In order to receive copy of the conference proceedings by courier/air mail from the Trans Tech Publications (TTP), Switzerland, kindly complete this form and provide your full mailing address and current email address in it.

TTP will send you the proceedings by courier/airmail only at the address given in this form.

Please complete this form and drop it in the box located at the registration desk. TTP is expected to send you proceedings by October 2016.

Kindly use CAPITAL letters to complete the form:

Title: __________ First Name: ___________________________ Name: __________________________

Institution/Organization: _____________________________________________________________

Mailing Address: ___________________________________________________________________

City: ______________ Post Code: ______________ Country: ______________

Email: __________________________________________________________________________

If student participant, please tick box ‘YES’ here (   )
THERMEC’2016

INTERNATIONAL CONFERENCE on PROCESSING & MANUFACTURING OF ADVANCED MATERIALS May 29- June 3, 2016

Messe Congress Graz

CONFERENCE PROGRAM
Contents

General Information .................................................................................................................. 1
Social Programme .................................................................................................................... 3
Poster Sessions ........................................................................................................................ 4
Acknowledgements .................................................................................................................. 7
Distinguished Award Recipients .............................................................................................. 8
Conference Program Sessions Table ....................................................................................... 14
Floor Plan MESSE GRAZ ....................................................................................................... 15
Non-Student Poster Presenters (Group A) .............................................................................. 16
Student Poster Presenters (Group B) ...................................................................................... 34
Inaugural Session ..................................................................................................................... 58

Session A – Room: Hall 1a
SESSION A1: Steels (HSLA/IF/TRIP/AHSS) .............................................................. 60
SESSION A2: Steels (HSLA/IF/TRIP/AHSS) .............................................................. 62
SESSION A3: Steels (HSLA/IF/TRIP/AHSS) .............................................................. 64
SESSION A4: Steels (HSLA/IF/TRIP/AHSS) .............................................................. 66
SESSION A5: Steels (HSLA/IF/TRIP/AHSS) .............................................................. 68
SESSION A6: Steels (HSLA/IF/TRIP/AHSS) .............................................................. 70
SESSION A7: Steels (HSLA/IF/TRIP/AHSS) .............................................................. 72
SESSION A8: Engineering Technologies for Medicine .................................................... 74
SESSION A9: Engineering Technologies for Medicine .................................................... 76

Session B – Room: Hall 12a
SESSION B1: High and Ultra High Temperature Materials ............................................. 78
SESSION B2: High and Ultra High Temperature Materials ............................................. 80
SESSION B3: High and Ultra High Temperature Materials ............................................. 82
SESSION B4: High and Ultra High Temperature Materials ............................................. 84
SESSION B5: High and Ultra High Temperature Materials ............................................. 86
SESSION B6: TMP Microalloyed Steels ........................................................................... 88
SESSION B7: TMP Microalloyed Steels ........................................................................... 91
SESSION B8: LPSO Structure and its Related Materials .................................................. 93
SESSION B9: LPSO Structure and its Related Materials .................................................. 95

Session C – Room: Hall 12b
SESSION C1: Advanced Materials in Biomedical and Bioengineering Applications .......... 97
SESSION C2: Advanced Materials in Biomedical and Bioengineering Applications .......... 99
SESSION C3: Advanced Materials in Biomedical and Bioengineering Applications ..........101
SESSION C4: Aluminium Alloys .......................................................................................103
SESSION C5: Aluminium Alloys .......................................................................................105
SESSION C6: Aluminium Alloys .......................................................................................107
SESSION C7: Aluminium Alloys .......................................................................................109
SESSION C8: Biomimetic Materials, Nanostructured Biomaterials & Biological Applications ... 111
SESSION C9: Biomimetic Materials, Nanostructured Biomaterials & Biological Applications ... 113

Session D – Room: Gallery A
SESSION D1: Surface Engineering & Advance Protective Coatings ................................116
SESSION D2: Surface Engineering & Advance Protective Coatings ................................118
SESSION D3: Surface Engineering & Advance Protective Coatings ................................120
SESSION D4: Surface Engineering & Advance Protective Coatings ................................122
SESSION D5: Surface Engineering & Advance Protective Coatings ................................124
SESSION D6: Titanium Alloys ..........................................................................................126
SESSION D7: Titanium Alloys ..........................................................................................128
SESSION D8: Titanium Alloys ..........................................................................................130

Session E – Room: Hall 11b
SESSION E1: Fuel Cells, H Storage, Batteries, Supercapacitors & Thermoelectric Materials ... 133
SESSION E2: Fuel Cells, H Storage, Batteries, Supercapacitors & Thermoelectric Materials ... 135
SESSION E3: Fuel Cells, H Storage, Batteries, Supercapacitors & Thermoelectric Materials ... 138
SESSION E4: Additive Manufacturing ..............................................................................140
SESSION E5: Additive Manufacturing ..............................................................................143
SESSION E6: Smart/Intelligent Materials & Processes .................................................. 145
SESSION E7: Smart/Intelligent Materials & Processes .................................................. 147
SESSION E8: Smart/Intelligent Materials & Processes .................................................. 149

Session F - Room: Gallery C
SESSION F1: Interfaces, Grain Boundaries & Structural Characterisation Techniques ........................................ 152
SESSION F2: Interfaces, Grain Boundaries & Structural Characterisation Techniques ........................................ 154
SESSION F3: Interfaces, Grain Boundaries & Structural Characterisation Techniques ........................................ 156
SESSION F4: Interfaces, Grain Boundaries & Structural Characterisation Techniques ........................................ 158
SESSION F5: Magnesium Alloys ................................................................................... 160
SESSION F6: Magnesium Alloys ................................................................................... 162
SESSION F7: Magnesium Alloys ................................................................................... 164
SESSION F8: Composites................................................................................................ 166
SESSION F9: Composites ................................................................................................ 168

Session G - Room: Gallery B
SESSION G1: Metallic Glasses/Bulk Metallic Amorphous Materials ........................................ 171
SESSION G2: Metallic Glasses/Bulk Metallic Amorphous Materials ........................................ 173
SESSION G3: Metallic Glasses/Bulk Metallic Amorphous Materials ........................................ 175
SESSION G4: Metallic Glasses/Bulk Metallic Amorphous Materials ........................................ 177
SESSION G5: Materials under Extreme Conditions .......................................................... 179
SESSION G6: Materials under Extreme Conditions .......................................................... 181
SESSION G7: Materials under Extreme Conditions .......................................................... 183

Session H – Room: Hall 1b.
SESSION H1: Nanomaterials for Energy and Structural Applications ........................................ 186
SESSION H2: Nanomaterials for Energy and Structural Applications ........................................ 188
SESSION H3: Nanomaterials for Energy and Structural Applications ........................................ 190
SESSION H4: Nanomaterials for Energy and Structural Applications ........................................ 192
SESSION H5: Welding & Joining of Advanced Materials & FSW/P ........................................ 194
SESSION H6: Welding & Joining of Advanced Materials & FSW/P ........................................ 196
SESSION H7: Welding & Joining of Advanced Materials & FSW/P ........................................ 198
SESSION H8: Welding & Joining of Advanced Materials & FSW/P ........................................ 200

Session I – Room: Hall 11a
SESSION I1: Materials Performance ................................................................................ 203
SESSION I2: Materials Performance ................................................................................ 205
SESSION I3: Materials Performance ................................................................................ 207
SESSION I4: Materials Performance ................................................................................ 209
SESSION I5: Ultra Fine-Grained Materials ........................................................................ 212
SESSION I6: Ultra Fine-Grained Materials ........................................................................ 214
SESSION I7: Ultra Fine-Grained Materials ........................................................................ 216
SESSION I8: Ultra Fine-Grained Materials ........................................................................ 218

Session J - Room: Hall 10
SESSION J1: Modelling & Simulation .............................................................................. 221
SESSION J2: Modelling & Simulation .............................................................................. 223
SESSION J3: Modelling & Simulation .............................................................................. 225
SESSION J4: Modelling & Simulation .............................................................................. 227
SESSION J5: Modelling & Simulation .............................................................................. 229
SESSION J6: Neutron Scattering & X-ray Studies of Advanced Materials .............................. 231
SESSION J7: Neutron Scattering & X-ray Studies of Advanced Materials .............................. 233
SESSION J8: Neutron Scattering & X-ray Studies of Advanced Materials .............................. 235

Session K – Room: Hall 3
SESSION K3: Texture of Materials ................................................................................... 238
SESSION K3: Texture of Materials ................................................................................... 240

Authors Index .................................................................................................................. 242
Chairpersons Index ......................................................................................................... 281
General Information

Identification Badge
Participants and accompanying persons are kindly requested to wear their personal name badge during all Conference events including Conference Dinner on June 1, 2016 due strict security reasons at MESSE GRAZ.

Plenary Lectures
Plenary Lecture by Prof. Dr. E. Arzt will take place on Monday, May 30th 2016 in the HALL 15 at MESSE GRAZ.

Location of Parallel Sessions
Eleven parallel sessions will take place concurrently in 11 rooms at Messe Graz. The location of the lecture rooms are given in the floor plan included in this book.

Message Board
Personal Messages and Program changes will be announced on the message board in the registration desk area. We strongly suggest that you check the message board every day.

Telephone
Some public telephones are available in the Messe Graz.

Lunches and Coffees
Lunches are served in Building A Ground Floor on May 30, 31, June 1 and June 2 from 12.30 pm to 2.30 pm. For admission to the dining hall please show your Conference identification badge.

Coffee breaks will take place from May 30 to June 2 in the mid-morning and mid-afternoon. On June 3, Friday there is coffee break in the mid-morning only.

Company Exhibition
Organizations exhibiting at THERMEC’2016:
- Dynamic Systems Inc. USA
- Edmund Bühler GmbH
- MatCalc
- Thermo-Calc Software
- JEOL Germany
- PULSTEC Industrial

The foyer mc/South is used as exhibitor’s space for companies exhibiting at THERMEC2016. The mid-morning/afternoon coffee breaks will also take place there from May 30 to June 3, in addition to the other locations near the session rooms.
Office Facilities at MESSE GRAZ
If you want to make any photocopies or any other office work, please contact the Business Centre at Messe Graz located near the registration desk. The Messe Graz will charge you for any office services that you require.

Preview Centre
Room 8 can be used for internet and previewing your presentation. A few computers may be available in the room for this purpose.

THERMEC’2016 Proceedings Your Manuscript Inclusion
The papers will be included in the conference proceedings and in the periodical after the manuscripts are reviewed by the Program Committee. The review process is over but a considerable number of authors have not returned their revised manuscripts to us yet which is causing a delay in the publication of the proceedings. Due to unavoidable circumstances, the conference proceedings is now expected to be ready by October 2016 and Trans Tech Publishers will mail you the copy of the proceedings once ready.

Proceedings Form
Kindly complete the proceedings form included in this program book and drop it in the box provided near the registration desk. You must give complete mailing address including City, Post Code, Country etc. along with your current email address in order for the Trans Tech Publishers to send you the proceedings by courier.

Registration Desk
All delegates and companions should register for the conference and collect their name badges and papers at the Registration Desk, which is situated in the Conference Foyer at the Messe Graz.

Sunday May 29, 2016
Registration Desk will be opened from 4.00 pm to 6.00 pm in the Foyer Ground Floor. We strongly recommended that you please try to register on this day.

Monday-May 31 to Friday-June 3, 2016
Registration Desk will be opened from 7.30 am to 6.00 pm during the conference period, except on June 3, 2016 when it will be opened until 2:00 pm.

Parallel Sessions
Following are 11 parallel sessions (A to K) which will run concurrently in the eleven separate rooms at the Messe Graz and room numbers are given below. Please check your paper presentation time and session/date/room location carefully. The rooms location can be found in the floor plan included in this book.
The sessions are held in the following rooms:

- Session A: Hall 1a
- Session B: Hall 12a
- Session C: Hall 12b
- Session D: Gallery A
- Session E: Hall 11b
- Session F: Gallery C
- Session G: Gallery B
- Session H: Hall 1b
- Session I: Hall 11a
- Session J: Hall 10
- Session K: Hall 3

Session Chairpersons and Speakers

Chairpersons are requested to meet speakers of their sessions in the allotted session rooms at least 15 minutes prior to the commencement of the session. Speakers are requested to load their power point presentation files on the computer provided in the respective session room with the help of the session monitor. See your session monitor at least 15 mins before the start of the session. Due to the tight schedule, the use of personal computer is not encouraged.

Session Chairpersons

The Program Committee would like to thank each Chairperson for their time and effort in chairing sessions at THERMEC’2016. If, due to unavoidable circumstances, the Chairperson listed is not able to chair the allotted session, please contact Professor E. Kozeschnick, Prof. R. Srinivasan, Prof. C. Sommitsch or Prof. M. Ionescu at the registration desk at least 24 hours prior to the start of your session, so that we can find an alternative arrangement. A list of Chairpersons together with their allocated sessions and duty dates to chair is included in the Final Program book under Session Chairpersons and also on the Conference website.

Social Programme

Welcome Reception

**Sunday, May 29, 2016 - 4:00 pm to 6:00 pm – Conference Foyer MESSE GRAZ**

It is strongly recommended that you pre-register on May 29th from 4:00 pm to 6:00 pm. Pre-registration is to be held in the Conference Foyer of the Messe Graz. All registered delegates and registered spouses are cordially invited for drinks by the governor of Styria Hermann Schützenhöfer and socialising with delegates from other countries. Drink coupons will be provided with your registration papers on Sunday May 29, 2016. From 5pm to 6 pm the Welcome Reception will be accompanied by music from the „Musikverein der Graz Linien “.
THERMEC Conference Awards Dinner and Music Performance

Wednesday, June 1, 2016 - 7.30 pm to 10.30 pm –HALL 15 MESSE GRAZ

The Conference dinner will be held at the MESSE GRAZ IN HALL 15 together with the distinguished THERMEC award ceremony, which will take place from 9:00 pm to 9:30 pm, to honour our peers from various countries. The dinner is accompanied by a grand MUSIC CONCERT by a grand group « Neue Hofkapelle Graz », a baroque orchestra, with the star singer Marie Fiedereke Schöder. VOESTALPINE AG is sponsoring the tonight's event and Dr. Franz Androsch, Head of R&D and Innovation, voestalpine AG, is invited to welcome all delegates on behalf of his organization.

The Conference Dinner ticket will be provided to each full fee paying participant at the time of registration. Student registration also includes the conference dinner. The extra Conference Dinner tickets can be purchased through the webpage or can be bought at the registration desk. The dinner ticket will be collected from you in the Dinner Hall by the staff once you are seated at your table, so please bring the dinner ticket on the night of June 1, 2016.

IMPORTANT:
All registered participants at THERMEC’2016 must wear their name badge when attending luncheons, coffee breaks, conference dinner or any official THERMEC function for security reasons. The security staff will ask you to leave the premises if you fail to wear the name badge or if you do not have your THERMEC name badge with you. KINDLY COOPERATE WITH US IN THIS MATTER.

Poster Sessions

IMPORTANT: Poster Presenters please note:

Maximum poster size allowed at THERMEC’2016 is 1,200 mm height x 1,000mm wide
Poster Presentations

Two Groups are making poster presentations at THERMEC’2016:

**GROUP A (Non Students Presentations) on Tuesday, May 31, 2016**

**GROUP B (Students Presentations) on Wednesday, June 1, 2016**

Posters will be displayed in the *Foyer* located on the same floor where registration desk is located

**GROUP A (Non Students):**

Presentation time:  *May 31, 2016 from 5.00 pm to 7.00 pm*

Authors making POSTER presentation in Group A are requested to bring their posters to the THERMEC’2016 on *May 31 (between 11.00 am and 12.30 pm)*. Please identify your poster number which will be displayed on the boards, and affix your poster on the poster boards provided. Please do not change the location of your poster ID displayed on the poster boards.

Authors in Group A are requested to take their poster off the poster board on *May 31, 2013 after 7.30 pm* in order to make the poster boards available for the next poster group presentation on *June 1, 2016*. If you fail to remove your poster by 8.00 pm on May 31, the staff will remove all the displayed posters. The THERMEC Committee does not take any responsibility for those posters left on the boards after 8.00 pm on May 31.

**GROUP B (Students):**

Presentation time:  *June 1, 2016 from 5.00 pm to 7.00 pm*

All students are scheduled to make poster presentations at THERMEC’2016. The student presenters are requested to bring their posters to the registration desk on *June 1, 2016* (between 11.00 am and 12.30 pm). Please identify your poster number which will be displayed on the boards, and affix your poster on the poster boards provided. Please do not change the location of your poster ID displayed on the poster boards.

Students are requested to take their poster off the poster board on *June 2, 2016 before noon*. If you fail to remove your poster by 12.30 noon on June 1, the staff will remove all the displayed posters. The THERMEC Committee does not take any responsibility for those posters left on the boards after noon on June 2.
THERMEC Secretariat does not assume any liability for mailed posters. Please DO NOT mail posters to the Conference Secretariat. Please bring your posters with you to the Registration Desk at the MESSE GRAZ on the dates specified.

**Poster Presenters**

The posters will have a maximum height of 100cm and maximum width of 120cm.

At the registration desk on May 31 (Group A) and June 1 (Group B), you will be given instructions on how to place your poster with your poster ID on the board allocated. VELCRO tape will be provided to you at the registration desk to affix the posters on the boards.

All participants are encouraged to visit the poster sessions and authors will be available for discussions. *Prof. E. Kozeschnik, Prof. Norbert Enzinger, Prof. Aferdita Vevecka Priftaj and Prof. R.N. Srinivasan,* are in charge of Poster sessions and are also on the THERMEC’2016 Students’ Affairs Committee, and additional enquiries can be addressed to them.

Manuscripts submitted by students will be reviewed and included in the THERMEC’2016 Proceeding and in the periodical.
Acknowledgements

The following organizations supported THERMEC’2016, and the Committee expresses sincere thanks them.

- Graz University of Technology
- City of Graz
- Graz Convention Bureau
- Province of Styria
- AMAG Austria Metall AG
- THERMEC Convention Services, Australia
- VOESTALPINE AG, Austria
- Dynamic Systems Inc (DSI), U.S.A.
- Trans Tech Publications, Switzerland
- Dayananda Sagar College of Engineering, Bangalore, India

Drinks in Conjunction with Student Poster Presentation Sessions

**Wednesday, June 1:  5 pm to 7 pm – FOYER mc/SOUTH**

The Program Committee has organized drinks in conjunction with the poster presentations by over 250 students from many countries. We encourage all participants to visit the poster sessions to encourage our student participants.
THERMEC’2016 Distinguished Award Recipients

Professor Michel Jeandin

Prof. Michel Jeandin is Research Professor “Directeur de Recherche” at MINES Paris Tech. He earned his doctorate in 1981 from the Ecole des Mines de Paris and worked at FRAMATOME (French nuclear components manufacturer) and at Joint Research Center –ISPRA-Italy before joining Paris Tech. Prof Jeandin has worked in numerous research areas over years but has specialized in the field of coatings and surface processing and tribology. Prof Jeandin has received several awards and honours such as “Palmes Academiques “(French academic decoration for services to education), ASM Fellow and member of several Scientific Committees and General Coordinator of the European High temperature Materials. Prof Jeandin has published extensively and has over 350 papers an also has 10 patents and 3 French ”Enveloppes Solean” to his credit.

CITATION
“for significant contributions in the field of laser processing & tribology/surface treatments of advanced materials and leadership in materials science/engineering education in France “
Prof. Roberto Montanari was born in Bologna, Italy and is at present Professor of Metallurgy/Materials engineering at the University of Rome-Tor Vergata. Prof Montanari’s research activities in the physical metallurgy cover topics like liquid metals and phase transformations, materials for future nuclear fusion reactors and metal-matrix composites. Prof Montanari has been actively involved in the construction of the copy of the equestrian statue of Marco Aurelio – a symbol of the cultural and artistic heritage of ancient Rome. In 1977, the copy of Marco Aurelio monument was placed on Michelangelo’s plinth in Campidoglio Square in Italy. Prof Montanari is author of over 270 scientific papers and 10 books and also involved in patents relating to portable apparatus of cylindrical indenter “FIMEC” and in the process for the production of coins with high security standards. Prof Montanari has served as the President of COMET (Council of Metallurgy) in 2014 and also as the President of the Centre of Physical Metallurgy & Materials Science of AIM (Italian Metallurgical Society) from 2004 to 2008.

CITATION
“for outstanding contributions in the area of structure of liquid metals & advanced materials for future nuclear fusion systems and leadership in materials science & engineering education in Italy”
Prof Mitsuo Niinomi is the Professor of Biomaterials Science, at the Institute of Materials Research, Tohoku University, in Sendai, Japan. He received his PhD in engineering in 1979 from Nagoya University, Japan. Prior to joining Tohoku University, he was at the Toyohashi University for several years and has also time as Visiting Professor at the University of Dayton and foreign researcher at the Materials Institute, WPAFB, in Dayton, Ohio. Prof Niinomi has held number of senior positions at Tohoku University but especially he was the Special Advisor to the President in 2008. He has received over 20 awards and honours from various organizations but notably: Nagai Academic Award, Nishiyama Award (ISIJ), Kobayashi Award, Tamigawa-Haris Award (JIM), JILM Medal (Japan Institute of Light Metals), Murakami Memorial Award just to name some to his credit. In 2016, Prof Niinomi became Fellow of the Biomaterials Science & Engineering (International Union of Societies for Biomaterial Science & Engineering). Prof Niinomi is the member of several Editorial Boards and Committees and has published over 440 papers and also has 16 patents to his portfolio. He is one of the internationally recognized scientists in the field of biomaterials in Japan.

CITATION:

“for pioneering research in the field of biomaterials & structural/functional materials and leadership in materials engineering education in Japan”
THERMEC’2016 Distinguished Award Recipients

Professor Reinhard Pippan

Prof Reinhard Pippan is the Director and Group Leader at the famous Erich Schmid Institute in Austria. He received his doctorate in 1982 from the Montan Universitaet Leoben and completed his Habilitation in solid state physics in 1991 at the University of Leoben. His scientific career has been mostly connected with the Erich Schmid Institute-Austrian Academy of Sciences. Prof Pippan’s research activities have been focused on the mechanical properties of metals/alloys and composites. The recent research interest has been in the field of SPD (Severe Plastic Deformation) on the structural evolution and mechanical properties. He established a new field of synthesis of novel advanced materials at his institute and has authored over 300 papers and also 60 chapters in the scientific books together with 3 patents to his credit. Prof. Pippan is the editor of the Special issue of the Engineering Fracture Mechanics. Prof Pippan received several awards over years: 1985 Erich Schmid Award, 2009 Tamman Gedenkmuenze Award of DGM (German Materials Society) and 2014 Woehler Medal of ESIS (European Structural Integrity Society).

CITATION

“for pioneering research in the field of fatigue/fracture and severe plastic deformation of advanced materials & for leadership in materials education in Austria”
THERMEC’2016 Distinguished Award Recipients

Professor C (Ravi) Ravindran

Prof. Ravindran is Professor of advanced Materials & Manufacturing at the Ryerson University, Toronto, Canada. He received PhD in Materials Engineering from the University of Manitoba. Prior to joining the academic position, Prof Ravindran worked in the research and development at the Manitoba Steel Rolling Mills where he achieved outstanding success. Prof Ravindran was invited in 1985 to assume the position of Group Vice-president of Galtaco automotive Castings & Stamping Corporation Inc., a multinational having plants in USA and Canada. While working in industry Prof Ravindran made several innovative R & D contributions in steel making, continuous casting of microalloyed steels. In 1989 he joined Ryerson university where he established the Centre for Near-Net Shape Processing of Materials (CNPM). CNPM earned recognition from the Magnesium Division of the American Foundry Society with the “outstanding Organizational Award” for research excellence in Magnesium Castings placing this centre at Ryerson University in the position to be recognized as one of elite Mg Research Centres in the world. Prof Ravindran is widely recognized in Canada and USA for excellence in collaborative research and technology transfer. He is Fellow of several societies: ASM International-USA, American Association for the Advancement of Science (AAAS) and Canadian Academy of Engineering (CAE). He was trustee of ASM (1997-200) the largest materials professional organization in world. He was elected vice-president in 2012 and President in 2013 of the ASM international. Prof Ravindran has received numerous awards: 1995 MacDonald ASM–Canada Council award, 2004 Brian Ives award and 2006 Allen Ray Putnam –ASM International Award.

CITATION

“for outstanding contributions in the area of magnesium technology and for significant research to solution to industrial problems in secondary processing of light alloys for automotive applications”
THERMEC’2016 Distinguished Award Recipients

Professor Ze Zhang

Prof Ze Zhang is Professor of Materials Science & Engineering at the Zhejiang University and also member of the Chinese Academy of Sciences. Prof Zhang received PhD in 1987 from the Institute of Metals Research (IMR)-Chinese Academy Of Sciences and also served as the Vice-President of prestigious Beijing University of Technology. Prof Zhang has been working actively in the field of structural characterization of materials using electron microscopic techniques for over 25 years. His research covers TEM study of advanced materials including nano-wires to thin films. Special interests in the in-situ atomic resolution study of materials has lead to pioneering research work in the materials physical properties. He is Chief Scientist of the National Basic Research Program in PR China and the President of the China Association for Instrumental Analysis, Chinese Electron Microscopy Society, and the President of the Asia-Pacific Electron Microscopy Association since 2012. Prof Zhang has received several awards from various organizations from PR China such as Ho Leung Ho Lee Prize, National Chien-Shiung Wu award and Chinese Young Scientist award. Prof Zhang has published over 250 papers.

CITATION

“for outstanding research in the field of structural characterization techniques (transmission electron microscopy, advanced technique involving In-situ atomic resolution) to study the microstructures in the metals/alloys including thin films and nano-wires”
Thermec’2016 Conference Programme

Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29 - June 03, 2016, Graz, Austria

<table>
<thead>
<tr>
<th>Session</th>
<th>May 30</th>
<th>May 31</th>
<th>June 01</th>
<th>June 02</th>
<th>June 03</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Interfaces GB &amp; Structural Charact. 1</td>
<td>Interfaces GB &amp; Structural Charact. 2</td>
<td>Interfaces GB &amp; Structural Charact. 3</td>
<td>Interfaces GB &amp; Structural Charact. 4</td>
<td>Mg Alloys</td>
</tr>
<tr>
<td>I</td>
<td>Materials Performance 1</td>
<td>Materials Performance 2</td>
<td>Materials Performance 3</td>
<td>Ultra fine Grained Mat 5</td>
<td>Ultra fine Grained Mat 6</td>
</tr>
<tr>
<td>K</td>
<td>Texture</td>
<td>Texture</td>
<td>Texture</td>
<td>Texture</td>
<td>Texture</td>
</tr>
</tbody>
</table>

Rooms Allocations

<table>
<thead>
<tr>
<th>Session</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Hall 1a</td>
</tr>
<tr>
<td>B</td>
<td>Hall 1a</td>
</tr>
<tr>
<td>C</td>
<td>Hall 1b</td>
</tr>
<tr>
<td>D</td>
<td>Hall 2a</td>
</tr>
<tr>
<td>E</td>
<td>Hall 3b</td>
</tr>
<tr>
<td>F</td>
<td>Gallery C</td>
</tr>
</tbody>
</table>
Conference facilities at the Messecongress Graz

<table>
<thead>
<tr>
<th>Facility</th>
<th>Size (sqm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Auditorium (ground floor)*</td>
<td>6,500</td>
</tr>
<tr>
<td>Messecongress South Foyer (mcs)</td>
<td>550</td>
</tr>
<tr>
<td>Hall 1</td>
<td>630</td>
</tr>
<tr>
<td></td>
<td>(can be divided into 1a, 315sqm and 1b, 315sqm)</td>
</tr>
<tr>
<td>Hall 2</td>
<td>250</td>
</tr>
<tr>
<td>Hall 3</td>
<td>110</td>
</tr>
<tr>
<td>Hall 4</td>
<td>110</td>
</tr>
<tr>
<td>Hall 5</td>
<td>110</td>
</tr>
<tr>
<td>Hall 6</td>
<td>51</td>
</tr>
<tr>
<td>Hall 7</td>
<td>51</td>
</tr>
<tr>
<td>Hall 8</td>
<td>55</td>
</tr>
<tr>
<td>Hall 9 [additional space on upper level]</td>
<td>60</td>
</tr>
<tr>
<td>Messecongress North Foyer (mnc)</td>
<td>811</td>
</tr>
<tr>
<td>Hall 10</td>
<td>233</td>
</tr>
<tr>
<td>Hall 11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>251</td>
</tr>
<tr>
<td>(can be divided into 11a, 130sqm and 11b, 121sqm)</td>
<td></td>
</tr>
<tr>
<td>Hall 12</td>
<td>314</td>
</tr>
<tr>
<td>(can be divided into 12a, 164sqm and 12b, 150sqm)</td>
<td></td>
</tr>
<tr>
<td>Hall 14</td>
<td>59</td>
</tr>
<tr>
<td>Gallery</td>
<td>544</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hall A 2nd floor* |

| Hall 15 | 2,200sqm |
| Hall 16  | 2,200sqm |
| Hall 17  | 2,200sqm |

GUESTS’ CLUB | 110sqm
(with press club)

How to reach the Messecongress Graz
- Only 10 km from Graz Airport
- Only 1.5 km from the Graz-Ost motorway exit
- Parking for 2,000 cars on the Messegelände site / underground car park
- Tram stop and taxi rank in front of the entrance

* Optional mobile partitions.

Sufficient additional space available for exhibitions, posters etc.
Non-Student Poster Presenters (Group A)

Poster Numbers P101 to P232
Tuesday May 31, 2016 from 5.00 pm to 7.00 pm in the FOYER mc/SOUTH
Session: Non-Student Posters

Venue: Building A, Ground Floor

Date and Time: May-31, 5PM to 7PM

Session Chairs: Ragu N. Srinivasan, USA & Norbert Enzinger, Austria

P101
Change in mechanical strength and bone contact ratio of beta-type TNTZ subjected to mechanical surface modification
Toshikazu Akahori, Tomokazu Hattori, Hisao Fukui, Mitsuo Niinomi
Meijo University, Japan

P102
Recrystallization and grain growth behaviour of an Mg-La alloy after hot-rolling
Djazia Elfiad, Youcef Bourezg, Hiba Azzeddine, Djamel Bradai
USTHB, Algeria

P103
Microstructure and microtexture evolution of invar alloy after cross accumulative roll bonding
Kamel Tirsatine, Hiba Azzeddine, Thierry Baudin, Anne-Laure Helbert, François Brisset, Djamel Bradai
USTHB, Algeria

P104
Synthesis of SiO2-CaO-K2O-Al2O3-B2O3 glass-ceramics for dental applications
Jae Chul Bang
SoonChunHyang University, Korea

P105
Effect of temperature and strain rate on the mechanical properties of 99.5 aluminium rods extruded by KOBO
Sonia Boczkal, Marzena Lech-Grega, Wojciech Szymanski, Paweł Ostachowski, Marek Łagoda
Institute of Non-Ferrous Metals in Gliwice, Poland

P106
Corrosion of MgCa alloys with conversion coatings
Michał Karaś, Sonia Boczkal, Marzena Lech-Grega
Institute of Non-Ferrous Metals in Gliwice, Poland
P107
Corrosion behavior of ZK40 alloys modified with Gd, Nd, Y or CaO using potentiodynamic polarization curves and SKPFM
Ricardo Henrique Buzolin, Marta Mohedano, Chamini Mendis, Carsten Blawert, Carlos Costa, Haroldo Cavalcanti Pinto, Karl Ulrich Kainer, Norbert Hort
University of São Paulo, Brazil

P108
The quantification of galling in forming operations of hot dip galvanised sheet metal under laboratory conditions
Jochen Giedenbacher, Anna-Elisabeth Raab, Christian Walch, Aziz Huskic
Forschungs & Entwicklung FH OÖ, Austria

P109
Effect of added elements on microstructures and joint strength of lead-free Sn-based solder joint dispersed IMC pillar
Yawara Hayashi, Ikuo Shohji, Yusuke Nakata, Tomihito Hashimoto
Gunma University, Japan

P110
*Friction stir processing at high rotation rates of a magnesium alloy: Mechanical properties at high temperatures and microstructure
Emanuela Cerri, G. Renna, M. Cabibbo, M. Simoncini, A. Forcellese
University of Parma, Italy

P111
Microstructure and mechanical properties of powder-pack boronized Inconel 625 alloy
Byungchul Cha, Jooyong Cheon, Jinyoung Park, Eoksoo Kim, Pilhwan Yon
Korea Institute of Industrial Technology, Korea

P112
Electroless plating of copper on TaN barrier layers using seed-anchoring self-assembled monolayer
Sung-Te Chen, Giin-Shan Chen
Hsiuping University of Science and Technology, China

P113
*Effects of precipitated particles on microstructure evolution during thermomechanical processing of Al-Zn-Mg-Cu alloy
Huiqin Chen, Kun Zhang, Huiqu Li, Xiaodong Zhao, Lianhua Han
Taiyuan University of Science and Technology, China
P114
Cu-induced dielectric breakdown for porous low dielectric constant film under static and dynamic stress
Yi-Lung Cheng
National Chi-Nan University, China

P115
High strength low carbon steel containing nano-sized copper precipitates and carbides
Phaniraj Madakashira, Young-Min Shin, Woo Sang Jung, In-Suk Choi
Korea Institute of Science and Technology, Korea

P116
On the development of specific heat treatments for TA6V parts produced by electron beam melting
Charlotte de Formanoir, Sébastien Michotte, Adrien Dolimont, Stéphane Godet
Université Libre de Bruxelles, Belgium

P117
New route to develop multi-structured anti-CMAS coatings to protect thermal barriers
Elodie Delon, Florence Ansart, Sandrine Duluard, Jean-Pierre Bonino, André Malie, Aurelien Joulia
Paul Sabatier University, France

P118
*Nanocomposites consisting of carbon nanotubes and nanoparticles of noble metals
Anna Dobrzańska-Danikiewicz, Dawid Cichocki, Dariusz Łukowiec
Silesian University of Technology, Poland

P119
The mechanical and micro-structural characterisation of novel high strength, highly creep resistant maraging steels for shaft applications
Deri Galvin
University of Swansea, United Kingdom

P120
*Sequentially layer-by-layer growth of Cu film on patterned Ru/Si substrate
Jau-Shiung Fang, Guan-Ru Su, G.S. Chen, Y.L. Cheng, T.S. Chin
National Formosa University, Taiwan

P121
Modelling methods of magnetohydrodynamic phenomena occurring in a channel of the device used to wash out by a liquid metal of spent automotive catalyst on metallic substrate
Agnieszka Fornalczyk
Silesian University of Technology, Poland
P122
Aging property of AZ91D magnesium alloy screw thread-rolled at room temperature using extrusion-torsion simultaneous processing
Mitsuaki Furui, Shouyou Sakashita, Shougo Suzuki, Tetsuo Aida, Yuusuke Ishisaka, Masayuki Yamamoto, Masayuki Ohta
Tokyo University of Technology, Japan

P123
*In-situ tensile texture analysis on a new Mg-RE alloy
Weimin Gan, Yuanding Huang, Yuling Xu, Norbert Schell, Michael Hofmann, Karl Ulrich Kainer, Nobert Hort
Helmholtz-Zentrum Geesthacht, Germany

P124
Numerical and experimental study of residual stress distribution in laser beam welded joint
Gancho Genchev, Nikolay Doynov, Ralf Ossenbrink, Vesselin Michailov, Gizo Bokuchava, Peter Petrov
Brandenburg University of Technology, Germany

P125
An all-wet electroless-plating process for copper metallization of through-silicon vias involving amino self-assembled monolayers
Chen Giin-Shan, Cheng Yu-Hsun, Chang Yiu-Hsiong, Chang Sung-Te
Feng Chia Univ., China

P126
TMP- Microalloyed Steels Development of production of heavy TMCP plates up to 100 mm at NLMK DanSteel for construction, offshore and shipbuilding purposes
Eugene Goli-Oglu
Denmark

P127
The analysis of inhomogeneous deformation behavior in dual-phase steel using by the crystal plasticity fast fourier transform method
Sadao Hashiguch, Sunao Sadamatsu, Jun Heshikiri, Yoshitaka Adachi
Kagoshima University, Japan

P128
Recrystallization behavior of aluminum thin foils with various purities
Tae Kwon Ha
Gangneung-Wonju National University, Korea

P129
Effect of boron addition on microstructure and mechanical behavior of AZ84 Mg alloy
Tae Kwon Ha
Gangneung-Wonju National University, Korea
P130
Influence of β-phase on initial pitting process of AZ91D magnesium alloy
Masahiro Kaido, Kenta Imai, Masahiko Hatakeyama, Satoshi Sunada
University of Toyama, Japan

P131
Control of magnetic susceptibility of Au-Nb alloys for MRI artifact-free biomedical applications
Shihoko Inui, Kenichi Hamada, Emi Uyama, Eiichi Honda
Tokushima University, Japan

P132
Effects of Ag addition on the microstructures and properties of Al-Mg-Si-Cu alloy
Lizi He
Northeastern University, China

P133
Two-step annealing for grain refinement in twin-roll cast Al-Mn alloys
Guangjie Huang, Li Huang, Zhihong Jia, Qing Liu
Chongqing University, China

P134
*Fiber texture of groove rolled Ti-Nb-Al biomedical shape memory alloy
Tomonari Inamura, Iyoko Kubota, Hideki Hosoda
Tokyo Institute of Technology, Japan

P135
*Effect of annealing upon retention of He and H in irradiated SiC
Mihail Ionescu, Alec Deslandes, Rohan Holmes, Mathew Guenette, Inna Karatchevtseva, Lars Thomsen, Gregory Lumpkin
ANSTO, Australia

P136
Effect of microstructural change by rolling and annealing on hydrogen permeability of Nb-TiNi and Nb-TiCo eutectic alloys
Yoshihide Saeki, Yoshinori Yamada, Kazuhiro Ishikawa
Kanazawa University, Japan

P137
Microstructural and mechanical properties of welded joints of 690 MPa grade QT and TMCP steel
Markku Pirinen, Jukka Martikainen, Paul Kah, Victor Karkhin, Sergei Ivanov
Peter the Great St. Petersburg Polytechnic University, Russia
P138
Comparative study of microstructural and mechanical inhomogeneity of laser and friction stir welded joints of Al-Mg-Si alloy
Sergei Ivanov, Oleg Panchenko, Victor Karkhin, Vesselin Michailov, Olga Velichko
Peter the Great St. Petersburg Polytechnic University, Russia

P139
Tensile and wear properties of TiB/Ti and TiC/Ti composites with different Ti powders prepared by spark plasma sintering
Hiroshi Izui, Shoji Kamemawa, Yoshiki Komiya
Nihon University, Japan

P140
Producing Ti-based amorphous/nanocrystalline powder using high-energy mechanical milling
Dora Janovszky, Kinga Tomolya, Anna Sycheva, Maria Sveda, Andras Roosz
MTA-TKI, Hungary

P141
*Effect of electroless Ni-P plating on mechanical properties of Al-4%Ge alloy
Teruto Kanadani, Norihito Nagata, Makoto Hino, Koji Murakami, Keitaro Horikawa, Keiyu Nakagawa, Minoru Fukuhara
Okayama University of Science, Japan

P142
*Novel siloxane-based copolymer for AEMFCs
Je Deok Kim, Lee Jin Ghil
National Institute for Materials Science (NIMS), Japan

P143
Direct growth of pure SnO nano-wires and nano-platelets on CVD graphene/Au thin film layer by thermal evaporation
Mee-Ri Kim, Ki-Chul Kim
Mokwon University, Korea

P144
Effect of large strain on texture formation behavior of AZ80 magnesium alloy during high temperature deformation
Kwonhoo Kim, Kazuto Okayasu, Hiroshi Fukutomi
Pukyong National University, Korea

P146
On the dynamic superplasticity
Daria Kitaeva, Georgii Kodzhaspirov, Yakov Rudaev
Peter the Great St.Petersburg Polytechnic University, Russia
P147
*In situ tests of the steam generator
Arnold Krasowsky, Andrii Oryniak
IPP-Centre, Ltd, Ukraine

P148
Effect of layer-by-layer texture non-uniformity on the stress corrosion of gas steel tubes
Olga Krymskaya, Yury Perlovich, Nikolay Morozov, Margarita Isaenko, Ilya Ryakhovskykh, Taimuraz Esiev
National Research Nuclear University «MEPhI», Russia

P149
Texture modification of warm-deformed Mg-Zn based alloy by micro-alloying
Jeong Hun Lee, Jihyeon Bak, Eok Soo Kim
Korea Institute of Industrial Technology, Korea

P150
Effect of CH4 content on the characteristics of surface layers of low temperature plasma nitrided 2205 duplex stainless steel
Insup Lee
Dongeui University, Korea

P151
The study of the microstructure of the metal after rolling thick workpieces of non-ferrous metals and alloys in relief and smooth rolls
Sergey Lezhnev, Abdrakhman Naizabekov, Evgeniy Panin, Igor Mazur
Rudny industrial Institute, Kazakhstan

P152
The technique of drawing dividing line of metal flow
Konstantin Solomonov, Sergey Lezhnev, Nikolay Fedorinin, Lydmila Tischuk
Rudny industrial Institute, Kazakhstan

P153
Influence of Cu doping on martensitic and magnetic transitions in Ni-Mn-Sn alloys
Zongbin Li
Key Laboratory for Anisotropy and Texture of Materials (Ministry of Education), Northeastern University, China

P154
Morphological evolution of carbides in DZ125 superalloy during heat treatment
Liu Lirong
Shenyang University of Technology, China
P155
Quasi-static and dynamic properties of Ti-3.5Al-2.5V-1.5Fe-0.25O titanium alloy plates
Rui Liu, Song xiao Hui, Wen jun Ye, Rong Chen, Yang Yu, Xiao yun Song, Yan yan Fu
General Research Institute for Nonferrous Metals, China

P156
*Recent progress in X-ray laue diffraction 3D microscopy
Wenjun Liu, Ruqing Xu, Jonathan Tischler
Argonne National Laboratory, USA

P157
Study of the precipitation of secondary phases in a duplex and superduplex stainless steel
Nuria Llorca-Isern, Isabel Lopez, Hector Lopez, Maria-Victoria Biezma, Antoni Roca
Universitat de Barcelona, Spain

P158
*Scalable methods to obtain superhydrophobicity onto metallic surfaces
Ana-Maria Escobar, Nuria Llorca-Isern
Universitat de Barcelona, Spain

P159
*On the elaboration of metal-ceramic composite coatings by laser cladding
Anne Mertens, Thibaut L'Hoest, Julien Magnien, Raoul Carrus, Jacqueline Lecomte-Beckers
University of Liège, Belgium

P161
Evolution of plastic zone size at a crack tip with ultra-fine grains in metastable austenite
Arnaud Macadre, Toshihiro Tsuchiyama, Setsuo Takaki
I2CNER - Kyushu University, Japan

P162
In situ phase investigations of X20Cr13 high Cr steel
Stefan Mitsche, Ernst Plesiutschng, Christof Sommitsch
Graz University of Technology, Austria

P163
Influence of severe plastic deformation on mechanical properties of an AA5024 alloy
Anna Mogucheva, Diana Yuzbekova, Tatiana Lebedkina, Mikhail Lebyodkin, Rustam Kaibyshev
Belgorod State University, Russia
P164
*Phase stability and mechanical properties of Ti-Cr-Sn-Zr alloys containing a large amount of Zr
Yonosuke Murayama
Niigata Institute of Technology, Japan

P165
*An amorphous phase formation at palladium / silicon oxide (Pd/SiOx) interface by electronic excitation
Takeshi Nagase, Ryo Yamashita, Atsushi Yabuuchi, Jung-Goo Lee
Osaka University, Japan

P166
*Microstructure of AlCoCrFeNi2.1 eutectic high-entropy alloy prepared by various solidification processes
Takeshi Nagase, Mamoru Takemura, Mitsuaki Matsumuro
Osaka University, Japan

P167
Effect of shearing distance on transfer characteristic of Al thin plate formed by compression shearing method at room temperature
Noboru Nakayama, Shota Sakagami, Masaomi Horita, Hiroyuki Miki, Hiroyuki Kosukegawa, Toshiyuki Takagi
Shinshu University, Japan

P168
Influence of chemical composition on precipitation behaviors in high-Cr ferritic steels
Jing Ning, Jianxiong Liang, Jie Su
China Iron & Steel Research Institute Group, China

P169
Design of bragg-edge spectrometer at steady-state neutron source
Yojiro Oba, Nobuhiro Sato, Rintaro Inoue, Masaaki Sugiyama
Kyoto University, Japan

P170
Cracking in Hot-Dip Zn-Al-Mg alloy coatings on a steel sheet
Y.B. Park, I.G. Kim, S.G Kim, W.T. Kim, T.C. Kim, M.S. Oh, J.S. Kim
Sunchon National University, Korea

P171
* Local surface phase stability during cyclic oxidation process
Guocai Chai, Mattias Calmunguer, Robert Eriksson, Sten Johansson, Jan Högberg, Johan Moverare
Sandvik Materials Technology, Sweden
P173
*Synergy of atom-probe structural data and quantum-mechanical calculations in a theory-guided design of extreme-stiffness superlattices containing metastable phases
Martin Friak, Darius Tytko, David Holec, Pyuck-Pa Choi, Philip Eisenlohr, Dierk Raabe, Joerg Neugebauer
Japan Atomic Energy Agency, Japan

P174
Formability enhancement of Al sheets with two step forming
Yong-Nam Kwon, Y.S. Lee
Korea Institute of Materials Science, Korea

P175
High temperature deformation and dynamic recrystallization behaviour of AlCoCrFeNiTi high entropy alloys
Kwang Seok Lee, Ka Ram Lim, Young Sang Na
KIMS, Korea

P176
Hierarchical nano-structural design for property enhancement in Al-Mg-Si-(Cu) alloys
Chunhui Liu, Limei Liu, Peipei Ma, Xiangliang Li, Shihao Wang, Jianghua Chen
Hunan University, China

P177
*Stress-induced hardening in a Zr-based bulk metallic glass under elastostatic compression
Yi-Mei Wang, Meng Zhang, Lin Liu
Huazhong University of Science and Technology, China

P178
*Characterization of precipitates in a Mg–Y–Ag–Zn alloy
Keiichiro Oh-ishi, Nick Wilson, Kazuhiro Hono, Allan Morton, Jian-Feng Nie
Monash University, Australia

P179
Phase field modeling of ordered kappa-carbide precipitate for various isothermal holding temperature
Alireza Rahnama, Sridhar Seetharaman
University of Warwick, United Kingdom

P180
Texture characterization of stainless steel cladded layers of process vessels
Joana Rebelo Kormmeier, Weimin Gan, Maria Jose Marques, Antonio Castanhola Batista, Michael Hofmann, Altino Loureiro
Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Germany
P181
Laser pulse simulation of high energy transient thermal loads on plasma sprayed W for NFR
Maria Richetta, Pasqualino Gaudio, Alessio Mattoccia, Roberto Montanari, Ekaterina Pakhomova
University of Roma Tor Vergata”, Italy

P182
Influence of different pH and fluoride addition on the corrosion behavior of the sintered CoCr alloy ceramill sintron compared to the cast alloy girobond Nb
Christine Schille, Ernst Schweizer, Rita Hoffmann, Falko Noack, Juergen Geis-Gerstorfer
University Hospital Tuebingen, Germany

P183
Effect of heat treatment on the microstructure evolution of Ti-6Al-3Sn-3Zr-3Mo-3Nb-1W-0.2Si titanium alloy
Xiaoyun Song, Wenjing Zhang, Teng Ma, Wenjun Ye, Songxiao Hui, Xiaoxiang Wang
General Research Institute for Nonferrous Metals, China

P184
Effect and mechanism of heat treatment temperature on microstructure and mechanical properties of 0Cr16Ni5Mo martensitic stainless steel
Yongqing Sun, Zhiyong Yang, Jianxiong Liang, Zhenbao Liu, Changjun Wang
Central Iron and Steel Research Institute, China

P185
Effects of kink on high temperature creep strength in a long period stacking ordered type magnesium alloy
Mayumi Suzuki, Koji Hagihara
Toyama Prefectural University, Faculty of Engineering, Japan

P186
Effect of the melt flow induced by travelling magnetic field on microstructure formation of solidified peritectic Sn–Cd alloy
Mária Svéda, Anna Sycheva, Arnold Rónaföldi, András Roósz
MTA TKI, Hungary

P187
Comparison of microstructure and mechanical behavior of the ferritic stainless steels ASTM 430 stabilized with niobium and ASTM 439 stabilized with niobium and titanium
Leandro Tanure, Claudio Alcântara, Tarcísio Oliveira, Dagoberto Santos, Berenice Gonzalez
Universidade Federal de Minas Gerais, Brazil
P188
*Microstructure and properties of an Al-12.7Si-0.7Mg alloy extrusion after an end-quenching test
Ni Tian, Guangdong Wang, Tao Hong, Gang Zhao, Changshu He*, Liang Zuo
Northeastern University, China

P189
Producing amorphous/crystalline composites by powder metallurgy
Kinga Tomolya, Dora Janovszky, Anna Sycheva, Maria Sveda, Peter Arki, Andras Roosz
MTA TKI, Hungary

P190
Ball-milling of Ti-based powders
Kinga Tomoly
MTA TKI, Hungary

P191
Early instability phenomena of IN792 DS superalloy
Alessandra Varone, Roberto Montanari, Oriana Tassa
University of Rome Tor Vergata, Italy

P192
Study of mechanical properties of nanocrystalline Ti-35Nb alloy processed by severe plastic deformation
Aferdita Vevecka Priftaj, Aida Bendo, Urim Buzra, Brikena Bejko, Erhard Schafler, Michael J. Zehetbauer
Polytechnic University of Tirana, Albania

P193
Influence of ageing treatment on precipitation evolution and mechanical properties of 0Cr13Ni8Mo2Al high-strength stainless steel
Changjun Wang, Jianxiong Liang, Zhiyong Yang, Zhenbao Liu, Yongqing Sun
Central Iron and Steel Research Institute, China

P194
*Changes in the electrical resistivity of amorphous carbon nitride films for potential applications to pressure sensors
Naoyuki Tamura, Masami Aono, Tomo Harata, Nobuaki Kitazawa, Yoshihisa Watanabe
National Defense Academy, Japan

P195
*Microstructure of AZCa912 continuous casting bar after hot compression
Akira Watazu, Naoki Omura, Kenji Miwa
National Institute of Advanced Industrial Science and Technology (AIST), Japan
P196
Microstructure and friction behaviour of AISI52100, D2 and H13 steels subjected to ultrasonic nanocrystalline surface modification (UNSM)
Young Sik Pyun
Sunmoon University, Korea

P197
Effect of Sr addition on the solidification structure in Al-6mass%Mg-3mass%Si alloy
Emi Yanagihara, Goshi Aoshima, Shota Komura, Seiji Saikawa, Susumu Ikeno
University of Toyama, Japan

P199
Microstructure and property of Fe-based alloy modified layer on 304 stainless steel by high-energy pulse laser-like cladding (HPLC)
Shenyang University of Technology, China

P200
The role of Nd/Zn ratio on the stability of Mg-Zn-Nd clusters and texture evolution of Mg-Zn-Nd alloys during annealing
Mehdi Sanjari, Armin Rajabzadeh, Amir Rezaei Farkoosh, In-Ho Jung, Stephen Yue, Richard Chromik
McGill University, Canada

P201
Life+12 ENV/IToo439 GREENWOOLF: Green Hydrolysis conversion of wool wastes into Organic Nitrogen Fertilisers
ISMAC, Italy

P202
Development of armor High Strength Steel (HSS) martensitic plates for troops carriers
Taher El-Bitar, Eman El-Shenawy, Maha El-meligy, Almosilhy Almosilhy, Nader Dawood
Central Metallurgical R&D Institute (CMRDI), Egypt

P203
Friction surfacing of Alloy 625 on AISI 4140: Microstructure and effect of process parameters on coating geometry
I. Sena, S. Hanke, J.F. dos Santos and R.S. Coelho

P204
Tool Surfaces analysis for Temperature-Supported Forming of AZ31 Mg alloy Sheets
B.C.S. Silva, A. Mosel, T. Schmidt, F.A. Lora and R.S. Coelho
P205
The interface character distribution and inter-granular corrosion resistance of duplex stainless steel UNS S32304
Xiaoyng Fang
China

P207
Evolution of deformation microstructures in cold-rolled ferritic steel
Tatsuya Morikawa
Japan

P208
The effect of Sc addition on microstructure in Mg-Gd alloys
Yuka Tomuro, Takuya Hamaguchi, Seungwon Lee, Seiji Saikawa, Susumu Ikeno, Kenji Matsuda
University of Toyama, Japan

P210
Microstructure and property of three-wire submerged arc welded joint of shipbuilding steel EH36
Yu Zhang
China

P211
*Improved tensile and fatigue properties of nanocrystalline Cu and Cu-Al alloys
Zhefeng Zhang, Xianghai An, Shiding Wu
IMR, China

P212
Laboratory mill simulation of industry TMCP rolling for technology development
Dmitrii Ringinen, Andrei Chastukhin, Oleg Bagmet, Leonid Efron
Vyksa Steel Works, Russia

P213
*Comparative quantum-mechanical study of uniaxial, biaxial and triaxial loading conditions in molybdenum disilicide
Mojmír Šob, Martin Friák, Jörg Neugebauer
Masaryk University, Brno, Czech Republic
P216
* Weibull analysis of fracture strength for Zr55Ti2Co28Al15 bulk metallic glass: Tension-compression asymmetry and porosity effect
Jian Xu, Hui-Li Gao, Yong Shen
*Institute of Metal Research, Chinese Academy of Sciences, China

P217
Electrodeposition of sulfonated poly(phenylene oxide) as solid electrolyte in 3D microbatteries
Michele Braglia, Philippe Knauth, Maria Luisa Di Vona
*Aix Marseille Université, France

P218
Comparison of self-annealing behaviors in (001) oriented and (111) oriented electrodeposited silver films by in situ EBSP analysis
Yumi Hayashi, Ikuo Shohji, Hiroshi Miyazawa
*Gunma University, Japan

P219
The optimal placement of sensors by minimizing the maximum probability of non-detection using genetic algorithm
Veena Jawali, Prakash Parasivamurthy
*B.M.S.College of, India

P220
The microstructure change of Sb added 60/40 Cu-Zn alloy by annealing
Keisuke Kawakami, Seungwon Lee, Susumu Ikeno, Kenji Matsuda
*University of Toyama, Japan

P221
Tensile and fatigue properties of miniature size specimens of Sn-5Sb lead-free solder
Kyosuke Kobayashi, Ikuo Shohji, Hiroaki Hokazono
*Gunma University, Japan

P222
In situ tests of the steam generator
Arnold Krasowsky
*Ukraine

P224
Metal-diamond composites processed by selective laser melting
Xiaoshuang Li, Adriaan B. Spierings, Christoph Kenel, Christian Leinenbach, Konrad Wegener
*Empa, Switzerland
P225
Mg impact upon the generalized stacking fault energy of Al
Dongdong Zhao, Yanjun Li, Ole Martin Løvvik, Knut Marthinsen
NTNU, Norway

P226
Luminescent property and crystal structures of green-emitting phosphors Ba-Al-O:Eu2+
Asuka Okuzumi, Shohei Furuya, Hiromi Nakano
Toyohashi University of Technology, Japan

P227
Comparison of microstructure and mechanical behavior of the ferritic stainless steels ASTM 430 stabilized with niobium and ASTM 439 stabilized with niobium and titanium
Leandro Tanure, Claudio Alcântara, Tarcísio Oliveira, Dagoberto Santos, Berenice Gonzalez
Universidade Federal de Minas Gerais, Brazil

P228
Effect of heat treatments on TiH2 surface composition and hydrogen release
Gabriele Lapi, Carlo Alvani, Francesca Varsano, Saulius Kaciulis, Roberto Montanari, Alessandra Varone, Marco Gambini, Michela Vellini
University of Rome Tor Vergata, Italy

P229
*A novel model for diffusion-controlled precipitation reactions based on the extended volume concept: Analysis the model and applications
Marco J. Starink, Benjamin Milkereit, Yong Zhang, Paul A. Rometsch
University of Southampton, United Kingdom

P230
The effect of alloying elements on static recrystallization and interphase precipitation behaviors during hot rolling process
Cheoljun Bae
Hanyang University, Korea

P231
Superplastic Properties of the Friction Stir Processed Al -Mg- Sc-Zr Alloys
Samo Smolej, Ales Nagode, Damjan Klobcar, Brane Skaza, Edvard Slacek, Vukasin Dragojevic, Anton Smolej
University of Ljubljana, Slovenia

P232
Feasibility study on characteristics of fatigue behaviour using friction stir processing in high strength steel
Heung-Ju Kim, Sook-Hwan Kim, Jeong-Ung Park, Gyu-Baek An
Research Institute of Industrial Science and Technology, Korea
P233
*Ultra-strong nano-twinned steel with large tensile elongation
Mingxin Huang
The University of Hong Kong, China
Student Poster Presenters (Group B)

Poster Numbers P501 to P696
Wednesday June 01, 2016 from 5.00 pm 7.00 pm in FOYER mc/SOUTH
Session: Student Posters

Venue: Building A, Ground Floor

Date and Time: June-01, 5PM to 7PM

Session Chairs: Aferdita Vevecka Priftaj, Albania & Ernst Kozeschnik, Austria

SP501
Evolution of homogeneity in oxygen-free copper processed by ECAP and HPT
Meshal Alawadhi, Yi Huang, T.G. Langdon
University of Southampton, United Kingdom

SP502
Hardness homogeneity of an AZ80 magnesium alloy processed by high-pressure torsion
Saad A. Alsubaie, Yi Huang, T. G. Langdon
University of Southampton, United Kingdom

SP503
Microstructural and micromechanical characterization of damage initiation in DP steels
Fady Archie, Stefan Zaefferer
Max-Planck-Institut für Eisenforschung GmbH, Germany

SP504
Microstructure observation of Al-Zn-Mg alloys with different Zn, Mg concentration
Ryoma Arita, Fumiaki Aoki, Seungwon Lee, Susumu Ikeno, Kenji Matsuda, Satoshi Nishikawa, Tomoo Yoshida, Satoshi Murakami
University of Toyama, Japan

SP505
Growth of polycrystalline diamond films on Cu/CF composite materials using combustion CVD method
Clio Azina, Jean-François Silvain, Yongfeng Lu
ICMCB, France

SP506
Routes for increased strength and ductility of Fe-TiB2 high modulus steels
Christian Baron, Agnieszka Szczepaniak, Hauke Springer, Dierk Raabe
Max-Planck-Institut für Eisenforschung GmbH, Germany
SP507
Correlations between defect content, mechanical properties and fractographic investigation of AlSi9Cu3(Fe) alloy reference castings
Eleonora Battaglia, Franco Bonollo, Illaria Tonello, Elena Fiorese
*University of Padova, Italy*

SP509
Influence of microalloying elements Ti and Nb on recrystallization during annealing of advanced high-strength steels
Marion Bellavoine, Myriam Dumont, Josée Drillet, Philippe Maugis, Véronique Hebert
*ArcelorMittal Research SA, France*

SP510
Effect of microstructure, texture, and crack trajectory on small crack growth in Ti-6Al-4V subjected to dwell fatigue
Alec Blankenship, Adam Pilchak, Jared Shank, Alisha Hutson, Dennis Buchanon, Raghu Srinivasan
*Wright State University / USAF AFRL, USA*

SP511
First-principles modeling of copper impurity diffusion in TiN
Anton Bochkarev, Maxim Popov, Vsevolod Razumovskiy, Jürgen Spitaler, Peter Puschnig
*Materials Center Leoben Forschung GmbH, Austria*

SP512
Torsional piezoelectric strain in monocrystalline paratellurite
Guillaume Boivin, Pierre Belanger, Ricardo J. Zednik
*École de technologie supérieure, Canada*

SP513
Evaluation of weld parameters on the mechanical properties of friction stir welded dissimilar Al alloy lap joints
Michael Booth, Olga Gopkalo, Xu Liu, Brad Diak, Adrian Gerlich
*University of Waterloo, Canada*

SP515
Properties of stainless steel 316L alloys processed by selective laser melting: A numerical and experimental study
Claire Bruna-Rosso, Barbara Previtali, Maurizio Vedani
*Politecnico di Milano, Italy*
SP516
Phase constitution and martensitic transformation behavior of Au-51Ti-18Co biomedical shape memory alloy heat-treated at 1173K to 1373K
Taywin Buasri, Hyunbo Shim, Masaki Tahara, Tomonari Inamura, Kenji Goto, Hiroyasu Kanataka, Yoko Yamabe-Mitarai, Hideki Hosoda
Tokyo Institute of Technology, Japan

SP517
Recrystallization after cold plane strain compression in a commercial AA6082
Romain Bureau, Mirjam Spuller, Peter Simon, Cecilia Poletti
IWS TU Graz, Austria

SP518
Microstructural investigation of oxynitrocarburized components processed at different temperatures
Daniele Caliari, Giulio Timelli, Tiziano Salata, Sergio Maestri, Giuseppe Cavagnini
University of Padova, Italy

SP519
Numerical simulation of the effects of preheating on electron beam additive manufactured Ti-6Al-4V build plate
Jun Cao, Philip Nash
Illinois Institute of Technology, USA

SP520
Preparation and characterization of porous magnesium for scaffold fabrication
Jaroslav Čapek, Dalibor Vojtěch
Institute of Physics CAS, Czech Republic

SP521
Ultrasound assisted hydrometallurgical process for Gold recovery from PCBs using thiosulphate as complexing agent
Pietrogiovannni Cerchier, Katya Brunelli, Manuele Dabalà
University of Padova, Italy

SP522
Optical and mechanical properties of Al-based amorphous/nanocomposite films with and without thermal treatment
Che-Min Chang, Jui-Hung Hsu, Jacob Chih-Ching Huang
National Sun Yat-sen University, Taiwan

SP523
Sample size and orientation effects of LiAlO2 single crystal in micro/nano scales
Hao-Chun Chen, Shou-Chi Tsai, Jacob Chih-Ching Huang
National Sun Yat-Sen University, Taiwan
SP524
Fluorinated copolymer membranes via initiated chemical vapor deposition
Paul Christian
TU Graz, Austria

SP525
The effect of final annealing heating rate to the abnormally growth grains in the Fe-3%Si steel
Fatavalkadri Citrawati, Md Zakaria Quadir, Paul Munroe
University of New South Wales, Australia

SP526
Phase progression during reactive sintering of NiTi using in situ neutron diffraction
Dan Cluff, Stephen Corbin, Michael Gharghouri
Dalhousie University, Canada

SP527
Phase transformations in nano-bainitic steels produced by direct-strip-casting
Jerome Cornu, Thomas Dorin, Peter Hodgson, Nicole Stanford
Deakin University, Australia

SP528
Dynamic piezoelectric behavior of lithium niobate at high temperature
Hector de Castilla, Pierre Bélanger, Ricardo Zednik
École de Technologie Supérieure, Canada

SP529
Study of austenite grain growth of micro-alloyed steels by using metallography and EBSD analysis
Lena Eisenhut, Daniel Rupp, Christian Motz
Universität des Saarlandes, Germany

SP530
Investigation of nanoscale interphase precipitates within Ti and Mo microalloyed steel
Sharmistha Dhara, Ross K.W. Marceau, Ilana B. Timokhina, Peter D. Hodgson
Deakin University, Australia

SP531
Correlation between aging effects and high temperature mechanical properties of the unmodified A356 foundry aluminium alloy
Maria Teresa Di Giovanni, Emanuela Cerri, Mattia Merlin, Daniele Casari, Lars Arneg, Gian Luca Garagnani
University of Parma, Italy
SP532  
Deformation behavior of extruded ZN11 magnesium plate  
Daria Drozdenko, Klaudia Horváth, Jan Bohlen, Sangbong Yi, Patrik Dobroň  
*Charles University in Prague, Czech Republic*

SP533  
Microstructure and texture evolution in nickel during accumulative roll bonding  
Jiaqi Duan, Michael Ferry, Quadir Zakaria  
*UNSW, Australia*

SP534  
Nanoindentation studies of inhomogeneities in high pressure torsion deformed bulk metallic glasses  
Christian Ebner, Stefan Noisternig, Christoph Gammer, Benjamin Escher, Simon Pauly, Jürgen Eckert, Hans-Peter Karnthaler, Christian Rentenberger  
*University of Vienna, Austria*

SP535  
Evolution of microstructure, phase composition and hardness in 316L stainless steel processed by high-pressure torsion  
Moustafa El-Tahawy, Jeno Gubicza, Yi Huang, Hyungyung Jo, Heeman Choe, Janos L. Labar, Terence G. Langdon  
*Eötvös Loránd University, Hungary*

SP536  
Texture evolution in multi-phase TNM sheet materials measured by means of high-energy X-ray diffraction  
Petra Erdely, Peter Staron, Emad Maawad, Norbert Schell, Volker Güther, Christiane Rothe, Joachim Klose, Helmut Clemens, Svea Mayer  
*Montanuniversität Leoben, Austria*

SP537  
Hydrogen-induced decomposition of Cu-Zr binary amorphous alloys  
Julien Fadonougbo, Jin-Yoo Suh, Soogyeong Han, Cheol-Hwee Shim, Gyeung-Ho Kim, Man-Ho Kim, Eric Fleury, Yong-Hwan Cho  
*Korea Institute of Science and Technology, Korea*

SP538  
Microstructure and mechanical properties of Mg-6Zn-1.4Y alloy prepared by rheo-squeeze casting process  
Xiaogang Fang, Shusen Wu, Shulin Liu  
*Huazhong University of Science and Technology, China*

SP539  
Microstructural evolution in a 9% Cr-3% Co-3% W-VNb steel during creep  
Alexandra Fedoseeva, Nadezhda Dudova, Rustam Kaibyshev  
*Belgorod State University, Russia*
SP540
Laser ultrasonic characterization of aluminium alloy coatings
Eva Grünwald, M. Ehmann, A. Binter, Rudolf Zelsacher, Robert Nuster, Günther Paltauf, Roland Brunner
Materials Center Leoben, Austria

SP541
Catalytic reaction with aunps/conjugated dibrock copolymers (iii)
Haruka Furukawa, Masahiro Yoshizawa-Fujita, Yuko Takeoka, Masahiro Rikukawa
Sophia University, Japan

SP543
Fracture toughness investigations of a ferritic-austenitic steel deformed by high pressure torsion
Katharina Grundner, Anton Hohenwarter, Reinhard Pippan
Austrian Academy of Sciences, Austria

SP544
Combination of microstructural investigation and simulation during the heat treatment of a creep resistant 11% Cr-steel
Bernadette Gsellmann, Dilek Halici, Mihaela Albu, Coline Béal, Bernhard Sonderegger
TU Graz, Austria

SP545
Modelling the transition from upper to lower bainite in multicomponent steels
Lei Guo, Hans Roelofs, H. K. D. H. Bhadeshia
University of Cambridge, United Kingdom

SP546
Structural evolution of Cu-Fe alloys deformed by high pressure torsion
Jinming Guo, Julian Rosalie, Zaoli Zhang
Austrian Academy of Sciences, Austria

SP547
Novel approaches for aluminium magnesium diffusion bonding by surface engineering
Stefan Habisch, Peter Mayr
TU Chemnitz, Germany

SP548
Effect of friction stir processing on the damage resistance of 6xxx series aluminium alloys
Florent Hannard, Rajmund Mokso, eric maire, thomas pardoens, aude simar
UCL, Belgium
SP550
Microstructural characterization of ultra-high strength steel welds by means of light optical microscopy and electron backscatter diffraction
Phillip Haslberger, Ronald Schnitzer, Daniel Schwarz, Irmgard Weißensteiner, Wolfgang Ernst, Helmut Clemens
Montanuniversitaet Leoben, Austria

SP551
Material and mechanical aspects of CMAS damage progression on thermal barrier coatings and its non-destructive detection
Yuki Hayashi, Siddharth Lokachari, Satoshi Yamagishi, Masakazu Okazaki
Nagaoka University of Technology, Japan

SP553
Influence of high-pressure torsion on the microstructure and the hardness of a Ti-rich high entropy alloy
Anita Heczel, Jenő Gubicza, Lola Lilensten, Julie Bourgon, Loic Perriere, Jean-Philippe Couzinié, Guy Dirras, Ivan Guillot, Yi Huang, Terence G. Langdon
Eötvös Loránd University, Hungary

SP554
Development of three-dimensional porous titanium web for bone defect filling
Yoko Henmi
Institute of Biomedical Sciences, The University of Tokushima Graduate School, Japan

SP555
Graphite-alumina and carbon nanotube-alumina sol-gel composite coatings on 304-L stainless steel for tribological applications
Karim Hentour, Viviane Turq, Alicia Weibel, Jean-Michel Sobrino, Pierre-François Cardey, Julien Garcia, Christophe Laurent
Université Paul Sabatier, Institut Carnot CIRIMAT, France

SP556
Plastic deformation of single crystals of iridium
Yukihiro Higashino, Norihiko Okamoto, Haruyuki Inui
Kyoto University, Japan

SP557
Characterization of the acoustic emission response and mechanical properties of Mg alloy with LPSO phase
Klaudia Horváth, Kristián Máthis, Daria Drozdenko, Gerardo Garces, Patrik Dobroň
Charles University in Prague, Czech Republic

SP558
Effect of intermetallic particles on the microstructure and elevated-temperature properties of Zr-added A356 alloy
Huilan Huang, Zhihong Jia, Xueli Wang, Yuan Xing, Qing Liu
Chongqing University, China
SP559
Stress and strain analysis in an Fe-Ga alloy single crystal
Takehito Ikeuchi, Shinki Tsubaki, Muneyuki Imafuku, Shun Fujieda, Yusuke Onuki, Shigeru Suzuki
Tokyo City University, Japan

SP561
Al-5Cu alloy processed by equal-channel angular pressing
Hailong Jia, Yanjun Li, Knut Marthinsen
NTNU, Norway

SP562
The influence of molybdenum on precipitation in strip cast steels containing niobium
Lu Jiang, Thomas Dorin, Ross Marceau, Katy Wood, Peter Hodgson, Nicole Stanford
Deakin University, Australia

SP563
Thermomechanical modelling of dissimilar friction melt bonding of AA6061 to dual-phase steel: Prediction of solidification cracking and residual stresses
Norberto Jimenez Mena, Jean-Marie Drezet, Pascal J. Jacques, Aude Simar
Université Catholique de Louvain, Belgium

SP564
Evaluation of bending response of heat-treatable aluminum alloys using crystal plasticity model
Jaimyun Jung, Hyoungseop Kim, Jaelk Yoon
POSTECH, Korea

SP569
Compression deformation of single crystals of the equiatomic CrMnFeCoNi high-entropy alloy
Marino Kawamura, Norihiko L. Okamoto, Katsushi Tanaka, Haruyuki Inui, Easo P. George
Kyoto University, Japan

SP570
Mechano-chemical synthesis of refractory alloys nanometric powders
Vasuki Kentheswaran, Sarah Dine, Jean-Philippe Couzinié, Dominique Vrel, Guy Dirras
Université Paris 13, France

SP571
Effects of die steel on the die soldering of aluminum alloy die-casting
Yu-Mi Kim, Se-Weon Choi, Young-Chan Kim, Sung-Kil Hong, Da-Som Kang, Min-Kook Moon
Chonnam national university, Korea
SP572
Determination of the grain coarsening temperature in Nb microalloyed steels by multiphase-field model
Jeong Min Kim, Suk Yoon Hong, Ji Hun Jang, Kyung Jong Lee
*Hanyang University, Korea*

SP573
Material flow studies in friction stir welding: Part I - numerical material flow Modeling, Part II - Cu inserts experiments, analysis
Krishna Kishore, Adepu Kumar
*National Institute of Technology- Warangal, India*

SP575
Effects of processing parameters on microstructure for semisolid forging of A356 alloy
Sewoong Park, Byung Keun Kang, Chun Pyo Hong, Il Sohn
*Yonsei University, Korea*

SP576
Formation of the C-type orbital-ordered state in the highly-correlated electronic system Ca1-xPrxMnO3
Kentaro Kojima, Yasuhide Inoue, Yasumasa Koyama
*Waseda University, Japan*

SP577
Effect of temperature on shear localization in Cu-Ag nanocomposites
Karoline Sophie Kormout, Bo Yang, Reinhard Pippan
*Erich Schmid Institute of Leoben, Austria*

SP578
Anisotropic defect recovery in HPT- and ECAP-processed ultrafine-grained Ni studied by difference dilatometry
Jaromir Kotzurek, Anton Hohenwarter, Macej Krystian, Wolfgang Sprengel, Reinhard Pippan, Roland Würschum
*Graz University of Technology, Austria*

SP579
Bulk metallic glasses composites produced via severe plastic deformation
Lisa Krämer, Verena Maier, Karoline Kormout, Reinhard Pippan, Yannick Champion
*Erich Schmid Institute, ÖAW, Austria*

SP580
Influence of thermo- and HIP treatments on the microstructure and mechanical properties of IN625 alloy parts produced by selective laser melting: a comparative study
Alena Kreitcberg, Vladimír Brailovskí, Sylvain Turenne, Victor Urlea, Cyrille Chanal
*Ecole de Technologie Superieure, Canada*
SP581
The effects of Fe on the microstructure and the interface between hypereutectoid Cu-Al-Fe coatings and steel substrate
Pawee Kucita, Shuncai Wang, Wen-Sheng Li, Marco Starink
University of Southampton, United Kingdom

SP582
Influence of peak temperature during weld simulation thermal cycle on microstructure and mechanical properties in weld HAZ of a low carbon quenched and tempered steel
Sanjeev Kumar, S. K. Nath
Indian Institute of Technology Roorkee, India

SP583
Effect of prior strain on damping capacity and mechanical property during heat treatment
Juho Kwak, changyong Kang, Hansang Kwon, Kwonhoo Kim
Pukyong National University, Korea

SP584
Micro-tensile testing of single block structures of lath martensitic steel
Kwangskik Kwak, Tsuyoshi Mayama, Yoji Mine, Kazuki Takashima
Kumamoto university, Japan

SP585
The role of grain boundary character on the hydrogen embrittlement of high-Mn TWIP steels
Young Jin Kwon, Junmo Lee, Da Hye Shim, Chong Soo Lee
POSTECH, Korea

SP587
Separating technology of pure zirconia from zircon-sand by the Ar-H2 arc plasma fusion and the microwave leaching
Jeong Han Lee, Sung Kil Hong, Da Som Kang
Chonnam national UNIV, Korea

SP588
A Study on the microstructural characterization of René 142 deposited atop René 80 processed through scanning laser epitaxy
Amrita Basak, Suman Das
Georgia Institute of Technology, USA

SP589
Synthesis of a metal matrix nanocomposite through high-pressure torsion
Han-Joo Lee, Jae-Kyung Han, Byungmin Ahn, Megumi Kawasaki, Terence Langdon
Hanyang University, Korea
SP590
Understanding and controlling the microscale silicon distribution for microstructure optimization of Q&P steels
Zhuangming Li, Stefan Zaefferer, Richard Thiessen
Max-Planck-Institut für Eisenforschung, Germany

SP591
Microstructural factors affecting deformation and fracture behaviors of advanced austenitic steels during creep
Hyun-Hwa Park, Joon-Oh Moon, Heon-Young Ha, Tae-Ho Lee, Hyun-Uk Hong
Changwon University, Korea

SP592
Strain induced martensitic transformation in Austempered Ductile Iron (ADI)
Xiaohu Li, Michael Hofmann, Patrick Saal, Markus Hölzel
FRM2, Germany

SP593
Thermal desorption spectroscopy study on the hydrogen behavior in a plasma charged aluminum
Toshiaki Manaka, Masaya Aoki, Goroh Itoh
Ibaraki University, Japan

SP594
Technical challenges in narrow-gap root pass welding during tandem and hybrid laser-arc welding of a thick martensitic stainless steel
Fatemeh Mirakhorli, Xinjin Cao, Tan Pham, Priti Wanjara, Jean-Luc Fihey
École de Technologie Supérieure, Canada

SP595
A study on the microstructure and the tensile fracture behavior of infiltrated TiC-steel composite
Nu-Ri Oh, Seung-Chan Cho, Sang-Kwan Lee, Hyun-Uk Hong
Changwon University, Korea

SP596
Microstructure evolution during LCF of a 10% Cr steel at room temperature
Roman Mishnev, Nadezhda Dudova, Rustam Kaibyshev
Belgorod State University, Russia

SP597
The effect of Si and Mn to phase decomposition of Cu-Zn alloys during annealing process
Tsuyoshi Miura
Graduate School of Science and Engineering for Education, Japan
SP598
Thermomechanical bonding between metallic glasses and various die materials
Amir Monfared, Weidong Liu, Liangchi Zhang, Mei Liu
UNSW, Australia

SP599
The influence of filler metal composition on microstructural evolution and isothermal solidification during transient liquid phase bonding of nickel
Eric Moreau, Eric Moreau, Stephen Corbin
Dalhousie University, Canada

SP600
Crystallographic investigation of the initial solidification grain structure in Al-Si alloy
Hironori Morishita, Hisao Esaka, Kei Shinozuka
National Defense Academy, Japan

SP601
Effect of deformation structure on strength of a low-alloyed Cu-Cr-Zr alloy
Anna Morozova, Iaroslava Shakhova, Andrey Belyakov, Rustam Kaibyshev
Belgorod State University, Russia

SP602
High temperature mechanical properties of harmonic structure designed SUS304L austenitic stainless steel
Masashi Nakatani, Yuya Fujiki, Mie Ota, Sanjay K. Vajpai, Kei Ameyama
Ritsumeikan University, Japan

SP603
Crystallographic features of the approximant H phase in the Mn-Si-V alloy system
Kei Nakayama, Takumi Komatsuzaki, Yasumasa Koyama
Waseda University, Japan

SP605
Influence of nano reinforcement volume-percentage on fabrication of surface nano composite by friction stir processing
Parumandla Naresh, Adepu Kumar, Mugada Krishna Kishore
NIT Warangal, India

SP606
Characterization of product phases formed from austenite during isothermal treatments around the Ms temperature in a low-C high-Si steel
Alfonso Navarro-López, Javier Hidalgo, Jilt Sietsma, Maria J. Santofimia
Delft University of Technology, The Netherlands
SP607
In-situ investigation of the kinetics of reverse austenite formation in supermartensitic stainless steel
Frank Nießen, Matteo Villa, Daniel Apel, Olaf Keßler, Michael Reich, Marcel Somers, John Hald
Technical University of Denmark, Denmark

SP608
Characteristic features of the modulated structure appearing in the multiferroic material Bi1-xSmxFeO3 around x= 0.15
Masashi Nomoto, Takumi Inoshita, Yasuhide Inoue, Yoichi Horibe, Yasumasa Koyama
WASEDA University, Japan

SP609
Deformation microstructures and mechanical properties of an austenitic stainless steel subjected to warm rolling
Marina Odnobokova, Andrey Belyakov, Rustam Kaibyshev
Belgorod State University, Russia

SP610
Crystal plasticity finite element analysis of micro-tensile behaviour of dual-phase steel subjected to pre-straining
Shinya Ogata, Tsuyoshi Mayama, Yoji Mine, Kazuki Takashima
Kumamoto University, Japan

SP611
A study on the microstructure and the tensile fracture behavior of infiltrated TiC-steel composite
Nu-Ri Oh, Seung-Chan Cho, Sang-Kwan Lee, Hyun-Uk Hong
Changwon National University, Korea

SP613
Microstructure formation of high pressure torsion processed (alpha gamma) two phase stainless steel
Mie Ota, Daiki Nanya, Sanjay Kumar Vajpai, Kei Ameyama, kaveh Edalati, Zenji Horita
Ritsumeikan University, Japan

SP614
A new method to study the thermodynamics of homogeneous nucleation of bcc phase from fcc in pure iron by molecular dynamics
Xiaoqin Ou, Jilt Sietsma, Maria Santofimia
Delft University of Technology, The Netherlands

SP616
Effect of Aluminum content on texture formation behaviors in magnesium alloy
Minsoo Park, Junho Choi, Kwonhoo Kim
Pukyong national university, Korea
SP617
Influence of initial heat treatment on microhardness evolution in an Al-Mg-Sc alloy processed by high-pressure torsion
Pedro Pereira, Yi Huang, Terence Langdon
University of Southampton, United Kingdom

SP618
Effect of the secondary phase precipitation on the corrosion resistance of different duplex stainless steels
Luca Pezzato, M. Lago, M. Breda, K. Brunelli, I. Calliari
University of Padova, Italy

SP619
Electrodeposited molybdenum oxide films and patterned submicrometer motifs: structure and mechanical properties
Alberto Quintana, Aida Varea, Miguel Guerrero, Santiago Suriñach, Maria Dolors Baró, Jordi Sort, Eva Pellicer
Universitat Autònoma de Barcelona, Spain

SP620
Control of physical properties of anodic coatings obtained by anodizing in aluminate solutions
David Alberto Quintero Giraldo, Maryory Gómez, Jorge A. Calderón, Juan G. Castaño, Félix Echeverría, Peter Skeldon, Michele Curioni, George Thompson, Etushi Tsuji, Yoshitaka Aoki, Hiroki Habazaki
Universidad de Antioquia, Colombia

SP621
Joining of dual phase steel DP 600 – benefits of weld bonding
Sivaraman Rajan, G. V. Sarathkumar, G. D. Janaki Ram, M. Kamaraj
Indian Institute of Technology Madras, India

SP622
Softening kinetics of plain carbon steels containing dilute Nb additions
Bhushan Rakshe, Eric Palmiere, Jitendra Patel
University of Sheffield, United Kingdom

SP623
Biocompatible ceramic-biopolymer coatings obtained by electrophoretic deposition on electron beam structured titanium alloy surfaces
Claudia Ramskogler, Luis Eduardo Cordero Arias, Fernando Warchomicka, Aldo R. Boccaccini, Christof Sommeritsch
Graz University of Technology, Austria

SP624
Fatigue in nanocrystalline, bimodal and ultrafine-grained nickel in respect of thermal and mechanical stability
Dominic Rathmann, Michael Marx, Christian Motz
Saarland University, Germany
SP625
Effect of prior austenite grain size on bainite formation: Faster or slower kinetics?
Ashwath M. Ravi, Jilt Sietsma, Maria J. Santofimia
Delft University of Technology, The Netherlands

SP626
Characterization of the oxygen pick-up behaviour of a nickel-based super alloy powder under different sintering atmosphere conditions using a combined TG-GC-MS technique
Addison Rayner, Catherine Whitman, Stephen Corbin
Dalhousie University, Canada

SP627
On the influence of microstructure and thermally activated processes on anomalous yielding point phenomena during nanoindentation
Oliver Renk, Anton Hohenwarter, Reinhard Pippan
Austrian Academy of Sciences, Austria

SP628
Effect of previous grain size on recrystallization texture and the formability of a Nb ferritic stainless steel
Daniella Rodrigues, Cláudio Moreira ALCântara, Dagoberto Brandão Santos, Tarcísio Reis de Oliveira, Berenice Mendonça Gonzalez
Universidade Federal de Minas Gerais, Brazil

SP629
Solid-state bonding of 5052 aluminum alloy/316L stainless steel by using organic salt formation/decomposition reaction
Hiroki Saito, Shinji Koyama
Gunma University, Japan

SP630
Effect of Cu and Ag addition on mechanical properties in Al-Mg-Ge alloys aged at different temperatures
Tatsuya Sato, Akihiro Kawai, Seungwon Lee, Susumu Ikeno, Kenji Matsuda
University of Toyama, Japan

SP631
Simulating cosegregation of carbon and oxygen in molybdenum with DFT
Daniel Scheiber, Lorenz Romaner, Peter Puschnig, Reinhard Pippan
Karl Franzens University, Austria
SP632
Experimental and theoretical EELS study of rhenium borides
Felix Schmuck, Dominik Spahr, Björn Winkler, Christopher Neun, Victor Milman, Miguel Avalos-Borja, Héctor Gabriel Silva-Pereyra, Benedikt Petermüller, Hubert Huppertz
Goethe Universität Frankfurt, Germany

SP633
Influence of different welding processes on the mechanical properties of structural steel S960
Christian Schneider, Wolfgang Ernst, Ronald Schnitzer, Herbert Staufer, Norbert Enzinger
Institute of Materials Science and Welding, Austria

SP634
Phase decomposition of a single-phase nanocrystalline CoCrFeMnNi high-entropy alloy
Benjamin Schuh, Francisca Mendez-Martin, Bernhard Völker, Easo P. George, Helmut Clemens, Reinhard Pippan, Anton Hohenwarter
Montanuniversität Leoben, Austria

SP635
The effects of interfacial heat transfer coefficient on the microstructure of high-pressure Die-cast magnesium alloy AM60B
Pouya Sharifi, Kumar Sadayappan, Jeff Wood
Western University, Canada

SP636
Crystallographic features of states near the state boundary between the C- and A-type orbital-ordered states in Sr1-xRxMnO3 (R=Nd, Sm)
Rina Shimasaki, Ayumi Shiratani, Hiroki Sato, Yasuhide Inoue, Yasumasa Koyama
Waseda University, Japan

SP637
Development of porous metallic femoral stems
Vladimir Brailovski, Patrick Terriault, Charles Simoneau, Mathieu Dumas, Bruno Jette
Ecole de technologie superieure, Canada

SP638
An extended mean field model for coupling discontinuous dynamic RX and post-dynamic RX
Guillaume Smagghe, David Piot, Frank Montheillet, Marc Bernacki, John Joseph Jonas, Guillaume Kermouche, Aurore Montouchet
EMSE, France
SP639
Preparation and characterization of nanostructured (Zn,Al) layered double hydroxides
Peiman Soltani, Lina Di Giamberardino, Alessio Mattoccia, Pier Gianni Medaglia, Roberto Montanari, Maria Richetta, Alessandra Varone, Saulius Kaciulis, Alessio Mezzi
ISMN-CNR, Italy

SP640
Microstructural influence on low-cycle fatigue properties of high-manganese Fe-Mn-C steels
Seok Weon Song, Seok Hwan Jung, Chong Soo Lee
POSTECH, Korea

SP641
Determination of the boron and oxygen K–edge in orthoboric acid by electron energy loss spectroscopy
Dominik Spahr, Felix Schmuck, Björn Winkler, Eiken Haussühl, Rita Luchitskaia, Victor Milman, Miguel Avalos-Borja, Hector G. Silva-Pereyra
Goethe Universität Frankfurt, Germany

SP642
The effects of intercritical annealing temperature and initial microstructure on the stability of retained austenite in a 0.1C-6Mn steel
Katharina Steineder, Daniel Krizan, Reinhold Schneider, Coline Béal, Christof Sommitsch
University of Applied Sciences Upper Austria, Austria

SP643
Electron beam welding of TZM sheets
Markus Stuetz, Diogo Oliveira, Norbert Enzinger, Matthias Rüttinger, Nikolaus Reheis, Heinrich Kestler
IWS TU Graz, Austria

SP644
Systematic investigation of the temperature field in Atmospheric Plasma Processing (APP)
Maximilian Stummer, Philipp Stögmüller, Norbert Enzinger
Graz University of Technology, Austria

SP645
The effect of Ni on the surface oxide layer during simulated brazing of aluminum alloys
Colin Tadgell, Mary Wells, Stephen Corbin, Sooky Winkler, Leo Colley, Brian Cheadle
Dalhousie University, Canada
SP646
Microstructure observations of graphite in gray cast iron and ductile cast iron using TEM
Makoto Takezawa, Seungwon Lee, Susumu Ikeno, Kenji Matsuda
University of Toyama, Japan

SP647
The effect of thermal cycling on microstructure of Er2O3 coating layer prepared by MOCVD process
Masaki Tanaka, Makoto Takezawa, Yoshimitsu Hishinuma, Teruya Tanaka, Takeo Muroga, Seungwon Lee, Susumu Ikeno, Kenji Matsuda
University of Toyama, Japan

SP648
Analysis of Thin Strip Shape and Profile in cold rolling: A way to Improve Strip Profile and Mechanical Properties
Hasan Tibar, Zhentyi Jiang
University of Wollongong, Austria

SP649
Effect of tempering on microstructure and creep properties of a P911-type steel
Evgeniy Tkachev, Marina Odnobokova, Alla Kipelova, Andrey Belyakov, Rustam Kaibyshev
Belgorod State University, Russia

SP651
Reverse transformation behavior induced by shot-peening for SUS410S martensitic stainless steel
Nagomi Tsuboi, Serika Higa, Hisashi Sato, Yoshimi Watanabe
Nagoya Institute of Technology, Japan

SP652
Micro-mechanical characterisation of hydrogen embrittlement related to twin boundary in type 304 stainless steel
Shohei Ueki, Kaoru Koga, Yoji Mine, Kazuki Takashima
Kumamoto University, Japan

SP653
Multi-stimuli responsive polymer gels via initiated chemical vapor deposition
Katrin Unger
Graz University of Technology, Austria

SP564
Investigation of microstructure evolution and phase transformations in ultra-fine grained metastable beta Ti alloys
Kristína Václavová, Josef Stráský, Jakub Čižek, Petr Harcuba, Svetlana Gatina, Veronika Polyakova, Irina Semenova, Miloš Janeček
Charles University in Prague, Czech Republic
SP655
Texture gradient through thickness of a cross roll-bonded aluminum composite
Kévin Verstraete, Thierry Baudin, Anne-Laure Helbert, François Brisset
ICMMO, France

SP656
High heating rates and their influences on austenite formation
Annika Vieweg, Erwin Povoden-Karadeniz, Peter Raninger, Reinhold Ebner
Materials Center Leoben Forschung GmbH, Austria

SP657
Laser direct metal deposition of M2 high speed steel: Microstructure evolution and crystallization behavior during annealing
Yiqiao Yang, Xiang Zhao, Shuang Jiang
Northeastern University, China

SP658
The effect of initial micro-structures on deformation behaviors of commercial pure titanium
Tongbo Wang
Beijing University of Science and Technology, China

SP659
A nanotwinned surface layer generated by high strain-rate deformation in a TRIP steel
Pan Xie, Cuilan Wu, Yan Chen, Jianghua Chen, Xiubo Yang, Shiyun Duan, Ning Yan, Xueao Zhang, Jingyue Fang
Hunan university, China

SP660
Temperature field evolution during flash butt welding of railway rails
Leonhard Weingrill, Norbert Enzinger
TU Graz, Austria

SP661
Effect of different bainite morphologies on the formability of advanced high strength steels
Irmgard Weißensteiner, Thomas Hebesberger, Helmut Clemens
Montanuniversität Leoben, Austria

SP662
Effects of microalloy additions and thermomechanical processing on austenite grain size control in medium carbon steel bar rolling
Blake Whitley, John Speer, Robert Cryderman, Robert Goldstein, Kip Findley, David Matlock
Colorado School of Mines- Advanced Steel Processing & Products Research Center, USA
SP663
Dissimilar electron beam welds of nickel base alloy A625 with a 9% Cr-steel for high temperature applications
Christopher Wiednig, Ernst Plesiutschnig, Coline Beal, Norbert Enzinger, Claus Lochbichler
Graz University of Technology, Austria

SP664
Mg impact upon the generalized stacking fault energy of Al
Dongdong Zhao
NTNU, Norway

SP665
Further study on the effect of environment on fatigue crack growth behavior of 2000 and 7000 series aluminum alloys
Ryuichi Yamada, Goroh Itoh, Akira Kurumada, Manabu Nakai
Ibaraki University, Japan

SP666
Crystal structure, microstructure and martensitic transformation path in Ni-Mn-In alloys
Haile Yan, Yudong Zhang, Claude Esling, Xiang Zhao, Liang Zuo
Key Laboratory for Anisotropy and Texture of Materials, China

SP667
The effect of grain size on oxidation resistance of pure titanium
Yang Yang, Kitashima Tomonori, Hara Toru, Hara Yuka, Yamabe-Mitarai Yoko, Liu Lijun
Kyushu University, Japan

SP668
Crystallographic features of the states appearing in the multiferroic material , Bi1-xLaxFeO3 around x = 0.2
Haruka Yoshida, Masashi Nomoto, Takumi Inoshita, Yasuhide Inoue, Yoichi Horibe, Yasumasa Koyama
Waseda University, Japan

SP670
Evaluation of parameters effect on microstructure and mechanical properties in TIG welding of A105 to A106 steels
Afshin Yousefi, Davood Ghasemi, Goroh Itoh
Ibaraki University, Japan

SP671
Prediction of carbide coarsening and its effect on the fretting wear behavior of an Inconel 690 SG tube for nuclear power plants
Jaeyong Yun, Hosik Lee, Woongsooon Kang, Seonjin Kim
Hanyang university, Korea
SP672
Fatigue crack growth in forged and flow formed IN718
Costa Coleman, Martin Bache, Carl Boettcher
Swansea University, United Kingdom

SP673
Characterization of phase transformations occurring in Ti-15Mo by in-situ methods
Pavel Zháňal
Charles University in Prague, Faculty of Mathematics and Physics, Czech Republic

SP675
Microstructure and mechanical properties of medium manganese steel plate with high strength and toughness
Ying Zou, YunBo Xu, ZhiPing Hu, Hui Liu, XiaoLong Yang, XiaoDong Tan,
YongMei Yu
Northeastern University, China

SP676
Characterization and mechanical properties of a 0.2C steel produced by Q&P
Pierre Huyghe, Loic Malet, Stéphane Godet, Matteo Caruso, Cédric Georges
Université Libre de Bruxelles, Belgium

SP677
Components of a heart catheter system
Gregor Gatomski, Jordanka Kostova, Hong-Nhung Nguyen, Loredana Santo, Fabrizio Quadrini, Andreas Foitzik
Technical University of Applied Sciences Wildau, Germany

SP680
Crystallographic features of electronic states in the highly-correlated electronic system Sr1-xSmxMnO3 around x = 0.50
Misato Yamagata, Yasuhide Inoue, Yasumasa Koyama
Waseda University, Japan

SP681
Harnessing the multifunctionality in nature: A bioactive agent release system with self-antimicrobial and immunomodulatory properties
Angela Mutschler, Hayriye Ozcelik, Engin Vrana, Adele Carrado, Alexandru Gudima, Pierre Schaaf, Julia Kzhyschkowska, Philippe Lavalle
INSERM, France

SP682
Study of growth kinetics of deformation twins in AZ31 magnesium alloy
Wenwen Wei, Erwin Povoden-Karadeniz, Ernst Kozeschnik
TU Wien, Austria
SP683
Miniaturized flow-through bioreactor for processing and testing in pharmacology
Andrea Böhme, Lars Radke, Felix Schütze, Sylvio Schneider, Sabine Sauer, Loredana Santo, Fabrizio Quadrini, Michael Hummel, Christoph Giese, Marcus Frohme, Andreas H. Foitzik
Technical University of Applied Sciences Wildau, Germany

SP684
Creep study of martensitic steels developed within the project Z-ultra: Experiments and modelling
Surya Deo Yadav, Bernhard Sonderegger, Coline Beal, Jiří Svoboda, Elguja Kutelia, Razmik Barseghyan, Cecilia Poletti
Graz University of Technology, Austria

SP685
Numerical and experimental investigation on dissimilar friction stir welded butt joints made of AA7020-T651 and AA6060-T6
Hugo Robe, Landry Giraud, Amevi Tongne, Jean-Michel Bergheau, Christophe Desr paysaud, Philippe Bocher, Eric Feulvarch
LTDS, France

SP686
Tunability of the domain structure of Pb_xSr_1-xTiO_3 thin film capacitors and its effect on the dielectric response
Stephanie Fernandez-Pena, Céline Lichtensteiger, Pavlo Zubko, Christian Weyman, Stefano Gariglio, Jean-Marc Triscone
University of Geneva, Switzerland

SP687
Innovative thin films by DC reactive pulsed co-sputtering
ICMCB-CNRS, France

SP689
Phases stability study of the shape memory alloy CuAl-X (X = Be, Zn, Ti, Ni, Ag and Au) by ab initio calculations
Nassim Boudalia, Jean-Marc Raulot, Etienne Patoor, Claude Esling
University of Lorraine, France

SP690
Analysis of microtexture development and deformation heterogeneity in the weld region of friction stir welded AZ31 Mg alloy
Min-Seong Kim
Korea
SP691
Measurement of residual stresses in linear friction welded in-service Inconel 718 superalloy by neutron diffraction
Mathew Smith
Canada

SP692
Comparative study of optimization in pultrusion with pre-heating and die-cooler temperature for improved cure
Rita de Cassia Costa Dias, Ralf Schledjewski
Montanuniversität Leoben, Austria

SP693
Measurement of local strain during martensitic transformations
Yadunandan Das
The Open University, United Kingdom

SP694
The effect of thermo-mechanical processing on grain size of a novel maraging steel for shaft applications
Matthew Williams
Swansea University, United Kingdom

SP695
Continuous modelling of dislocation cores using a mechanical theory of dislocation fields
Kodjovi Gbemou, Jean-Marc Raulot, Vincent Taupin, Claude Fressengeas
University of Lorraine, France

SP696
Effect of as-rolled microstructure on static recrystallization characteristics and texture evolution during annealing
Jing Su
McGill University, Canada
THERMEC’2016

Inaugural Session

May 30 (Monday)

Messe Graz Ball Room

8.30 AM – 9.00 AM: Introductory Remarks

* Welcome: Professor Christof Sommitsch - General Chair

* Introductory Remarks: Professor T. Chandra – THERMEC’2016 International Advisory Committee

* Official Inaugural Address: Prof.Dr. Harald Kainz: Rector- TU Graz

* Professor Ernst Kozeschnik: Program Chairman (Vote of Thanks)

9.00 AM – 9.30 AM: Inaugural Distinguished Plenary Lecture

“Engineering of Bio-inspired Functional Surfaces”

Prof. Dr. Eduard Arzt: Saarland University, Germany

Chairman: Prof. Reinhard Pippan: Eric Schmid Institute, Austria

9.30 AM – 10.15 AM Coffee Break
Session A

Room: Hall 1a
Session: A1, Venue: (Room: Hall 1A)

Advanced Steels (HSLA/IF/TRIP/Stainless/HNS) Stainless Steels 1

Session Chairs: Setsuo Takaki, Japan & Helena Van Swygenhoven, Switzerland

A1 May-30 10:30 Keynote
* Effect of C and N on deformation behavior and stacking fault energy of Fe-Cr-Mn austenitic stainless steels
Sung-Joon Kim
POSTECH, Korea

A1 May-30 11:00
* Regularities of microstructure evolution and strengthening mechanisms of austenitic stainless steels subjected to large strain cold working
Andrey Belyakov, Marina Odnobokova, Iaroslava Shakhova, Rustam Kaibyshev
Belgorod State University, Russia

A1May-30 11:20
*Characterisation of hydrogen embrittlement of metastable austenitic stainless steel using micro-tensile testing
Yoji Mine, Oliver Kraft, Kazuki Takashima
Kumamoto University, Japan

A1 May-30 11:40
* The effect of sample preparation on the microstructure of duplex stainless steels
Timo Juuti, Antti Kaijalainen, Sampo Usikallio, Severi Anttila, Esa Heinonen, Nyo Tun
Tun, David Porter
University of Oulu, Finland

A1 May-30 12:00
The observation of austenite to ferrite martensitic transformation in an Fe-Mn-Al austenitic steel after cooling from high temperature
Wei-Chun Cheng, Kun-Hsien Lee, Shu-Mao Lin, Shao-Yu Chien
National Taiwan University of Science and Technology, China

A1 May-30 12:20
* Mechanical stability of austenite in carbon- and nitrogen-added metastable austenitic stainless steel
Takuro Masumura, Kohei Fujino, Toshihiro Tsuchiyama, Setsuo Takaki, Kazuhiko Adachi
Kyushu University, Japan

* Invited Presentation
A1 May-30 12:40
* Stabilization of retained austenite by carbon and nitrogen in Q&P processed martensitic stainless steel
Toshihiro Tsuchiyama, Junya Tobata, Setsuo Takaki
Kyushu University, Japan

A1 May-30 13:00
* In situ investigation on the deformation-induced phase transformation of metastable austenite in Fe-13%Cr-4%Ni martensitic stainless steel
Pei Wang, Dianzhong Li, Yiyi Li
Institute of Metal Research, Chinese Academy of Sciences, China

A1 May-30 13:20
* Potential for improved machinability in carbon steels via graphitisation
Aqil Inam, David Edmonds
University of Leeds, United Kingdom

Lunch break 13:40 - Sessions restarts at 14:10
**Session: A2, Venue:** (Room: Hall 1A)

Advanced Steels (HSLA/IF/TRIP/Stainless/HNS) Stainless Steels 2

**Session Chairs:** Stephanie Godet, Belgium & John Jonas, Canada

---

**A2 May-30 14:10 Keynote**
* Thermomechanical Processing of Medium Manganese Steels
Atsushi Ito, Yo-ichiro Matsui, Akinobu Shibata, Nobuhiro Tsuji
* Kyoto University, Japan

A2 May-30 14:40
* Anisotropic plasticity and crystallographic fatigue crack growth in lath martensite structures of carbon steel
Yoji Mine, Takuya Matsumura, Shohei Ueki, Kazuki Takashima
* Kumamoto University, Japan

A2 May-30 15:00
* Recrystallization kinetics and texture evolution of Nb stabilized ferritic 430 stainless steel cold rolled and isothermal annealed
Paula Malta, Iane Moutinho, Aline Vasconcelos, Davi Alves, Dagoberto Santos
* Universidade Federal de Minas Gerais, Brazil

A2 May-30 15:20
The microstructural criterion for creep strength breakdown in a 10% Cr martensitic steel
Nadezhda Dudova, Roman Mishnev, Rustam Kaibyshev
* Belgorod State University, Russia

**Session A2: Advanced Steels (HSLA/IF/TRIP/Stainless/HNS)**

Coffee / Tea break 15:40 to 16:10

A2 May-30 16:10
Effects of warm working on microstructural and shear deformation properties of TRIP-aided martensitic steel
Tomohiko Hojo, Takuya Kochi, Koh-ichi Sugimoto
* Iwate University, Japan

A2 May-30 16:30
Microstructure and mechanical properties of medium manganese steel plate with high strength and toughness
Ying Zou, YunBo Xu, ZhiPing Hu, Hui Liu, XiaoLong Yang, XiaoDong Tan, YongMei Yu
* Northeastern University, China
A2 May-30 16:50
Mechanical properties of duplex stainless steel with martensitic phase and austenitic phase
Yoshiki Morimoto, Taichirou Mizoguchi
NISSHIN STEEL CO.LTD, Japan

A2 May-30 17:10
*Influence of grain size on work-hardening behavior in 12Cr stainless steel
Masataka Yoshino, Chikara Kami
JFE Steel Corporation, Japan

A2 May-30 17:30
*The work-hardening behaviour of Fe-Ni and Fe-Cr-Ni austenitic alloys
Chihiro Furusho, Hiroyuki Takabayashi, Setsuo Takaki, Daichi Akama
Daido Steel Co., Ltd., Japan

A2 May-30 17:50
*Multiaxial strain path changes in 316L steel: In situ neutron diffraction and multi-scale modelling
T. Panzner, M. Upadhyay, S. Van Petegem, Helena Van Swygenhoven-Moens
Paul Scherrer Institute & EPFL, Switzerland

A2 May-30 18:10
*Effect of nitrogen on age-hardening of metastable austenitic stainless steel after cold drawing
Shota Yamasaki, Kohji Takano
Nippon Steel & Sumikin Stainless Steel Corporation, Japan

A2 May-30 18:30
Development of hetero-nano structure in a 316LN austenitic stainless steel during cold-rolling
Chihiro Watanabe, Yoshihito Aoyagi, Yoshikazu Todaka, Masakazu Kobayashi, Hiromi Miura
Kanazawa University, Japan

A2 May-30 18:30
Kinetic behavior of Fe-Ni-C martensitic steels during aging at room temperature
Sergiu Curelea, Sophie Cazottes, Frederic Danoix, Mohamed Goune, Helena Zapolsky, Philippe Maugis, Thierry Epicier, Mykola Lavrskyi, Sara Chentouf
MATEIS, University of Lyon, INSA-LYON, France

* Invited Presentation
Session: A3, Venue: (Room: Hall 1A)

Advanced Steels (HSLA/IF/TRIP/Stainless/HNS) 3

Session Chairs: Dirk Ponge, Germany & Sung Joon Kim, Korea

A3 May-31 8:30 Keynote
* Grain size dependence on the yielding behavior of iron
Setsuo Takaki
Kyushu University, Japan

A3 May-31 9:00
* Influence of prior-austenite grain structure on delamination toughening of ultra-high-strength low-alloy steels processed by warm tempforming
Yuji Kimura, Tadanobu Inoue
National Institute for Materials Science, Japan

A3 May-31 9:20
* Development of medium-Mn steels via batch and continuous annealing
Daniel Krizan, Katharina Steineder, Johannes Rehrl, Reinhold Schneider, Coline Béal, Christof Sommitsch
Voestalpine Steel Division GmbH, Austria

A3 May-31 9:40
Effect of prior austenite grain size on yielding behavior of the low-C martensitic stainless steel
Kazumasa Kubota, Masahito Ueda, Hideki Nakagawa
Aichi Steel Corporation, Japan

A3 May-31 10:00
*A study on the microstructural evolution of low and medium Mn TRIP steel during annealing process
Kyooyoung Lee, Joohyun Ryu, Seawoong Lee, Jeongin Kim, Dongwoo Suh
POSCO, Korea

A3 May-31 10:20
* Design of third generation advanced high strength steels for processing in the continuous galvanizing line
Joseph McDermid, Kazi Bhadhon, R. Kavitha, Elizabeth McNally, Daniella Pallisco, Armando Salinas-Rodriguez, Frank E. Goodwin
McMaster University, Canada

* Invited Presentation
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>A3 May-31 11:00 *Austenite formation along dislocations in medium manganese steels</td>
<td>Margarita Kuzmina, Dirk Ponge, Stefanie Sandlöbes, Michael Herbig, Dierk Raabe</td>
</tr>
<tr>
<td></td>
<td>Max-Planck-Institut für Eisenforschung GmbH, Germany</td>
<td></td>
</tr>
<tr>
<td>11:20</td>
<td>A3 May-31 11:20 *Design of hybrid and composite tool steels by mechanical milling and spark plasma sintering</td>
<td>Massimo Pellizzari</td>
</tr>
<tr>
<td></td>
<td>University of Trento, Italy</td>
<td></td>
</tr>
<tr>
<td>11:40</td>
<td>A3 May-31 11:40 Macrosegregation of alloying elements in hot-top of large high strength steel ingot</td>
<td>Abdelhalim Loucif, Davood Shahriari, Chunping Zhang, Mohammad Jahazi, Louis-Philippe</td>
</tr>
<tr>
<td></td>
<td>Lapierre-Boire, Rami Tremblay, École de technologie supérieure, Canada</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>A3 May-31 12:00 *Laboratory simulations of strip casting for production of dual-phase and transformation-induced plasticity steels</td>
<td>Zhiping Xiong, Andrii Kostryzhiev, Ahmed Saleh, Nicole Stanford, Elena Pereloma</td>
</tr>
<tr>
<td></td>
<td>University of Wollongong, Australia</td>
<td></td>
</tr>
<tr>
<td>12:20</td>
<td>A3 May-31 12:20 Effect of microalloying elements on phase transformation, microstructure and mechanical properties in dual-phase steels</td>
<td>Ekaterina Bocharova, Kirill Khlopkov, Roland Sebald</td>
</tr>
<tr>
<td></td>
<td>ThyssenKrupp Steel Europe, Germany</td>
<td></td>
</tr>
<tr>
<td>12:40</td>
<td>A3 May-31 12:40 *Continuous versus conventional heat treatment of hardenable steels</td>
<td>Sophie Primig, Stephanie Sackl, Harald Leitner, Michael Zuber, Helmut Clemens</td>
</tr>
<tr>
<td></td>
<td>University of New South Wales, Australia</td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td>A3 May-31 13:00 *The low-nickel cryogenic steel alloyed by nitrogen</td>
<td>Anatoly Svyazhin, Lyudmila Kaputkina, Inga Smrygina</td>
</tr>
<tr>
<td></td>
<td>National University of Science and Technology MISiS, Russia</td>
<td></td>
</tr>
<tr>
<td>13:20</td>
<td>A3 May-31 13:20 *2.1 GPa ultra-strong nanostructured steel with unexpected large ductility</td>
<td>Mingxin Huang</td>
</tr>
<tr>
<td></td>
<td>The University of Hong Kong, China</td>
<td></td>
</tr>
</tbody>
</table>

**Lunch break 13:30 - Sessions restarts at 14:10**
Session: A4, Venue: (Room: Hall 1A)

Advanced Steels (HSLA/IF/TRIP/Stainless/HNS) 4

Session Chairs: David Edmonds, UK & Oscar Ruano, Spain

A4 May-31 14:10
* Relationship between microstructures and mechanical properties of temper heat treated metastable austenitic stainless steel
Kazuhiko Adachi, Masayoshi Sawada, Masaru Abe
NIPPON STEEL & SUMITOMO METAL CORPORATION, Japan

A4 May-31 14:30
* Migration of interfaces in low carbon steels at low temperatures
Jilt Sietsema, Maria J. Santofimia
Delft University of Technology, Netherlands

A4 May-31 14:50
* The influence of microstructure on low cycle fatigue behavior of steels containing retained austenite
Kip Findley, Alex Ly, Dan Shields, Shennia Zhang
Colorado School of Mines, USA

A4 May-31 15:10
* Transformation mechanism and microstructure optimization of a novel high strength high ductility hot rolled medium Mn steel
Wei Xu
Northeastern University, China and Delft University of Technology, The Netherlands

Session A4: Advanced Steels (HSLA/IF/TRIP/Stainless/HNS)

Coffee / Tea break 15:30 to 16:00

A4 May-31 16:00
* Microstructure and mechanical properties of Fe-Mn-Al-C low density steels
Hua Ding, Dong Han, Zhihui Cai, Minghui Cai
Northeastern University, China

A4 May-31 16:20
* An investigation of recrystallization behavior of a high-manganese transformation-induced plasticity (TRIP) steel
Xing Li, Yang Zhao, Liqing Chen
Northeastern University, China

* Invited Presentation

Thermec '2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
A4 May-31 16:40
*Effects of magnetic field intensity on carbon diffusion coefficient in pure iron in the paramagnetic ferrite region
Huihui Li, Yan Wu, Xiang Zhao
Northeastern University, China

A4 May-31 17:00
* Effect of continuous annealing temperature on microstructure and mechanical properties of a high strength cold-rolled DP980 steel
Kai Zhou, Ying Zou, Yun Bo Xu, ZhiPing Hu, XiaoLong Yang, XiaoDong Tan, YongMei Yu, Hua Zhan
Northeastern University, China

A4 May-31 17:20
* Drawing Fe-6.5wt.%Si wires with enhanced formability
Shibo Wen, Hui Li, Yongfeng Liang, Wei Yang, Feng Ye
University of Science and Technology Beijing, China

A4 May-31 17:40
* The effect of thermomechanical processing temperature-strain-time parameters on the mesostructure formation
Georgii Kodzhaspirov, A. Rudskoy
Peter the Great St. Petersburg Polytechnic University, Russia

A4 May-31 18:00
Microstructure of Z-phase strengthened martensitic steels: meeting the 650°C challenge
Fang Liu, Masoud Rashidi, John Hald, Lutz Reissig, Hans-Olof Andren
Chalmers University of Technology, Sweden

A4 May-31 18:20 Student
In-situ investigation of the kinetics of reverse austenite formation in supermartensitic stainless steel
Frank Nießen, Matteo Villa, Daniel Apel, Olaf Keßler, Michael Reich, Marcel Somers, John Hald
Technical University of Denmark, Denmark

A4 May-31 18:30 Student
A study on the microstructure and the tensile fracture behavior of infiltrated TiC-steel composite
Nu-Ri Oh, Seung-Chan Cho, Sang-Kwan Lee, Hyun-Uk Hong
Changwon University, Korea

A4 May-31 18:40 Student
Microstructural factors affecting deformation and fracture behaviors of advanced austenitic steels during creep
Hyun-Hwa Park, Joon-Oh Moon, Heon-Young Ha, Tae-Ho Lee, Hyun-Uk Hong
Changwon University, Korea

A4 May-31 18:50 Student
Microstructure formation of high pressure torsion processed (alpha gamma) two phase stainless steel
Mie Ota, Daiki Nanya, Sanjav Kumar Vajpai, Kei Ameyama, Kaveh Edalati, Zenji Horita
Ritsumei University, Japan
Session: A5, Venue: (Room: Hall 1A)

Advanced Steels (HSLA/IF/TRIP/Stainless/HNS) 5

Session Chairs: Beatriz Lopez, Spain & Dagoberto Santos, Brazil

A5 June-1 8:30 Keynote
* Dynamic transformation during plate and strip rolling
  John Jonas, Clodualdo Aranas, Jr., Samuel Rodrigues, Rupanjit Grewal
  McGill University, Canada

A5 June-1 9:00
* High ductility AHSS grades: Improved formability by advanced microstructure control
  Thomas Hebesberger, Andreas Pichler, Daniel Krizan, Florian Winkelhofer, Christian Walch
  Voestalpine Stahl GmbH, Austria

A5 June-1 9:20
Reversion during continuous heating in martensitic Fe-2Mn-1.5Si-0.3C alloy
  Xianguang Zhang, Goro Miyamoto, Tadashi Furuhara
  Institute for Materials Research, Tohoku University, Japan

A5 June-1 9:40
* Analysis of mechanical properties in nitrogen-added duplex stainless steels by nano-indentation and in-situ neutron diffraction
  Heung Nam Han, Yanghoo Kim, Yong Min Kim, Tae Ho Lee, Wan Chuck Woo
  Seoul National University, Korea

A5 June-1 10:00
* An appraisal of direct quenching for the development and processing of novel super-high strength steels
  Mahesh Somani, Jaakko Hannula, Antti Kajialainen, Devesh Misra, David Porter
  University of Oulu, Finland

A5 June-1 10:20
Anelastic dislocation behavior of an interstitial free steel
  Zaloa Arechabaleta, Ton Riemslag, Peter van Liempt, Jilt Sietsma
  Delft University of Technology, The Netherlands

Coffee / Tea break 10:40 to 11:00
A5 June-1 11:00
Development of a 2.25%Cr steel grade T/P P23 reinforced with micro/nano-carbide particles prepared by self-propagating high-temperature synthesis
Jose Jimenez, Manuel Carsi, Maider Garcia de Cortazar, Oscar Ruano
CENIM-CSIC, Spain

A5 June-1 11:20
The effect of fast annealing on the strength and microstructure of CMnAlSi TRIP steel
Felipe Castro, Constantinos Goulas, Ilchat Sabirov, Spyros Papaefthymiou, Alberto Monsalve, Roumen Petrov
Ghent University, Belgium

A5 June-1 11:40
*Microstructural banding in medium carbon steel
Rian Dippenaar, Masoud Al-Gahtani
University of Wollongong, Australia

A5 June-1 12:00
*Property improvement of (ferrite + austenite) duplex lightweight steels by TRIP and TWIP mechanisms
Seok Su Sohn, Jai-Hyun Kwak, Nack Joon Kim, Sunghak Lee
Pohang University of Science and Technology, Korea

A5 June-1 12:20
Low cycle fatigue behaviour of a high interstitial cast TRIP steel
Matthias Droste, Marco Wendler, Horst Biermann
TU Bergakademie Freiberg, Germany

A5 June-1 12:40
* Relationship between the tensile strength-fracture toughness balance and the multiscale microstructure of a maraging stainless steel for aircraft applications
Charline Le Nué, Jean-Marc Cloué, Marie-Hélène Mathon, Sylvain Puech, Denis Béchet, Denis Delagnes
Ecole des Mines d'Albi, France

A5 June-1 13:00
Evolution of the dislocation structure of a cold worked high nitrogen steel during fatigue testing
Rainer Fluch, Marianne Kapp, Krystina Spiradek Hahn, Manfred Brabetz, Heinz Holzer
BÖHLER Edelstahl GmbH &Co KG, Austria

| Lunch break 13:20 - Sessions restarts at 14:10 |

* Invited Presentation
Session: A6, Venue: (Room: Hall 1A)

Advanced Steels (HSLA/IF/TRIP/Stainless/HNS) 6

Session Chairs: Eric Palmiere, UK & Jose Maria Rodriguez-Ibabe, Spain

A6 June-1 14:10 Keynote
* Intermetallic phases in new steels
Wolfgang Bleck, Wenwen Song, Alexander Zimmermann
RWTH Aachen University, Germany

A6 June-1 14:40
Constitutive modelling of high Mn TWIP steels: Composition and temperature dependencies of tensile behaviour
Jee-Hyun Kang, Tobias Ingendahl, Wolfgang Bleck
Pohang University of Science and Technology (POSTECH), Korea

A6 June-1 15:00
* Understanding carbon redistribution processes during quenching and partitioning heat treatments
Bij-Na Kim, Jilt Sietsma, Maria J Santofimia
TU Delft, The Netherlands

A6 June-1 15:20
* Effects of grain size and particle dispersion on the work hardening behavior of austenitic stainless steel
Takashi Hosoda, Yasumasa Muto, Kazuo Nakama
Sanyo Special Steel Co., Ltd, Japan

Session A6: Advanced Steels (HSLA/IF/TRIP/Stainless/HNS)

Coffee / Tea break 15:40 to 16:00

A6 June-1 16:00
Revealing the individual hardening effects of twins, dislocations, grain boundaries and solid solution in a twinning-induced plasticity steel
Zhiyuan Liang, Yizhuang Li, Mingxin Huang
The University of Hong Kong, China
A6 June-1 16:20
*Microstructure and mechanical properties of welded joint of TMCP890 steel and the effect of postweld heat treatment
Yun Peng, Yuanjie Zhang, Chengyong Ma, Zhiling Tian
China Iron & Steel Research Institute Group, China

A6 June-1 16:40
Effects of an intercritical and single-phase annealing on texture evolution in cold-rolled dual-phase steel sheets
Hidekazu Minami, Shinjiro Kaneko, Kaneharu Okuda, Yasunobu Nagataki
JFE Steel Corporation, Japan

A6 June-1 17:00
*Microstructure-property relationships in medium-Mn steels with metastable retained austenite
Adam Grajcar, Mateusz Morawiec, Krzysztof Radwanski
Silesian University of Technology, Poland

A6 June-1 17:20
Modelling the static recrystallization kinetics of microalloyed twip steels with different alloying contents
Laura Llanos, Beatriz Pereda, Beatriz Lopez, Jose Mari Rodriguez-Ibabe
CEIT and TECNUN, Spain

A6 June-1 17:40
*Ultra-fine microstructures immediately beneath denomination cracks in fully pearlitic steels
Masaki Tanaka, Kenji Higashida
Kyushu University, Japan

A6 June-1 18:00
*Continuous casting of high Al TWIP steel using molten mold flux technology
Shin Yoo, Ki-Hyeon Moon, Min-Seok Park, Joo-Kil Park, Jung-Wook Cho
POSCO and POSTECH, Korea

A6 June-1 18:20 Student
The effects of inter-critical annealing temperature and initial microstructure on the stability of retained austenite in a 0.1C-6Mn steel
Katharina Steineder, Daniel Krizan, Reinhold Schneider, Coline Béal, Christof Sommitsch
University of Applied Sciences Upper Austria, Austria

A6 June-1 18:30 Student
High temperature mechanical properties of harmonic structure designed SUS304L austenitic stainless steel
Masashi Nakatani, Yuya Fujiki, Mie Ota, Sanjay K. Vajpai, Kei Ameyama
Ritsumeikan University, Japan

A6 June-1 18:40 Student
Interfacial strength characterization in a high-modulus low-density steel-based Fe-TiB2 composite
Yizhuang Li, Mingxin Huang
The University of Hong Kong, China

* Invited Presentation

Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Session: A7, Venue: (Room: Hall 1A)

Advanced Steels (HSLA/IF/TRIP/Stainless/HNS) 7

Session Chairs: Francisca Caballero & Yun Peng, PR China

A7 June-2 8:30 Keynote
* Ultrafast heating of advanced high strength steels
Roumen Petrov, Leo Kestens
Ghent University, Belgium

A7 June-2 9:00
*Nanoparticle addition into molten steel
Idurre Kaltzakorta, Lorena M. Callejo, Zurine Idoyaga
TECNALIA, Spain

A7 June-2 9:20
*Modelling fracture behaviour of high strength low alloy steel with microstructural FE model and crystal plasticity
Tom Andersson, Merja Sippola, Anssi Laukkanen
VTT Technical Research Centre of Finland, Finland

A7 June-2 9:40
* Complex nano-scale structures for unprecedented properties in steels
Francisca Caballero, Jon Poplawsky, Hung-Wei Yen, Rosalia Rementeria, Lucia Morales-Rivas, Jer-Ren Yang, Carlos Garcia-Mateo
CENIM-CSIC, Spain

A7 June-2 10:00
Influence of the processing variables on the microstructure evolution of a bainitic carbide-free steel
María del Carmen Taboada, Isabel Gutierrez, Denis Jorge-Badiola, Stefan van Bohemen, Frank Hisker, Georg Paul
CEIT and TECNUN (University of Navarra), Spain

A7 June-2 10:20
*Mechanisms of microstructure evolution during hot deformation of a 20%Cr ferritic stainless steel
Jean-Denis Mithieux, Grégoire Jacquet, Frank Montheimel, Guillaume Lefebvre, Chad W Sinclair
APERAM, France

* Invited Presentation
# Session A7: Advanced Steels (HSLA/IF/TRIP/Stainless/HNS)

Coffee / Tea break 10:40 to 11:00

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
</tr>
</thead>
</table>
| A7 June-2 11:00 | *Thermo-mechanical processing advanced high-strength steels: atom probe microscopy guided materials design  
Simon P. Ringer  
*University of Sydney, Australia |
| A7 June-2 11:20 | *Evolution of deformation microstructures in cold-rolled ferritic steel  
Tatsuya Morikawa, Kenji Higashida  
*Kyushu University, Japan |
| A7 June-2 11:40 | *Manganese effect on Q&P CMnSi steels  
Andrea Di Schino, Pablo Rodriguez-Calvillo, José Maria Cabrera  
*University of Perugia, Italy |
| A7 June-2 12:00 | *Interaction between recrystallization and austenite formation in cold-rolled dual-phase steels during non-isothermal inter-critical treatments  
Melanie Ollat  
*MATEIS INSA Lyon, France |
| A7 June-2 12:20 | Deformation microstructures and mechanical properties of an austenitic stainless steel subjected to warm rolling  
Marina Odnobokova, Andrey Belyakov, Rustam Kaibyshev  
*Belgorod State University, Russia |
| A7 June-2 12:30 | Microstructural evolution in a 9%Cr-3%Co-3%W-VNb steel during creep  
Alexandra Fedoseeva, Nadezhda Dudova, Rustam Kaibyshev  
*Belgorod State University, Russia |
| A7 June-2 12:40 | Microstructure evolution during LCF of a 10% Cr steel at room temperature  
Roman Mishnev, Nadezhda Dudova, Rustam Kaibyshev  
*Belgorod State University, Russia |
| A7 June-2 12:50 | Characterization and mechanical properties of a 0.2C steel produced by Q&P  
Pierre Huyghe, Loic Malet, Stéphane Godet, Matteo Caruso, Cédric Georges  
*Université Libre de Bruxelles, Belgium |

Lunch break 13:10 - Sessions restarts at 14:10

* Invited Presentation
Session: A8, Venue: (Room: Hall 1a)

Engineering Technologies for Medicine 1

Session Chairs: Andreas Foitzik, Germany & Enrico Staderini, Switzerland

A8 June-02 14:10 Keynote
* Diamond based Schottky photodiode for radiation therapy dosimetry
Gianluca Verona Rinati, Marco Marinelli, Giuseppe Prestopino, Claudio Verona
Università di Roma Tor Vergata, Italy

A8 June-02 14:40
* Photonic application of diatom frustules
Fabio De Matteis, Paolo Proposito, Roberto Francini, Roberta De Angelis, Sonia Melino, Roberta Congestri, Laura Bruno, Mauro Casalboni
University of Rome Tor Vergata, Italy

A8 June-02 15:00
* Otoacoustic emissions as a promising diagnostic tool for the early detection of mild hearing impairment. Technical advances in acquisition, analysis and modeling
Arturo Moleti
University of Roma Tor Vergata, Italy

A8 June-02 15:20
* Photolithography of 3D scaffolds for artificial tissue
Paolo Proposito, Roberto Francini, Fabio De Matteis, Sonia Melino, Federico Mochi, Paolo Di Nardo, Slava Ksenzov, Sigurd Schrader, Mauro Casalboni
University of Rome Tor Vergata, Italy

Session A8: Engineering Technologies for Medicine

Coffee / Tea break 15:40 to 16:10

A8 June-02 16:10
* Miniaturized laser power sensor via rapid phototyping
Sylvio Schneider, Harald Beyer, Karsten Lange, Werner Bohmeyer, Mauro Casalboni, Maria Richetta, Andreas H. Foitzik
Technical University of Applied Sciences Wildau, Germany

A8 June-02 16:30

* Invited Presentation
* Novel bioreactor-system for in-situ-cultivation of artificial tissue
Jordanka Kostova, Sylvio Schneider, Thilo Liebscher, Andrea Böhme, Sabine Sauer, Mauro Casalboni, Andreas H. Foitzik
University of Applied Science Wildau, Germany
A8 June-02 16:50

* Affinity viscosimetry sensor for enzyme free detection of glucose in a micro-bioreaction chamber
Thilo Liebscher, Franziska Glös, Andrea Böhme, Mario Birkholz, Maria Luisa Di Vona, Fabio De Matt, Andreas Foitzik
University of Applied Science Wildau, Germany
A8 June-02 17:10

* Experimental bio-ESPI for validation of magnetic induced deformation on HeLa cells
Kai-Henning Lietzau, Carsten Stollfuß, Steffen Zinn, Maria Richetta, Andreas H. Foitzik
TH Wildau, Germany
A8 June-02 17:30

* A new approach for the spectroscopic detection of different pH-values
Christian Rogge, Steffen Zinn, Sylvio Schneider, Roberto Francini, Paolo Prospito, Andreas Foitzik
Technical University of Applied Sciences Wildau, Germany
A8 June-02 18:10

* The use of vibrotactile stimulation for improving manual tasks in Parkinson's disease patients
Sandro Gentili, Maria Richetta, Stefano Mugnaini, Sarah Mancini, Enrico Maria Staderini
University of Rome Tor Vergata, Italy
A8 June-02 18:30

* Near infrared device for tissue inflammation evaluation
Enrico Maria Staderini, David Junior Branco, Stefano Mugnaini, Sandro Gentili
University of Rome Tor Vergata, Italy
A8 June-02 18:30 Student

Novel ESPI measurement prototype for analyzing biological samples from cell culture technique
Carsten Stollfuß, Kai-Henning Lietzau, Maria Richetta, Andreas Foitzik
University of Applied Science Wildau, Germany
Session: A9, Venue: (Room: Hall 1a)

Engineering Technologies for Medicine 2

Session Chairs: Maria Richetta, Italy & Paolo Prosposito, Italy

A9 June-03 9:00 Keynote
*Evaluating athletic performances with a real time location and tracking system
Stefano Milici, Ambra Esposito, Enrico M. Staderini
HEIG-VD Switzerland, Switzerland

A9 June-03 9:40
*Application of optical techniques to detect chemical and biological agents dangerous for human health
University of Rome Tor Vergata, Italy

A9 June-03 10:00
A novel facility to investigate dust mobilization in confined environments with applications of the safety of the medical industry
Andrea Malizia, Michela Gelfusa, Andrea Murari, Maria Richetta, Jean Francois Ciparissee, Luigi Antonio Poggi, Michele Lungaroni, Pasqualino Gaudio
University of Rome Tor Vergata, Italy

A9 June-03 10:20
Design and characterization of conductive biopolymer nanocomposite electrodes for medical applications
Charles Tematio, Monica Bassas, Narcis Fosso, Vanessa Gaillard, Marc Mathieu, Manfred Zinn, Enrico Staderini, Silvia Schintke
HEIG-VD, University of Applied Sciences Western Switzerland, Switzerland

A9 June-03 10:40 Student
Miniaturized flow-through bioreactor for processing and testing in pharmacology
Andrea Böhme, Lars Radke, Felix Schütze, Sylvio Schneider, Sabine Sauer, Loredana Santo, Fabrizio Quadrini, Michael Hummel, Christoph Giese, Marcus Frohme, Andreas H. Foitzik
Technical University of Applied Sciences Wildau, Germany

* Invited Presentation
Session B
Room: Hall 12a
**Session: B1, Venue:** (Room: Hall 12a)

High and Ultra High Temp. Materials 1

**Session Chairs: Haruyuki Inui, Japan & Florian Pyczak, Germany**

---

**B1 May-30 10:30 Keynote**

* Advanced engineering intermetallic titanium aluminides
  Helmut Clemens, Svea Mayer, Wilfried Smarsly  
  *Montanuniversität Leoben, Austria*

**B1 May-30 11:00**

*MAX phases: New materials for high temperature applications*
  Jesus Gonzalez-Julian, Martin Bram, Olivier Guillon  
  *Forschungszentrum Jülich, Germany*

**B1 May-30 11:20**

*Influence of long term ageing on deformation and fracture behaviors of Alloy 617*
  Guocai Chai, Mattias Calmunger, Sten Johansson, Johan Moverare, Joakin Odqvist  
  *Sandvik Materials Technology, Sweden*

**B1 May-30 11:40**

*Spark plasma sintering: A route for manufacturing TiAl blades?*
  Alain Couret  
  *CEMES/CNRS, France*

**B1 May-30 12:00**

*Quantum-mechanical study of clean and impurity-segregated grain boundaries in Ni3Al and Fe3Al*
  Martin Friak, Monika Vsianska, Tomas Komarek, Mojmir Sob  
  *Institute of Physics of Materials ASCR, Brno, Czech Republic*

**B1 May-30 12:20**

*Shear band and texture formation in intermetallic gamma titanium aluminides during severe hot-working*
  Ulrich Froebel, Andreas Stark  
  *Helmholtz-Zentrum Geesthacht, Germany*

**B1 May-30 12:40**

*Z-phase strengthened steels - the European Z-ultra project*
  John Hald, Bernhard Donth, Hermann Riedel  
  *DTU Mechanical Engineering, Denmark*
B1 May-30 13:00
*Evolution of Σ-CSL boundaries of Ni₃Al-based alloy in long term annealing treatments
Ming Qian, Heli Luo, Chaochao Ding, Jiantao Wang
Jilin University, China

Lunch break 13:20 - Sessions restarts at 14:10
Session: B2, Venue: (Room: Hall 12a)

High and Ultra High Temp. Materials 2

Session Chairs: Hiroyuki Yasuda, Japan & Alain Couret, France

B2 May-30 14:10 Keynote
* What controls temperature dependence of yield stress in L12-ordered intermetallic compounds?
Haruyuki Inui
*Kyoto University, Japan*

B2 May-30 14:40
* Microstructure - mechanical properties relationship of MoSi2/Mo5Si3-based eutectic composites
Kyoosuke Kishida, Hirotaka Matsunoshita, Haruyuki Inui
*Kyoto University, Japan*

B2 May-30 15:00
*The 3D imaging and metrology of microstructural elements in innovative materials for clean energy systems and aeronautics
Adam Kruk, Aleksandra Czyrska-Filemonowicz
*AGH University of Science and Technology, Poland*

B2 May-30 15:20
* Role of plasticity during the microstructure evolution in metallic alloys
Yann Le Bour, Maeva Cottura, Pierre-Louis Valdenaire, Alphonse Finel, Benoît Appolaire
*CNRS/ONERA, France*

**Session B2: High and Ultra High Temp. Materials**

Coffee / Tea break 15:40 to 16:10

B2 May-30 16:10
*On the role of alloying elements in gamma/gamma prime cobalt-base superalloys
Steffen Neumeier, Christopher H. Zenk, Mathias Göken
*Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany*

B2 May-30 16:30
*Solid solution strengthening and atomic displacements in equiatomic high-entropy alloys with the FCC structure

---

* Invited Presentation  
Thermec’2016 Conference Programme  
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Norihiko Okamoto, Marino Kawamura, Koretaka Yuge, Katsushi Tanaka, Haruyuki Inui, Easo George
Kyoto University, Japan

B2 May-30 16:50
TEM analysis of creep deformation micromechanisms in the AD730 Ni-based disk superalloy
Florence Pettinari-Sturmel, Muriel Hantcherli, Winnie Vultos, Joël Douin, Patrick Villechaise, Jonathan Cormier, Alexandre Devaux
CEMES-CNRS, France

B2 May-30 17:10
*Microstructure formation in a quaternary Ti-Al-Nb-Ta alloy by massive transformation
Florian Pyczak, Marcus Rackel, Andreas Stark, Norbert Schell, Andreas Schreyer
Helmholtz-Zentrum Geesthacht, Germany

B2 May-30 17:30
*Study on the formation of stray grains during directional solidification of Nickel-base superalloys
Maria Rita Ridolfi
Centro Sviluppo Materiali S.p.A., Italy

B2 May-30 17:50
Influence of thermo- and HIP treatments on the microstructure and mechanical properties of IN625 alloy parts produced by selective laser melting: a comparative study
Alena Kreitcberg, Vladimir Brailovski, Sylvain Turenne, Victor Urlea, Cyrille Chanal
Ecole de Technologie Superieure, Montreal, Canada

B2 May-30 18:10 Student
Characterization of the oxygen pick-up behaviour of a nickel-based super alloy powder under different sintering atmosphere conditions using a combined TG-GC-MS technique
Addison Rayner, Catherine Whitman, Stephen Corbin
Dalhousie University, Canada

B2 May-30 18:20 Student
Electron beam welding of TZM sheets
Markus Stuetz, Diogo Oliveira, Norbert Enzinger, Matthias Rüttinger, Nikolaus Reheis, Heinrich Kestler
IWS TU Graz, Austria
Session: B3, Venue: (Room: Hall 12a)

High and Ultra High Temp. Materials 3

Session Chairs: Marc Thomas, France & Kouichi Maruyama, Japan

B3 May-31 8:30 Keynote
* Temperature and strain rate effects on strengthening of metallic materials
   Ernst Kozeschnik, Johannes Kreyca, Heinrich Buken, Jiri Svoboda, Hermann Riedel, Franz Dieter Fischer
   TU Wien, Austria

B3 May-31 9:00
* New Fe-Al-O based ODS alloys; processing, microstructure and properties
   Jiří Svoboda, Bohuslav Mašek
   Institute of Physics of Materials, Czech Republic

B3 May-31 9:20
* Solidification pathway for the formation of Bcc/T1/T2 three-phase microstructure in Mo-Nb-Si-B quaternary system
   Naoki Takata, Nobuaki Sekido, Michael Figueroa, Masao Takeyama, John Perepezko
   Nagoya University, Japan

B3 May-31 9:40
Controlling microstructures of Co-based L12/fcc two-phase superalloys having oxidation resistance
   Takumi Iwanaka, Shogo Ikeda, Katsushi Tanaka
   Kobe University, Japan

B3 May-31 10:00
* Zinc oxide sputter lubricative coatings
   Masahiro Tosa, Michiko Sasaki, Masahiro Goto, Akira Kasahara, Hiroshi Suzuki, Hiroshi Honda
   National Institute for Materials Science, Japan

B3 May-31 10:20
Effect of a number transition metals on the cohesion properties of Cr-base alloys
   Victor Butrim, Vsevolod Razumovskiy, Alexander Beresnev, Anna Trushnikova, Igor Razumovskii
   JSK Kompozit, Russia

Session B3: High and Ultra High Temp. Materials
Coffee / Tea break 10:40 to 11:00
B3 May-31 11:00
*Applications of electric discharge assisted mechanical milling to the synthesis of high temperature and high hardness materials
David Wexler, Andrzej Calka
University of Wollongong, Australia

B3 May-31 11:20
*Deformation behavior of Fe-Al-Co-Ti single crystals containing Co2AlTi precipitates
Hiroyuki Yasuda, Ryota Kobayashi
Osaka University, Japan

B3 May-31 11:40
*Annealing effect on ambient ductility of a high Nb containing TiAl alloy
Ji Zhang, Joe Kelleher, Shu Yan Zhang, Hongbiao Dong
China Iron and Steel Research Institute Group, China

B3 May-31 12:00
The effect of process parameters of a novel interdendritic-melt solidification control technique on the microstructure and properties of a Ni-base superalloy
Liang Zheng, Guoqing Zhang, Dominik Daisenberger, Zhou Li, Chengbo Xiao
Beijing Institute of Aeronautical Materials, China

B3 May-31 12:20
Challenges of thermomechanical processing of a beta-stabilized gamma-TiAl alloy in a near conventional forging process
Daniel Huber, Cecilia Poletti, Helmut Clemens, Martin Stockinger
Böhler Schmiedetechnik GmbH & Co KG, Austria

B3 May-31 12:40
* Molybdenum based materials and their challenges in production and applications
Wolfram Knabl
Plansee SE, Austria

B3 May-31 13:00
Strain rate sensitivity on tensile deformation behaviour of GH4199 superalloy under dynamic loading
Lei Wang, Y. Liu, X. Song, J. C. Jin, X. Y. Qiao, Y. Q. Wang
Northeastern University, China

B3 May-31 13:20 Student
Creep study of martensitic steels developed within the project Z-ultra: Experiments and modelling
Surya Deo Yadav, Bernhard Sonderegger, Coline Beal, Jiří Svoboda, Elguja Kutelia, Razmik Barseghyan, Cecilia Poletti
Graz University of Technology, Austria

**Lunch break 13:30 - Sessions restarts at 14:10**
**Session: B4, Venue:** (Room: Hall 12a)

**High and Ultra High Temp. Materials 4**

**Session Chairs:** Koji Hagihara, Japan & Raghavan Srinivasan, USA

---

**B4 May-31 14:10 Keynote**  
*Microstructure and creep behaviour of similar martensitic 9% chromium steel electron beam welds*  
Christof Sommitsch, Coline Beal, Christian Schlacher, Tanja Pelzmann, Corinna Sabitzer  
*Graz University of Technology, Austria*

**B4 May-31 14:40**  
*Experimental validation of the CALPHAD approach applied to multi-component alloys*  
Raghavan Srinivasan, Nathan Bryant, Daniel Miracle, Oleg Senkov, Jonathan Miller  
*Wright State University, USA*

**B4 May-31 15:00**  
Polycrystalline gamma/gamma prime Co-base superalloys produced by casting and rolling  
Lisa Freund, Steffen Neumeier, Mathias Göken  
*Friedrich-Alexander Universität Erlangen-Nürnberg, Germany*

**B4 May-31 15:20**  
*High-temperature deformation behavior of (Mo0.85Nb0.15)Si2 crystals with C40/C11b lamellar microstructure*  
Koji Hagihara, Haruka Araki, Takaaki Ikenishi, Takayoshi Nakano  
*Osaka University, Japan*

---

**Session B4: High and Ultra High Temp. Materials**

Coffee / Tea break 15:40 to 16:10

**B4 May-31 16:10**  
Structure formation in Ni superalloys during high-speed direct laser deposition  
Gleb Turichin, Olga Klimova-Korsmik, Evgeniy Zemlyakov, Konstantin Babkin, Pavel Petrovsky, Andrey Travyanov  
*Peter the Great Saint-Petersburg Polytechnic University, Russia*

---

* Invited Presentation  
Thermec'2016 Conference Programme  
Intl' Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
B4 May-31 16:30
A 3D DDD modelling and simulations of precipitate strengthening at high temperatures
Tomáš Záležák, Jiří Švoboda, Antonín Dlouhý
_Institute of Physics of Materials, Czech Republic_

B4 May-31 16:50
Kinetic simulation of long-term precipitate evolution in heat-resistant alloys
Jae-Hyeok Shim, Woo Sang Jung, Jin-Yoo Suh, Brian Wirth, Erwin Povoden-Karadeniz, Ernst Kozeschnik
High Temperature Energy Materials Research Center, Korea

B4 May-31 17:10
Microstructure evolution and its effect on creep strength of single crystal Ni-based superalloys with various orientations
Sugui Tian, Yong Su, Huichen Yu, Delong Shu
Shenyang University of Technology, China

B4 May-31 17:30
Atomic-scale modeling of point defects, phase stability, and the formation mechanism of Z phases CrMN (M=V, Nb, Ta)
Daniel Urban, Matous Mrovec, Christian Elsässer
_Fraunhofer Institute for Mechanics of Materials IWM, Germany_

B4 May-31 17:50
Stability, kinetics and prospects of high entropy alloys at elevated temperatures
Nicholas Jones, Edward Pickering, Katerina Christofidou, Paul Mignanelli, Howard Stone
_University of Cambridge, United Kingdom_
Session: B5, Venue: (Room: Hall 12a)

High and Ultra High Temp. Materials 5

Session Chairs: David Wexler, Australia & Tian Sugui, PR Cina

B5 June-01 9:00
Development of new heat resistant austenitic alloys hardened with intermetallic sigma phase
Michael Spiegel, Patrik Schraven
Salzgitter Mannesmann Forschung GmbH, Germany

B5 June-01 9:20
*Microstructural instabilities in Co-Co3Ti based superalloys
Howard Stone, Ayan Bhownik, James Minshull, Steffen Neumeier, Katerina Christofidou, Nicholas Jones
University of Cambridge, United Kingdom

B5 June-01 9:40
*Discontinuous precipitation of the complex intermetallic phase Nb2Co7 from supersaturated Co solid solution
Frank Stein, Toshiaki Horiuchi
Max-Planck-Institut für Eisenforschung, Germany

B5 June-01 10:00
Initiation and propagation behaviors of small crack in a polycrystalline Ni-base superalloy under thermos-mechanical fatigue loading
Yasuhiro Yamazaki, Tomohiro Tomita
Niigata Institute of Technology, Japan

B5 June-01 10:20
Creep rupture, oxidation and corrosion of a Z-phase stabilized steel tested with welded tubes
Simon Heckmann, Ralf Mohrmann, Gereon Lüdenbach
RWE Power AG, Germany

Session B5: High and Ultra High Temp. Materials

Coffee / Tea break 10:40 to 11:10

B5 June-01 11:10
Simulation of the residual stress field in air-quenched turbine disks
Andreas Drexler, Hans-Peter Gänser, Werner Ecker, Bernd Oberwinkler, Andreas Fischers worring-Bunk
Materials Center Leoben, Austria
B5 June-01 11:30
EBSD study of delta-processed Ni-base superalloy
Martha P. Guerrero Mata
*Universidad Autonoma de Nuevo Leon, Mexico*

B5 June-01 11:50
Design of solution heat treatments for low-cost single crystal Ni superalloy
Jeonghyeon Do, Baig Gyu Choi, In Soo Kim, Joong Eun Jung, Chang Yong Jo
*Korea Institute of Materials Science, Korea*

Lunch break 13:20 - Sessions restarts at 14:10
Session: B6, Venue: (Room: Hall 12a)

TMP- Microalloyed Steels 1

Session Chairs: Tadashi Furuhara, Japan & John Speer, USA

B6 June-01 14:10 Keynote
*Metallurgical aspects affecting thermomechanical processing of Ti based microalloyed steels
Beatriz Lopez, Jose Rodriguez-Ibabe
CEIT and Tecnun, Spain

B6 June-01 14:40
*Grain coarsening in niobium containing steels studied in-situ by 3DXRD microscopy
Erik Offerman, Hemant Sharma, John Wright, Jilt Sietsma
Delft University of Technology, The Netherlands

B6 June-01 15:00
* Physical simulation of thermo-mechanical processing of ferritic-bainitic dual phase (FBDP) steel
Taher El-Bitar, Eman El-Shenawy, Maha El-meligy
Central Metallurgical R&D Institute (CMRDI), Egypt

B6 June-01 15:20
Northeastern University, China
* Synchrotron radiation investigations of niobium precipitates in HSLA steel
Christian Klinkenberg, Helmut Klein
SMS group, Germany

Session B6: TMP- Microalloyed Steels
Coffee / Tea break 15:40 to 16:10

B6 June-01 16:10
* Novel steels with niobium microalloying
Sujoy Hazra
Ferro Tech India Pvt. Ltd., India

B6 June-01 16:30
* High quality tmcp production and metallurgy of niobium bearing steels
Steven Jansto
CBMM North America, Inc, USA

* Invited Presentation
B6 June-01 16:50
* An approach to the deformation of thick steel plates by high-frequency induction heating
Kwang Seok Lee
KIMS, Korea

B6 June-01 17:10
Optimization of design and development of advanced TMCP steel plates using physical simulation
Daniel Rupp, Peter Flüss, Volker Schwinn
AG der Dillinger Hüttenwerke, Germany

B6 June-01 17:30
* The influence of nitrogen on the precipitation kinetics in microalloyed medium carbon steel
Sabine Zamberger, Tomasz Wojcik, Gerald Klösch, Ernst Kozeschnik
Voestalpine Stahl Donawitz GmbH, Austria

B6 June-01 17:50
* Influence of thermal history on the hot ductility of Ti-Nb microalloyed steels
Coline Béal, Ozan Caliskanoglu, Christof Sommitsch, Sergiu Ilie, Jakob Six, Mária Dománková
Graz University of Technology, Austria

B6 June-01 18:10
In-situ characterisation of gamma/alpha decomposition kinetics and interphase morphology and their influence upon interphase precipitation in V and V+Mo microalloyed HSLA steels
Samuel Clark, Vit Janík, Arjan Rijkenberg, Yongjun Lan, Seetharaman Sridhar
International Manufacturing Centre, United Kingdom

B6 June-02 18:30
The effect of boron addition on precipitation and hot ductility of 1.5Mn-0.1Nb-Ti carbon steels in as-cast condition
Jacek Komenda, David Martin, Johan Lönnqvist
Swerea KIMAB AB, Sweden

B6 June-02 18:50
On the contribution of deformation temperature and strain to the work-hardening behavior of the twinning induce plasticity (TWIP) steel
Ilana Timokhina
Deakin University, Australia

B6 June-02 19:10
Refined and Uniform Microstructure with Superior Mechanical Properties in Medium Plate Microalloyed Steel with Reduction in Mn-content during Ultrafast Cooling
Zhaodong Wang, Bin Wang
Northeastern University, Republic of China

B6 June-02 19:30 Student
Effects of microalloy additions and thermomechanical processing on austenite grain size control in medium carbon steel bar rolling
Blake Whitley, John Speer, Robert Cryderman, Robert Goldstein, Kip Findley, David Matlock
Colorado School of Mines, USA
B6 June-02 19:40 Student
Softening kinetics of plain carbon steels containing dilute Nb additions
Bhushan Rakshe, Eric Palmiere, Jitendra Patel
University of Sheffield, United Kingdom
Session: B7, Venue: (Room: Hall 12a)

TMP- Microalloyed Steels 2

Session Chairs: David Matlock, USA and Riad Asfahani, USA

B7 June-02 8:30 Keynote
*Strengthening of low alloy steel by nano-scale precipitation of alloy carbide/nitride
Tadashi Furuhara, Goro Miyamoto, Mitsutaka Sato
Tohoku University, Japan

B7 June-02 9:00
*Nb-microalloying in next-generation automotive sheet steels
John Speer
Colorado School of Mines, USA

B7 June-02 9:20
*Effect of microalloying and thermo-mechanical processing on the properties of quenched-and-tempered X65 seamless pipe
Riad Asfahani
U. S. Steel, USA

B7 June-02 9:40
*Dissolution and precipitation behaviour in steels microalloyed with niobium during thermomechanical processing
Peng Gong, Eric Palmiere, Mark Rainforth
The University of Sheffield, United Kingdom

B7 June-02 10:00
Application of physical modelling for fine grain structure formation in Nb-microalloyed pipe steels during controlled rolling
Andrei Chastukhin, Dmitry Ringinen, Sergei Golovin, Leonid Efron
Vyksa Steel Works, Russia

B7 June-02 10:20
Microstructure evolution of 304L stainless steel during variable thermo-mechanical processing conditions: Experiment and simulation
Ke Huang, Roland Logé
École polytechnique fédérale de Lausanne (EPFL), Switzerland

* Invited Presentation
Session B7: TMP- Microalloyed Steels

Coffee / Tea break 10:40 to 11:00

B7 June-02 11:00
Improving the control of precipitation strengthening during thermomechanical processing of V-bearing micro-alloyed steel by application of in-situ EBSD and phase field modelling methods
Vít Janík, Alireza Rahnama, Sam Clark, Arjan Rijkenberg, Yongjun Lan, Seetharaman Sridhar
University of Warwick, United Kingdom

B7 June-02 11:20
Effect of pre-deformation on TiC precipitation kinetics in ferritic steel
Yukiko Kobayashi, Jun Takahashi, Kazuto Kawakami
Nippon Steel & Sumitomo Metal Corporation, Japan

B7 June-02 11:40
Mathematical model of microstructural evolution of hot rolled wire rods for Nb microalloyed steels
Felipe Oliveira, Ronaldo Barbosa, Roney Lino
Universidade Federal de Minas Gerais, Brazil

B7 June-02 12:00
*Analysis of the static recrystallization behaviour of Nb-Ti microalloyed steels including low strain levels
Lorena Sanz-Vilariño, Beatriz Pereda, Beatriz Lopez
CEIT and TECNUN, Spain

B7 June-02 12:20
Computational and experimental analysis of hot ductility during continuous casting of micro-alloyed steel
Harald Radlwimmer, Sergiu Ilie, Jakob Six, Ernst Kozeschnik
TU Wien, Austria

B7 June-02 12:40
Low temperature toughness stability increasing of X65 and X70 steel using austenite evolution models
Dmitrii Ringinen, Andrei Chastukhin, Alexander Muntin, Alexey Chervonniy, Leonid Efron
Vyksa Steel Works, Russia

B7 June-02 13:00
Effect of cooling rate and austenite grain size on Ar3 in low alloy steels
Congyu Zhang, Zhigang Yang, Masato Enomoto, Hao Chen, Zenan Yang, Chi Zhang
Tsinghua University, China

B7 June-02 13:20
Influence of NbC-precipitation on hot ductility in microalloyed steel
Tomasz Wojcik, Ernst Kozeschnik
TU Wien, Austria

Lunch break 13:40 - Sessions restarts at 14:10
Session: B8, Venue: (Room: Hall 12a)

LPSO Structure and its Related Materials 1

Session Chairs: Yoshihito Kawamura, Japan & Koretaka Yuge, Japan

B8 June-02 14:10 Keynote
* LPSO structure and its related high strength magnesium alloys
Yoshihito Kawamura
Kumamoto University, Japan

B8 June-02 14:40
*Plasticity analysis by synchrotron radiation diffraction in Mg-Y-Zn alloys
Gerardo Garces
CENIM-CSIC, Spain

B8 June-02 15:00
* Thermal conductivity and tensile property of Mg-Zn-Y casting alloys with long-period stacking ordered phase
Yuichi Ienaga
Honda R&D Co., Ltd., Japan

B8 June-02 15:20
*First-principles study on thermodynamic stability of Mg-based LPSO phases revisited from short-range order
Koretaka Yuge
Kyoto University, Japan

Coffee / Tea break 15:40 to 16:10

B8 June-02 16:10 Keynote
*The formation of kink bands in a Mg alloy with synchronized LPSO structure
Kenji Higasida
Kyushu University, Japan

B8 June-02 16:40
*Preparation of Mg-TM-Y (TM=Transition metal) alloys with long period stacking ordered phase and their superior mechanical properties
Takaomi Itoi
Chiba University, Japan
B8 June-02 17:00
*Microstructure of the Mg96Zn2Y2 alloy joints welded by ultrasonic spot welding
Chihiro Iwamoto, Yuichi Higashi, Yoshihito Kawamura
Ibaraki University, Japan

B8 June-02 17:20
*Observation of local structures in Mg-Zn-Y LPSO structures by scanning tunneling microscopy
Shu Kurokawa
Kyoto University, Japan

B8 June-02 17:40
*Quantitative evaluation of dislocation nucleation in magnesium via atomistic simulations
Masayuki Uranagase
Kyoto University, Japan

B8 June-02 18:00
*Early stage of phase transformation in MgYZn ternary alloys from rapidly quenched ribbons
Hiroshi Okuda, Hiroto Tanaka, Michiaki Yamasaki, Yoshihito Kawamura, Shigeru Kimura
Kyoto University, Japan

B8 June-02 18:20
* Influence of second phases on the superplasticity of Mg-TM-Y-CeMM alloys containing LPSO-phases
Pablo Pérez Zubiaur, Judit Medina, Gerardo Garcés, Paloma Adeva
CENIM-CSIC, Spain
Session: B9, Venue: (Room: Hall 12a)

LPSO Structure and its Related Materials 2

Session Chairs: Kenji Higasida, Japan & Jian Feng Nie, Australia

B9 June-03 8:30 Keynote
* Kinking and Disclinations in Plastically Anisotropic Materials
Alexey Romanov
ITMO University, St. Petersburg, Russia

B9 June-03 9:00
*Effect of short-range ordering of solute atoms on elastic properties of Mg-Zn-Y alloy single crystals with long-period stacking ordered structures
Masakazu Tane, Hajime Kimizuka, Koji Hagihara
Osaka University, Japan

B9 June-03 9:20
*Hydrogenation behaviour and structural change of LPSO Mg-based alloys
Kazuhiro Ishikawa, Teppei Kawasaki, Yoshinori Yamada
Kanazawa University, Japan

B9 June-03 9:40
*Mg-Zn-Y alloys with long-period stacking ordered phases: deformation, creep, solute segregation and strengthening mechanisms at elevated temperatures
Zhiqing Yang, Weiwei Hu, Hengqiang Ye
Institute of Metal Research, CAS, China

B9 June-03 10:00
Microscopic elastic properties of polycrystalline Mg-Zn-Y alloys with long-period stacking ordered 18R phase by inelastic x-ray scattering
Shinya Hosokawa, Koji Kimura, Michiaki Yamasaki, Yoshihito Kawamura, Koji Yoshida, Masanori Inui, Satoshi Tsutsui, Alfred Baron
Nagoya Institute of Technology, Japan

B9 June-03 10:20
*Local structure investigation of in Mg-Zn-Gd alloys by XAFS
Satoru Yoshioka, Masahiro Ishida, Toshiki Yoshimoto, Tomokazu Yamamoto, Kazuhiro Yasuda, Syo Matsumura, Nobuhiro Yasuda, Shigeru Kimura
Kyushu University, Japan

* Invited Presentation
Session C
Room: Hall 12b
Session: C1, Venue: (Room: Hall 12b)

Advanced Materials in Biomedical and Bioengineering Applications 1

Session Chairs: Thierry Gloriant, France & Hideki Hosoda, Japan

C1 May-30 10:30 Keynote
*Innovation for the next generation of health solutions
Diego Mantovani
Laval University, Canada

C1 May-30 11:00
* Plasmonic nanostructures for biomedical sensing
Monika Fleischer
University of Tübingen, Germany

C1 May-30 11:20
* Microstructure and mechanical properties of selective laser melted metals for biomedical applications
Naoyuki Nomura
Tohoku University, Japan

C1 May-30 11:40
*Human liver microtissue spheroids in hollow fiber membrane bioreactor
Loredana De Bartolo, Haysam Ahmed, Shervin Khakpour, Simona Salerno, Sabrina Morelli, Franco Tasselli, Lidietta Giorno
National Research Council of Italy, Italy

C1 May-30 12:00
* In vitro degradation behavior of AZ31 Mg alloy as biomaterial in Hank’s solution
Junhua Dong, Baojie Wang, Daokui Xu, Wei Ke
Institute of Metal Research, CAS, China

C1 May-30 12:20
* Surface structuring of dental zirconia implants in terms of stable osseointegration
Jens Fischer
University of Basel, Switzerland

C1 May-30 12:40
* Surface nitriding of beta-type titanium-based superelastic alloys for biomedical applications
Doina-Margareta Gordin, Yvan Bédouin, Valentina Mitran, Anisoara Cimpean, Cora Vasilescu, Silviu-Iulian Drob, Lorène Héraud, Thierry Gloriant
INSA Rennes, France

* Invited Presentation
C1 May-30 13:00
*Laser processing of biomedical materials
Roger Narayan
University of North Carolina and North Carolina State University, USA

Lunch break 13:20 - Sessions restarts at 14:10
Session: C2, Venue: (Room: Hall 12b)

Advanced Materials in Biomedical and Bioengineering Applications 2

Session Chairs: Diego Mantovani, Canada & Carolina Richard, France

C2 May-30 14:10 Keynote
* Enhancement of mechanical biocompatibility of metastable beta-type titanium alloys by deformation-induced transformation
Mitsuo Niinomi
Tohoku University, Japan

C2 May-30 14:40
* Development of Zr-Mo alloy with low magnetic susceptibility for spinal instruments to decrease MRI artifact
Takao Hanawa, Naoyuki Nomura, Maki Ashida, Yusuke Tsutsumi, Hisashi Doi, Peng Chen
Tokyo Medical and Dental University, Japan

C2 May-30 15:00
* Effect of Fe addition on mechanical properties of Ti-Au near-eutectoid alloys
Hideki Hosoda, Takuya Ishigaki, Tomonari Inamura
Tokyo Institute of Technology, Japan

C2 May-30 15:20
* Preparation of poly (lactic acid)-based composites containing calcium carbonate with core-shell-type fibrous structure
Jian Wang, Pin Zhou, Aiko Obata, Julian Jones, Toshihiro Kasuga
Nagoya Institute of Technology, Japan

Session C2: Advanced Materials in Biomedical and Bioengineering Applications
Coffee / Tea break 15:40 to 16:10

C2 May-30 16:10
* Tailored properties for metallic implant materials
Bernhard Mingler, Maciej Krystian, Jelena Horky, Manfred Bammer
AIT Austrian Institute of Technology GmbH, Austria
C2 May-30 16:30
*Hydroxyapatite formation on Type 316L stainless steel and zirconium by cathodic polarization with pulse current
Sayaka Miyabe, Chisato Toji, Naoya Asakura, Shinji Fujimoto
Osaka University, Japan

C2 May-30 16:50
*Anti-bacterial nanocomposites by silver nano-coating fragmentation
Fabrizio Quadrini, Denise Bellisario, Giovanni Matteo Tedde, Loredana Santo
University of Rome Tor Vergata, Italy

C2 May-30 May-30 17:10
Wool keratin fibrils sponges for bone tissue engineering
Alessia Patrucco, Francesco Cristofaro, Martina Simionati, Marina Zoccola, Giovanna Bruni, Lorenzo Fassina, Livia Visai, Giovanni Magenes, Raffaella Mossotti, Alessio Montarsolo
CNR Italian National Research Council, Italy

C2 May-30 17:30
Superelasticity of rolled Ti-Nb-Zr alloy
Margarita Isaenkova, Yuriy Perlovich, Vladimir Fesenko, Olga Krymskaya, Sergey Chekanov
National Research Nuclear University MEPhy, Russia

C2 May-30 17:50
* Concept of nano technology in ayurveda
Ahalya Sharma
Ayurveda Medical College, Bangalore, India

C2 May-30 18:10
Characterization of a degradable Zn based alloy
Zhenlun Song, Zhenguo Niu, Cheng Xu, lijin yang
Ningbo Institute of Material Technology and Engineering Chinese Academy of Sciences, China

C2 May-30 18:30
Effects of Ti addition on properties of Au-Nb-Ti alloys for MRI artefact-free biomedical applications
Kenichi Hamada, Shihoko Inui, Emi Uyama, Eiichi Honda
Tokushima University, Japan

C2 May-30 18:50 Student
Multi-stimuli responsive polymer gels via initiated chemical vapour deposition
Katrin Unger
Graz University of Technology, Austria

C2 May-30 19:00 Student
Harnessing the multifunctionality in nature: A bioactive agent release system with self-antimicrobial and immunomodulatory properties
Angela Mutschler, Hayriye Ozcelik, Engin Vrana, Adele Carrado, Alexandru Gudima, Pierre Schaaf, Julia Kzyshkowska, Philippe Lavalle
INSERM, France
Session: C3, Venue: (Room: Hall 12b)

Advanced Materials in Biomedical and Bioengineering Applications 3

Session Chairs: Roger Narayan, USA & Takao Hanawa, Japan

C3 May-31 8:30 Keynote
*Application of the additive manufacturing by selective laser sintering for constituting implant-scaffolds and hybrid multilayer biological and engineering composite materials
Leszek A. Dobrzański
Silesian University of Technology, Poland

C3 May-31 9.00
Nanoscale AB-type carbonated hydroxyapatite fabricated based on sea shells
Yongmei Ge, Huili Li, Kuan Jiang, Yizebang Xue, Bin Tang
South University of Science and Technology of China, China

C3 May-31 9:20
* Athermal ω-phase transformation and mechanical properties in binary Zr-Nb biomedical alloy
Mitsuharu Todai, Keisuke Fukunaga, Takayoshi Nakano
Osaka University, Japan

C3 May-31 9:40
* Effect of chemical state of silver added to calcium phosphates on dissolution behavior, antibacterial activity, and cytotoxicity
Kyosuke Ueda, Ozkan Gokcekaya, Kouetsu Ogasawara, Hiroyasu Kanetaka, Takayuki Narushima
Tohoku University, Japan

C3 May-31 10:00
* Innovative surface treatments of titanium alloys for biomedical applications
Caroline Richard
Université François Rabelais de Tours, France

* Invited Presentation

Thermec'2016 Conference Programme
Intl' Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
C3 May-31 11:00
Preceramic polymer-derived sphene bioceramic coating on cpTi substrates for orthopaedic implants
Lisa Biasetto, Hamada Elsayed, Paolo Colombo, Franco Bonollo
Università di Padova, Italy

C3 May-31 11:20
Environment-assisted cracking of super-elastic TiNi alloy depending on solution pH and electrochemical potential
Takumi Haruna, Yosuke Fujita, Daiki Morihashi, Youhei Hirohata
Kansai University, Japan

C3 May-31 11:40
*Precipitates and mechanical properties of metallic biomaterials
Takayuki Narushima, Kosuke Ueki, Kenji Hara, Kyosuke Ueda
Tohoku University, Japan

C3 May-31 12:00
*Adsorption of an albumin subdomain on different crystallographic surfaces of anatase TiO2: a molecular dynamics study
Giuseppina Raffaini
Politecnico di Milano, Italy

C3 May-31 12:20
*Thermal spray coating application onto low temperature polymer substrate
Armando Salito, Sylvie Ruch, Laurent Corté
Alhenia AG, Switzerland

C3 May-31 12:40
*Biodegradability, cytotoxicity, mechanical and magnetic properties of newly-developed Fe-Mn-Si-Pd alloys during in-vitro immersion tests in simulated body fluid
Jordina Fornell, Yuping Feng, Andreu Blanquer, Sophia Zhang, Carme Nogués, Elena Ibañez, Lleonard Barrios, Pau Solsona, Maria Dolors Baró, Santiago Suriñach, Eva Pellicer, Jordi Sort
UAB, USA

C3 May-31 13:30
*Hydroxyapatite coating and silver nanoparticles assemblies on additively manufactured Ti6Al4V scaffolds
E. Chudinova, M. Surmeneva, A. Koptioug, P. Skoglund, A. Sharonova, K. Loza, M. Epplle, R. Surmenev
National Research Tomsk Polytechnic University, Russia

---

Lunch break 13:20 - Sessions restarts at 14:10
Session: C4, Venue: (Room: Hall 12b)

Aluminium Alloys 1

Session Chairs: Knut Marthinsen, Norway & Hiromi Nagaumi, PR China

C4 May-31 14:10 Keynote

*Precipitates in Al alloys across and between industrially common compositions*
Sigurd Wenner, Calin D. Marioara, Eva A. Mørtsell, Jesper Friis, Sigmund J. Andersen, Randi Holmestad
Norwegian University of Science and Technology (NTNU), Norway

C4 May-31 14:40

*Needle like Fe-containing intermetallic compounds of high silicon aluminium alloy with Fe modified by Mn and ultrasonic vibration*
Zhong Gu, Wu Shusen, Lin Chong, Xin Tao Li, Hiromi Nagaumi
Chinalco Research Institute of Science & Technology, China

C4 May-31 15:00

*Analytical sub-angstrom scanning transmission electron microscopy of alloys and steels*
Mihaela Albu, JH. Li, A. Pal, E. Plesiutschnig, R.C. Picu, P. Schumacher, B. Panzirsch, G. Kothlein, F. Hofer
Graz Center for Electron Microscopy, Austria

C4 May-31 15:20

*Development of Al-Mg-Si-(Cu) alloys for automotive body panels and the related ageing behaviours*
Lingfei Cao, Hao Zhong, Paul Rometsch,
Chongqing University, China

Coffee / Tea break 15:40 to 16:10

C4 May-31 16:10

*Accelerated ageing and Portevin-Le Chatelier effect in Al 2024*
Fabienne Delaunois, Véronique Vitry
UMONS – Polytech, Belgium
C4 May-31 16:30
* Joining of aluminium alloy to galvanized and uncoated steels
Honggang Dong, Yang Song, Song Niu, Wenjin Hu, Chuanqing Liao, Liqun Yang
Dalian University of Technology, China

C4 May-31 16:50
* Effect of the compositional variations on the early-stage precipitation hardening in Al-Mg-Si(-Cu) alloys
Shahrzad Esmaeili, Vahid Fallah, Brian Langelier, Li Hua Liao, Helene Godin, Babak Raeisinia
University of Waterloo, Canada

C4 May-31 17:10
* Damage generation process in cast Al-Cu alloys during in situ room temperature tensile tests
Ricardo Fernández Gutiérrez, Guillermo Requena, Federico Sket, Fabian Wilde
Nemak Linz GmbH, Austria

C4 May-31 17:30
* Simultaneous increase in strength and ductility of an Al-Si-based casting aluminum alloy
Feng Liu
Northwestern Polytechique University, China

C4 May-31 17:50
* Extraction of high purity silicon for solar cell from Al die casting scraps
Suk Jun Kim, Je-Beom Jeon, Ji-Won Youn, Ki-Young Kim
KOREATECH, Korea

C4 May-31 18:10 Student
Correlation between aging effects and high temperature mechanical properties of the unmodified A356 foundry aluminium alloy
Maria Teresa Di Giovanni, Emanuela Cerri, Mattia Merlin, Daniele Casari, Lars Arnberg, Gian Luca Garagnani
University of Parma, Italy

C4 May-31 18:20 Student
The effect of Ni on the surface oxide layer during simulated brazing of aluminium alloys
Colin Tadgell, Mary Wells, Stephen Corbin, Sooky Winkler, Leo Colley, Brian Cheadle
Dalhousie University, Canada
**Session: C5, Venue:** (Room: Hall 12b)

**Aluminium Alloys 2**

**Session Chairs:** Alexis Deschamps, France & Kenji Matsuda, Japan

---

**C5 June-01 8:30 Keynote**

*The natural aging and precipitation hardening behavior of Al-Mg-Si-Cu alloys with different Mg/Si ratio and Cu addition*

Qing Liu, Lipeng Ding, Zhihong Jia

*Chongqing University, China*

**C5 June-01 9:00**

*Characterization and modelling the microstructure and texture evolution in AlMgSi-extrusions*

Knut Marthinsen, Kai Zhang, Bjørn Holmedal, Jesper Friis, Tanja Pettersen, Trond Aukrust, Antonioi Segatori,

*Norwegian University of Science and Technology, Norway*

**C5 June-01 9:20**

*The effect of thermo mechanic coupling on microstructure and properties in Al-Li alloy*

Yue Ma, Chong Gao,

*Beihang University, China*

**C5 June-01 9:40**

*Design of high strength aluminium alloys by application of rapid solidification and hot extrusion technology*

Tomasz Tokarski,

*AGH University of Science and Technology, Poland*

**C5 June-01 10:00**

*Research on microstructure evolution in Al-9.8Zn-2.0Mg-1.8Cu alloy during solution treatment*

Baiqing Xiong, Kai Wen, Yunqiang Fan, Yongan Zhang, Xiwu Li, Zhuhui Li, Shuhui Huang, Hongwei Liu, Hongwei Yan

*General Research Institute for Nonferrous Metals, China*

**C5 June-01 10:20**

Effect of cold rolling on the size and shape of the second phase particles in Al-Si alloy

Tianlin Houang, Linfei Shuai, Guilin Wu, Xiaoxu Huang

*Chongqing University, China*

---

**Session C5: Aluminium Alloys**

* Invited Presentation

Thermec’2016 Conference Programme

Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Coffee / Tea break 10:40 to 11:10

C5 June-01 11:10
* Trace element-added Al-Mg-Si alloys
Stefan Pogatscher, Marion Werinos, Helmut Antrekowitsch, Peter J. Uggowitzer, Montanuniversitaet Leoben, Austria

C5 June-01 11:30
Solidification behaviour of aluminium-copper based alloy during controlled diffusion solidification
Hao Qitang, Northwestern Polytechnical University, China

C5 June-01 11:50
* In situ study on interface evolution of Al/Cu bimetal by synchrotron X-ray radiography
Tongmin Wang, Fei Cao, Fenfen Yang, Tingju Li, Dalian University of Technology, China

C5 June-01 12:10
*Modification effects of Sb on Al7SiMg alloy measured with cooling curve analysis
Shusen Wu, Mengjie Lü, Jianxun Chen, Ping An, Shulin Lü, Huazhong University of Science and Technology, China

C5 June-01 12:30
*Sheet forming processes for AW-7xxx alloys: Relevant process parameters
Manoj Kumar, Georg Kirov, Florian Grabner, Ermal Mukeli, Olaf Kessler, LKR Leichtmetallkompetenzzentrum Ranshofen GmbH, Austrian Institute of Technology, Austria

C5 June-01 12:50
A comparative study of CALPHAD and differential scanning calorimetry to optimize 7xxx aluminium alloys
Gernot Kolb, Helmut Antrekowitsch, Peter J. Uggowitzer, Daniel Pöschmann, Stefan Pogatscher, Montanuniversitaet Leoben, Austria

C5 June-01 13:10
*Precipitation in the gradient nanostructured Al-Cu-Mg alloy
Zongqiang Feng, Xuan Luo, Tianlin Huang, Guilin Wu, Chongqing University, China

Lunch break 13:30 - Sessions restarts at 14:10
Session: C6, Venue: (Room: Hall 12b)

Aluminium Alloys 3

Session Chairs: Randi Holmestad, Norway & Qing Liu, PR China

C6 June-01 14:10 Keynote
*Neutron diffraction analysis of light alloys
Comondore (Ravi) Ravindran, Anthony Lombardi, Eli Vandersluis, Dimitry Sediako,
Ryerson University, Canada

C6 June-01 14:40
*Microstructure observation of Al-Mg-Ge alloy aged at 423K and 473K using TEM
Kenji Matsuda
University of Toyama, Japan

C6 June-01 15:00
* Metastable phase structure and evolution in the Al-Si-Mg-Hf Alloy
Zhihong Jia, Xueli Wang, Qing Liu
Chongqing University, China

C6 June-01 15:20
*In-situ study of the recrystallization behavior of an age hardening AlMgScZr alloy
Johannes Taendl, Shoichi Nambu, Junya Inoue, Toshihiko Koseki, Cecilia Poletti
Graz University of Technology, Austria

Session C6: Aluminium Alloys

Coffee / Tea break 15:40 to 16:10

C6 June-01 16:10
Effect of cavity volume on deformation behavior of tailored step cast Al ingot
Yong-Nam Kwon
Korea Institute of Materials Science, Korea

C6 June-01 16:30
Investigation on effect of centrifugal counter-gravity casting to solidification microstructure
and mechanical properties of aluminium alloy
Li Xinlei
Northwestern Polytechnical University, China

* Invited Presentation
Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
C6 June-01 16:50
Modelling of the microstructural evolution and yield strength of an innovative age-hardenable Al alloy for high temperature applications
Marco Colombo, Elisabetta Gariboldi, Paola Bassani, Mihaela Albu, Ferdinand Hofer
Politecnico di Milano, Italy

C6 June-01 16:30
Study on the porosity in Al-Zn-Mg-Cu high strength alloy DC ingot
Huixue Jiang, Nagaumi Hiromi, Shijie Guo, Chun Zou, Chinalco
Research Institute of Science and Technology, China

C6 June-01 16:50
Microstructure evolution of rolled Al-Si-Mg alloys with Fe/Mn ratio
Dae Hwan Kim, Kee Do Woo, Jae Hwang Kim
Korea Institute of Industrial Technology, Chonbuk National University, Korea

C6 June-01 17:50
Hot workability and extrusion characteristics of Al-Cu-Li-X and Al-Mg-Li-X alloys
Su-Hyeon Kim, Hyoung-Wook Kim, Joon-Hyeon Cha, Yun-Soo Lee, Cha Yong Lim
Korea Institute of Materials Science, Korea
Session: C7, Venue: (Room: Hall 12b)

Aluminium Alloys 4

Session Chairs: Xiaoxu Huang, PR China & C. Ravindran, Canada

C7 June-02 8:30
Effect of high and low temperature exposure on the mechanical properties of self-hardening Al-based alloy
Ildiko Peter, Christian Castella, Silvia Lombardo, Mario Rosso
Politecnico di Torino, Italy

C7 June-02 8:50
Diffusion based modelling of isothermal solidification during brazing of aluminium alloys
Catherine Whitman, Stephen Corbin, Mary Wells, Sooky Winkler
Dalhousie University, Canada

C7 June-02 9:10
The Portevin–Le Chatelier effect and kinematics of deformation bands in an Al-Mg-Sc alloy: Effect of grain size
Daria Zhemchuzhnikova, Mikhail Lebyodkin, Tatiana Lebedkina, Rustam Kaibyshev
Belgorod State University, Russia

C7 June-02 9:30
Numerical simulation of pore evolution of 7050 aluminium alloy during hot compression process
Yongfu Wu, Huixue Jiang, Chun Zou, Kangcai Yu, Hiromi Nagaumi
Laboratory of Advanced Aluminum Alloy, China

C7 June-02 9:50
*Multi-institutional collaboration of industry and university along the processing chain as a means to holistically optimize material characteristics of aluminium products
Austria Metall GmbH, Austria

C7 June-02 10:10
Modelling yield strength in an A6061 aluminium alloy
Johannes Kreyca, Ahmad Falahati, Ernst Kozeschnik,
TU Wien, Austria

* Invited Presentation
## Session C7: Aluminium Alloys

*Invited Presentation*

**Coffee / Tea break 10:30 to 11:00**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>C7 June-02 11:00</td>
<td><em>Effects of precipitated particles on microstructure evolution during thermo-mechanical processing of Al-Zn-Mg-Cu alloy</em></td>
<td>Huiqin Chen, Kun Zhang, Huiqu Li, Xiaodong Zhao, Lianhua Han</td>
<td>Taiyuan University of Science and Technology, China</td>
</tr>
<tr>
<td>C7 June-02 11:20</td>
<td>Microstructure and mechanical properties of a spray-formed and hot worked ultra-high strength aluminum alloy</td>
<td>Shuhui Huang, Zhihui Li, Baiqing Xiong, Yongan Zhang, Xiwu Li, Hongwei Liu, Hongwei Yan, Lizhen Yan</td>
<td>General Research Institute for Nonferrous Metals, Beijing, China</td>
</tr>
<tr>
<td>C7 June-02 11:40</td>
<td>Impact of silicon, magnesium and strontium on feeding ability of AlSiMg cast alloys</td>
<td>Gerhard Huber, Mile Djurdjevic</td>
<td>Nemak Linz, Austria</td>
</tr>
<tr>
<td>C7 June-02 12:00</td>
<td>Age hardening behaviour of Al-Li alloys produced by sand mold casting</td>
<td>Seiji Saikawa, Chiharu Otsubo, Hiroki Kako, Emi Yanagihara, Susumu Ikeno, Koichi Komai</td>
<td>University of Toyama, Japan</td>
</tr>
</tbody>
</table>

**Lunch break 13:10 - Sessions restarts at 14:10**
Session: C8, Venue: (Room: Hall 12b)

Biomimetic Materials, Nanostructured Biomaterials and Biological Applications

Session Chairs: Michael Tatoulian, France & Kunio Ishikawa, Japan

C8 June-02 14:10 Keynote
* Complex cell physiology on topographically and chemically designed material surfaces
Barbara Nebe, Caroline Moerke, Susanne Staehlke, Birgit Finke, Matthias Schnabelrauch,
Karine Anselme, Christiane Helm, Henrike Rebl
University Medical Center Rostock, Germany

C8 June-02 14:40
* Effects of the pore size on mechanical property and tissue response to porous carbonate
apatite made by the setting reaction of carbonate apatite granules
Kunio Ishikawa, Kanji Tsuru, Chen Song
Kyushu University, Japan

C8 June-02 15:00
Nanostructured SPD-processed Ti-based materials for load-bearing orthopedic applications
Mariana Calin, Matthias Bönisch, Arne Helth, Stefan Pilz, Romy Schmidt, Annett Gebert,
Thomas Waitz, Michael Zehetbauer, Jürgen Eckert
IFW Dresden, Germany

C8 June-02 15:20
*Non-viral vectors for gene delivery
Gabriele Candiani
Politecnico di Milano, Italy

Session C8: Biomimetic Materials, Nanostructured Biomaterials and Biological Applications

Coffee / Tea break 15:40 to 16:10

C8 June-02 16:10
* Scaffolds applicable as implants of a loss of palate fragments
Anna Dobrzańska-Danikiewicz, Leszek A. Dobrzański, Tomasz Gaweł
Silesian University of Technology, Poland

* Invited Presentation  Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
C8 June-02 16:30
* Plasma polymerized allylamine - PPAAm - a cell adhesive finishing for implant surfaces
Birgit Finke, Henrike Rebl, Barbara Nebe, Carmen Zietz, Carolin Gabler, Rainer Bader, Uwe Walschus, Michael Schlosser, Klaus-Dieter Weltmann, Martin Polak
INP Greifswald, Germany

C8 June-02 16:50
* Ultrafine-grained multifunctional titanium alloys
Yulin Hao
Institute of Metal Research, Chinese Academy of Sciences, China

C8 June-02 17:10
* Materials to control biological cells function: A focus on microtopography influence
Karine Anselme
CNRS, France

C8 June-02 17:30
* Implanted MgO is osteoinductive through the formation of a bone-inducing matrix
Håkan Nygren
University of Gothenburg, Sweden

C8 June-02 17:50
* Mechanical tuning of collagen fibrils through osmotic stress
Sylvia Desissaire, Orestis Andriotis, Philipp Thurner
TU-Wien, Austria

C8 June-02 18:10
Novel Ti-25Ta-Zr alloys for biomedical applications
Carlos Roberto Grandini
UNESP, Brazil
Session: C9, Venue: (Room: Hall 12b)

Biomimetic Materials, Nanostructured Biomaterials and Biological Applications

Session Chairs: Takayoshi Nakano, Japan & Barbara Nebe, Germany

C9 June-03 8:30
*Materials processing for fluorescent probes in the second biological window
Kohei Soga, Masao Kamimura
Tokyo University of Science, Japan

C9 June-03 8:50
*Apatite orientation and material property of bone are enhanced by artificially elevated load
Takuya Ishimoto, Jun Wang, Kohei Kadota, Tea-Wan Kim, Takayoshi Nakano
Osaka University, Japan

C9 June-03 9:10
*Osteoconductivity of protein adsorbed titanium implants using hydrothermal treatment
Kensuke Kuroda, Masazumi Okido
Nagoya University, Japan

C9 June-03 9:30
*Osteoconductivity of superhydrophilic Ti- and Zr-alloys for biomedical application
Masazumi Okido, Kensuke Kuroda
Nagoya University, Japan

C9 June-03 9:50
*Artificial extracellular matrices based on cross-linkable polysaccharides for tissue regeneration
Matthias Schnabelrauch, Jana Becher, Stephanie Moeller, Juergen Weisser, Albrecht Berg
INNOVENT e. V., Germany

C9 June-03 10:10
*Preparation of self-setting paste composed of hydroxyapatite/collagen bone-like nanocomposite
Masanori Kikuchi, Taira Sato, Mamoru Aizawa, Yuki Shirosaki
National Institute for Materials Science, Japan

C9 June-03 10:40
*High fatigue strength of Ti-12Cr rod as spinal fixation devices
Masaaki Nakai, Mitsuo Niinomi, Huihong Liu, Kengo Narita, Osamu Takakuwa, Hitoshi Soyama
Tohoku University, Japan

C9 June-03 11:00

* Invited Presentation
Mechanical properties and magnetic susceptibility of Ti-X alloys fabricated by selective laser melting process for new biomaterial devices

Yalatu Su, Takayoshi Nakano, Norio Higuchi, Hitoshi Sakai

Osaka University, Japan
Session D

Room: Gallery A
Session: D1, Venue: (Room: Hall 11b)

Surface Engineering/Advanced Protective Coatings 1

(Prof. J.T. M. De Hosson Symposium)

Session Chairs: Michel Jeandin, France & Hideyuki Murakami, Japan

D1 May-30 10:30 Keynote
*Advanced plasma processing for surface modifications of materials
M. Tatoulian, C. Guyon
Institut de Recherche de Chimie Paris, IRCP, France

D1 May-30 11:00
*Thermal design of hard coatings
P. H. Michael Böttger, Jörg Patscheider, Valery Shklover, Matthias Sobiech
SKF Österreich AG, Austria

D1 May-30 11:20
* The unexpected role of benzotriazole in mitigating magnesium alloy corrosion: A nucleating agent for crystalline nanostructured magnesium hydroxide film
Jun-Lan Wang, Chong Ke, Katharina Pohl, Nick Birbilis, Xiaobo Chen
Monash University, Australia

D1 May-30 11:40
*Laser induced surface texturing of metal or organic substrates for structural adhesive bonding
Sophie Costil, Robin Kromer, Sébastien Goujon, Christophe Verdy, Hanlin Liao
UTBM, France

D1 May-30 12:00
*Ceramic coatings for protecting carbon/carbon composites against oxidation
Qian-Gang Fu
Northwestern Polytechnical University, China

D1 May-30 12:20
Microstructures and thermo-physical properties of thermal barrier coatings produced by PS-PVD
Hongbo Guo, Liangliang Wei, Shengkai Gong, Huibin Xu
Beihang University, China

D1 May-30 12:40
*Surface structuring by pulsed laser implantation
Kai Hilgenberg, Michael Rethmeier
BAM, Germany

* Invited Presentation
D1 May-30 13:00
*Non-classical crystallization of thin films and nanostructures synthesized by chemical vapor deposition
Nong-Moon Hwang
Seoul National University, Korea

D1 May-30 13:20
*Structures and properties of laser-assisted cold-sprayed metallic coatings
Heli Koivuluoto, Andrea Milanti, Giovanni Bolelli, Jyrki Latokartano, Francesco Marra, Giovanni Pulci, Jorma Vihinen, Luca Lusvarghi, Petri Vuoristo
Tampere University of Technology, Finland

Lunch break 13:40 - Sessions restarts at 14:10
Session: D2, Venue: (Room: Hall 11b)

Surface Engineering/Advanced Protective Coatings 2

Session Chairs: J.T. M. De Hosson, Netherlands & Masakazu Okazaki, Japan

D2 May-30 14:10 Keynote
*An artistic approach to thermal spray
Michel Jeandin, François Borit, Nicole Fabregue, Gilles Rolland, Francesco Delloro
MINES ParisTech, France

D2 May-30 14:40
* Effect of oxygen potential gradient on mass transfer in alumina layer at high temperature
Satoshi Kitaoka, Tsuneaki Matsudaira, Tsubasa Nakagawa, Naoya Shibata, Yuichi Ikuhara
Japan Fine Ceramics Centre, Japan

D2 May-30 15:00
* Mechanical properties of sol-gel hybrid coatings
Eric Le Bourhis
Univ Poitiers, France

D2 May-30 15:20
* Release of polymer additives from pharmaceutical packaging studied by an original UHPLC-ESI-MS/MS and ToF-SIMS approach
Charlène Pouech, Florent Lafay, Laure Wiest, Robert Baudot, Claire Bordes, Yohann Clement, Pierre Lanteri, Emmanuelle Vulliet, Didier Leonard
UMR 5280 CNRS, Université Lyon 1, ENS-Lyon, France

Coffee / Tea break 15:40 to 16:10

D2 May-30 16:10
* Atomic layer deposited protective layers
Markku Leskelä
University of Helsinki, Finland
D2 May-30 16:30
*Air-based sputtering deposition of nitride, oxynitride, and N-doped oxide thin films
Fu-Hsing Lu
National Chung Hsing University, Taiwan

D2 May-30 16:50
*Effect of nickel content on structure and scratch and wear resistances of nickel doped diamond-like carbon thin films
Nay Win Khun, Erjia Liu
Nanyang Technological University, Singapore

D2 May-30 17:10
*Microstructure and oxidation resistance of bond coats on Ni-based single crystal superalloys
Hideyuki Murakami
National Institute for Materials Science, Japan

D2 May-30 17:30
*Friction and wear properties of AlB12- and SiB6-based ceramics
Takashi Murakami, Haruyuki Inui
National Institute of Advanced Industrial Science and Technology (AIST), Japan

D2 May-30 17:50
*Unusual wetting on surface fine crevice structure by laser irradiation
Masashi Nakamoto, Toshihiro Tanaka
Osaka University, Japan

D2 May-30 18:10
Reactive diffusion for contact in advanced MOS devices
Dominique Mangelinck, M. El Kousseifi, F. Panciera, K. Hoummada, M. Descoinds, M. Bertoglio, M. Gregoire
IM2NP, France

D2 May-30 18:30
Electroless plating of copper on TaN barrier layers using seed-anchoring self-assembled monolayer
Sung-Te Chen
HUST, Taiwan
Session: D3, Venue: (Room: Hall 11b)

Surface Engineering/Advanced Protective Coatings 3

Session Chairs: Marcel Somers, Denmark & Lidong Sun, PR China

D3 May-31 8:30 Keynote
* Development of polymer-based composite coatings for the gas exploration industry
Brajendra Mishra, Ali Usman Chaudhry
Worcester Polytechnic Institute, USA

D3 May-31 9:00
*Towards frictionless surface
Tomas Polcar
University of Southampton, United Kingdom

D3 May-31 9:20
* Elaboration of nanostructured coatings by pulsed plasma spraying of liquid feedstock
Vincent Rat, Fabrice Mavier, Marguerite Bienia, Martine Lejeune, Jean-François Coudert
CNRS-University of Limoges, France

D3 May-31 9:40
Overview of some innovative coatings for electrical applications at Schneider Electric
Sophie Roure, Arnaud Gautier, Viviane Aristhène
Schneider Electric, France

D3 May-31 10:00
*A plasma-based surface treatment as an alternative to chromate-based conversion coating for Al alloys
Sergey Ershov, Farid Khelifa, Marie-Eve Druart, Philippe Dubois, Marjorie Olivier, Rony Snyders
University of Mons, Belgium

D3 May-31 10:20
*Anodizing of Al alloys in tartaric, boric and sulfuric acids mixture
Salah Salman, O Tetsuya, K Kuroda, M. Okido
Institute of materials and system for sustainability, Nagoya University, Japan
Mining, Metallurgy and Petroleum Engineering Dept., Al-Azhar University, Egypt

Session D3: Surface Engineering/Advanced Protective Coatings

Coffee / Tea break 10:40 to 11:00
D3 May-31 11:00
*Thermo-mechanical and low cycle fatigue failure behavior relevant to temperature regime in a TBCed superalloy specimen
Masakazu Okazaki
Nagaoka University of Technology, Japan

D3 May-31 11:20
*Development of a self-healing thermal barrier coating system for prolonged lifetime
Willem G. Sloof
Delft University of Technology, The Netherlands

D3 May-31 11:40
Re-melting technique with high intense pulsed plasma beams applied for surface modification of steel. Own investigations.
Bozena Sartowska, Marek Barlak, Wojciech Starosta, Lech Walis, Jan Senatorski
Institute of Nuclear Chemistry and Technology, Poland

D3 May-31 12:00
*Low temperature surface hardening of stainless steel; the role of plastic deformation
Federico Bottoli, Freja Jespersen, Jesper Hattel, Thomas Christiansen, Grethe Winther, Marcel Somers
Technical University of Denmark, Denmark

D3 May-31 12:20
*Coatings of anodic titania nanotube arrays grown on titanium tubular electrodes
Lidong Sun
Chongqing University, China

D3 May-31 12:40
*Deposition and characterization of boron-carbon-nitrogen (BCN) thin films for wear-resistant applications
Tolga Tavsanoglu, Michel Jeandin, Okan Addemir
Mugla Sitki Kocman University, Turkey

D3 May-31 13:00
*Control of the surface of quantum dots and semiconductor oxides for photovoltaics
Jianjun Tian
University of Science and Technology Beijing, China

D3 May-31 13:20
Crystallization behavior of cold sprayed pure Ni coatings
Pasquale Cavaliere
University of Salento, Italy

---

[**Lunch break 13:40 - Sessions restarts at 14:10**]

---

* Invited Presentation

Thermec’2016 Conference Programme
Int’l Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
**Session: D4, Venue:** (Room: Hall 11b)

### Surface Engineering/Advanced Protective Coatings 4

**Session Chairs:** Veronique Vitry, France & Hidehiro Yasuda, Japan

**D4 May 31 14:10**  
* Gas nitriding of high vanadium alloy steel  
Haizhi Li, Weiping Tong, Liang Zuo  
*Northeastern University, China*

**D4 May 31 14:30**  
* Development of the advanced TBC for high efficiency gas turbine  
Taiji Torigoe  
*Mitsubishi Heavy Industries, LTD, Japan*

**D4 May 31 14:50**  
* Can heat treatment improve duplex electroless nickel coatings?  
Véronique Vitry, Fabienne Delaunois  
*UMONS, Belgium*

**D4 May 31 15:10**  
* Photo-excitation-induced silicides formation in Pt/SiOx bilayer film  
Hidehiro Yasuda  
*Osaka University, Japan*

**D4 May 30 15:30**  
* Enamel coatings for high temperature protection of superalloys  
Minghui Chen, Shenglong Zhu, Fuhui Wang  
*Laboratory of Corrosion and Protection, China*

---

**Session D4: Surface Engineering/Advanced Protective Coatings**

**Coffee / Tea break 15:50 to 16:10**

**D4 May 30 16:10**  
A ceria-dispersed nickel aluminide coating with the increased resistance to high temperature oxidation  
Xiao Peng  
*Institute of Metal Research, Chinese Academy of Sciences, China*
D4 May-30 16:30
*Preparation and its application of high performance plasma electrolytic oxidation (PEO) and its compound coatings on magnesium alloy
Wei Zhang, Fuhui Wang
Institute of Metal Research, Chinese Academy of Sciences, China

D4 May-30 16:50
*Development of low expansion coatings of reactive element modified Ni+CrN+AlN noncomposite for high temperature protection
Shenglong Zhu, Lijuan Zhu, Pan Ren, Shichen Wang, Fuhui Wang
Institute of Metal Research, Chinese Academy of Sciences, China

D4 May-30 17:10
*Thermocyclic high temperature oxidation of intermetallic TiAl alloys and their protection by fluorine
Alexander Donchev, Mathias Galetz, Michael Schütze
DFI, Germany

D4 May-30 17:30
*Tantalum nitride structure selection: A new route to control diamond nucleation and growth?
Angéline Poulon, Maureen Cheviot, Mohamed Goune
University of Bordeaux, France

D4 May-30 17:50
Improvement of mechanical and wear characteristics at the welded joint of rail by ultrasonic nanocrystal surface modification
Seky Chang, Auezhan Amanov, Jun-Hyong Kim, Shirmendagva Darisuren, Young-Sik Pyun
Korea Railroad Research Institute, Korea

D4 May-30 18:10
*Environmental protection of γ-TiAl alloy by coatings
Reinhold Braun, Nadine Laska
Institute of Materials Research, Köln, Germany
Session: D5, Venue: (Room: Hall 11b)

Surface Engineering/Advanced Protective Coatings 5

Session Chairs: Jose Ocana, Spain & Alexander Donchev, Germany

D5 June-01 9:00
*Fabrication of copper pattern with high adhesion via nano-structuring of PET substrate
Junhyun Han
Chungnam National University, Korea

D5 June-01 9:20
*Surface modification of magnesium alloy by shot lining and laser heating
Yasunori Harada, Minoru Matsumoto, Masayuki Nunobiki, Katsuhiko Takahashi
University of Hyogo, Japan

D5 June-01 9:40
*Splat analysis and assessment of porosity in thermal barrier coatings produced by axial suspension plasma spraying (ASPS)
Uta Klement, Johanna Ekberg, Ashish Ganvir
Chalmers University of Technology, Sweden

D5 June-01 10:00
*Surface modification of interfacial structure of the novel solar cells
Meicheng Li
North China Electric Power University, China

D5 June-01 10:20
*Compressive residual stresses and associated surface modifications induced in Ti6Al4V by laser shock processing
José L. Ocaña, José L. González-Carrasco, Marcela Lieblich, Sandra Barriuso, Juan A. Porro,
Leonardo Ruiz de Lara, Marcos Díaz, José A. Santiago
Universidad Politécnica de Madrid, Spain

Session D5: Surface Engineering/Advanced Protective Coatings

Coffee / Tea break 10:40 to 11:10

D5 June-01 11:10
*Enabling diamond deposition with Cold Spray through the coated particle method
Rocco Lupoi
Trinity College, University of Dublin, Ireland

* Invited Presentation
D5 June-01 11:30  
*Formation of hierarchical intra-splat crack patterns in plasma sprayed ceramic splats  
Guanjun Yang  
*Xian Jiaotong University, China

D5 June-01 11:50  
*Enhanced corrosion resistance and cell behavior of NiTi shape memory alloy by titanium ion implantation  
Yan Li, Ting Zhou, Peng Luo  
Beihang University, China

D5 June-01 12:10  
*Local surface phase stability during cyclic oxidation process  
Sten Johansson  
Linköping University, Sweden

D5 June-01 12:30  
Influence of long heat treatments on the microstructure and mechanical behaviour of HVOF sprayed WC-CoCr and Cr3C2-25NiCr coatings  
Elisabetta Gariboldi, Ludovica Rovatti, Nora Lecis, Luisa Mondora, Giacomo Andrea Mondora  
Politecnico di Milano, Italy

D5 June-01 13:10 Student  
Formation and interaction of point defects in group IVb transition metal carbides and nitrides  
Vsevolod Razumovskiy, Maxim Popov, Hong Ding, Joakim Odqvist  
Materials Center Leoben Forschung GmbH, Austria

D5 June-01 13:30 Student  
Growth of polycrystalline diamond films on Cu/CF composite materials using combustion CVD method  
Clio Azina, Jean-François Silvain, Yongfeng Lu  
ICMCB, France

D5 June-01 13:20 Student  
Innovative thin films by DC reactive pulsed co-sputtering  
ICMCB-CNRS, France

[Lunch break 13:30 - Sessions restarts at 14:10]
Session: D6, Venue: (Room: Gallery A)

Ti Alloys/Aerospace Structural Metallic Materials 1

Session Chairs: Chong Soo Lee, Korea & Eri Miura-Fujiwara, Japan

D6 June-01 14:10 Keynote
* Combined effects of grain boundary convection and migration in dynamic phase transformations
Frank Montheillet, David Piot
* Ecole des Mines, France

D6 June-01 14:40
*Deformation anisotropy and associated mechanisms in rolling textured high purity titanium
Jong Woo Won, Seong Gu Hong, Chong Soo Lee
* POSTECH, Korea

D6 June-01 15:00
*Titanium oxide coating on Ti-based alloys for dental application
Eri Miura-Fujiwara, Yoshimi Watanabe, Toshihiro Kasuga, Thoru Yamasaki, Mitsuo Niinomi
* University of Hyogo, Japan

D6 June-01 15:20
Microstructure study of nickel-based superalloys after deep cold rolling
Balasubramanian Nagarajan, Sylvie Castagne
* Nanyang Technological University, Singapore

Session D6: Ti Alloys/Aerospace Structural Metallic Materials

Coffee / Tea break 15:40 to 16:10

D6 June-01 16:10
*Modelling of grain-boundary mobility and nucleation rate in Ni–Nb alloys during discontinuous dynamic recrystallization
David Piot, Frank Montheillet
* Mines Saint-Étienne, France

* Invited Presentation
D6 June-01 16:30
*Influence of the beta / alpha+beta transformation on the stresses and strains evolutions during quenching of Ti17 and Ti6Al4V alloys from the beta phase field
Julien Teixeira, Benoît Denand, Elisabeth Aeby-Gautier, Sabine Denis
Institut Jean Lamour - CNRS - Université de Lorraine, France

D6 June-01 16:50
High strength titanium alloys with harmonic structure for enhanced properties: Microstructure and mechanical properties
Shotaro Yokoyama, Tarik Sadat, Aziz Hocini, David Tingaud, Frédéric Mompiou, Damien Faurie, Guy Dirras, Kei Ameyama
Université Paris 13, France

D6 June-01 17:10
*Variant selection in α/β Ti alloy
Denis Solas, Sebastien Le Corre
Université Paris Sud, France

D6 June-01 17:30
Ultrafine-grained equiaxed and bimodal Ti-6Al-4V fabricated by thermomechanical processing
Yan Chong, Nobuhiro Tsuji
Kyoto University, Japan

D6 June-01 17:50
TEM observation of the evolution of the microstructure during aging of a betametastable titanium alloy
Joël Douin, Nicolas Bello, Florence Pettinari-Sturmel, Claude Archambeau
CNRS, France

D6 June-01 18:10
Analysis of deformation and internal defect in flat-wedge cross-wedge rolling of GH4169 superalloy
Yan Chen
Institute of Metal Research, Chinese Academy of Sciences, China

D6 June-01 18:30 Student
Characterization of phase transformations occurring in Ti-15Mo by in-situ methods
Pavel Zháňal
Charles University in Prague, Faculty of Mathematics and Physics, Czech Republic
Session: D7, Venue: (Room: Gallery A)

Ti Alloys/Aerospace Structural Metallic Materials 2

Session Chairs: Sengo Kobayashi, Japan & Frank Montheillet, France

D7 June-02 8:30 Keynote
* Development and research of low-cost titanium alloys, especially case of Japan
  Masahiko Ikeda
  Kansai University, Japan

D7 June-02 9:00
Anisotropic characteristics and constitutive modelling of Ti6Al4V sheets deformed at elevated temperature and strain rate
  Beatrice Valoppi, Stefania Bruschi, Andrea Ghiotti
  Dept. of Industrial Engineering, University of Padova, Italy

D7 June-02 9:20
*Thermohydrogen treatment of beta titanium alloys
  Hans-Juergen Christ, Vitali Macin, Peter Schmidt
  Universität Siegen, Germany

D7 June-02 9:40
*Understanding the mechanisms of blended powder sintering of Ti alloys using combined thermal analysis
  Stephen Corbin
  Dalhousie University, Canada

D7 June-02 10:00
*Innovative route for elaborating metal/metal composite
  Damien Fabregue, Guilhem Martin, Florian Mercier
  MATEIS, France

D7 June-02 10:20
*Progress in Titanium Machining
  Franz Haas, Philipp Zopf, Jörg Edler
  Graz University of Technology, Austria

D7 June-02 10:40
*First principle analysis for the effect of beta stabilizer in Ti alloys on the formation of alpha double prime phase
  Sengo Kobayashi, Mitsuki Sugeoi, Tatsuaki Sakamoto
  Ehime University, Japan

* Invited Presentation
### Session D7: Ti Alloys/Aerospace Structural Metallic Materials

**Coffee / Tea break 10:40 to 11:10**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:10 D7</td>
<td><em>Multiscale study of heterogeneity and intermittence of plastic deformation of commercially pure titanium</em></td>
<td>Mikhail Lebyodkin, Kékéli E.K. Amouzou, Tatiana Lebedkina, Thiebaud Richeton, Amandine Roth</td>
<td>CNRS, France</td>
</tr>
<tr>
<td>11:30 D7</td>
<td><em>Influence of niobium content on the hot mechanical behavior of nickel alloys</em></td>
<td>Nedjoua Matougui, David Piot, Mohamed Lamine Fares, Frank Montheillet</td>
<td>École nationale supérieure des mines et métallurgie (ENSMM), Algeria</td>
</tr>
<tr>
<td>11:50 D7</td>
<td><em>Design of strong and stable &quot;high entropy alloys&quot; (HEA) by multi-objective optimisation using thermodynamics and physical models</em></td>
<td>Edern Menou, Isaac Toda-Caraballo, Pedro Rivera-Diaz-del-Castillo, Franck Tancret</td>
<td>University of Cambridge, United Kingdom</td>
</tr>
<tr>
<td>12:10 D7</td>
<td><em>Fibre laser beam welding of Ti6242 - effect of parameter variation on microstructural and mechanical properties</em></td>
<td>Nikolai Kashaev, Dmitry Pugachev, Volker Ventzke, Stefan Riekehr</td>
<td>Helmholtz-Zentrum Geesthacht, Germany</td>
</tr>
<tr>
<td>12:30 D7</td>
<td><em>Identification of pre-transformations of beta phase in metastable beta titanium alloy</em></td>
<td>Yudong Zhang, Jiangkun Fan, Jinshan Li, Hongchao Kou, Jaafar Ghanbaja, Lionel Germain, Claude Esling</td>
<td>University of Lorraine, France</td>
</tr>
<tr>
<td>12:50 D7</td>
<td><em>High porosity titanium coatings by cold spraying for photocatalytic water splitting</em></td>
<td>Maria Villa Vidaller, Frank Gärtner, Agnieszka Rzeszutek, Thomas Klassen</td>
<td>Helmut Schmidt Universität, Germany</td>
</tr>
<tr>
<td>13:10 D7</td>
<td>Microstructure and processing map development of Ti-Al-Fe alloy</td>
<td>Yong-Taek Hyun</td>
<td>KIMS, Korea</td>
</tr>
</tbody>
</table>

**Lunch break 13:30 - Sessions restarts at 14:10**
**Session: D8, Venue:** (Room: Gallery A)

**Ti Alloys/Aerospace Structural Metallic Materials 3**

**Session Chairs:** Priti Wanjara, Canada & Yudong Zhang, France

---

D8 June-02 14:10
*Microstructure evolution in titanium alloys during large deformation in a wide temperature interval*

*Sergey Zherebtsov, Gennady Salishchev*

*Belgorod State University, Russia*

D8 June-02 14:30
*The effect of rare earth Er on the microstructure and mechanical properties in high temperature titanium alloys*

*Bolong Li, Tongbo Wang, Peng Han, Zhenqiang Wang, Zuoren Nie*

*Beijing University of Technology, China*

D8 June-02 14:50
High temperature tensile behavior in Si-bearing near alpha titanium alloy

*Tatsuaki Sakamoto, Hiroshi Matsumura, Shohei Ohtsuka, Sengo Kobayashi*

*Ehime University, Japan*

D8 June-02 15:10
Microstructure and creep property of silicon- and/or germanium-bearing near-alpha titanium alloys

*Tomonori Kitashima, Suresh K.S., Toru Hara, Yoko Yamabe-Mitarai, Yoshiaki Toda*

*National Institute for Materials Science, Japan*

---

**Session D8: Ti Alloys/Aerospace Structural Metallic Materials**

**Coffee / Tea break 15:30 to 16:00**

---

D8 May-31 16:00
Evaluation of weldability of titanium alloy Ti-6Al-4V and aluminum alloy 6061 dissimilar welds produced by electron beam welding

*Petr Havlík, Jan Kouřil, Rudolf Foret, Ivo Dlouhý, Norbert Enzinger, Christopher Wiednig*

*Brno University of Technology, Faculty of Mechanical Engineering, Czech Republic*

D8 June-02 16:20
Modeling molten Ni-based superalloy properties

*James Lill, Christopher Woodward*

*Air Force Research Laboratory, Ohio, USA*
D8 June-02 16:40
*Influence of flash treatment on pseudoelastic behaviour of biomedical Ti–25Nb–3Zr–3Mo–2Sn alloy
Suming Zhu, Yuman Zhu, Matthew Dargusch, Jian-Feng Nie
Monash University, Australia

D8 June-02 17:00
Design and characterization of new titanium alloys combining high strength, high strain hardening and improved ductility
Frédérik Prima
Paris Tech, France

D8 June-02 17:20
* In-situ measurement of resistivity in pure titanium during elastic/plastic deformations
Masato Ueda, Takanori Sakamoto, Masahiko Ikeda
Kansai University, Japan

* Invited Presentation Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Session E
Room: Hall 11b
Session: E1, Venue: (Room: Gallery A)

Fuel Cells and Hydrogen Storage Technologies, Batteries, Supercapacitors and Thermoelectric Materials 1

Session Chairs: Phillipe Knauth, France & Ludger Blum, Germany

E1 May-30 10:30 Keynote
*Ionic conducting polymer electrolytes for electrochemical energy technologies
Maria Luisa Di Vona
University of Rome Tor Vergata, Italy

E1 May-30 11:00
*Syntheses of novel hydrides under high pressure and high temperature
Hiroyuki Saitoh, Shigeyuki Takagi, Katsutoshi Aoki, Shin-ichi Orimo
Japan Atomic Energy Agency, Japan

E1 May-30 11:20
*Re-shaping our thoughts on thermoelectric higher manganese silicides
Stephane Gorsse, Solange Vivès
ICMCB-CNRS, France

E1 May-30 11:40
*New insights into high-temperature polymer electrolyte membrane fuel cells using electron microscopy techniques
Christina Scheu
Max-Planck-Institut für Eisenforschung GmbH, Germany

E1 May-30 12:00
*Fuel cell electrodes based on electrospun mats
Sara Cavaliere
ICGM/AIME Université de Montpellier/CNRS, France

E1 May-30 12:20
*Effect of electrolyte solution concentration and composition on the transport properties of ion exchange membranes for applications in energy conversion systems
Enrica Fontananova, Diego Messana, Isabella Nicotera, Ramato Ashu Tufa, Gianluca Di Profio, Efrem Curcio, Willem van Baak, Enrico Drioli
National Research Council (CNR), Italy

E1 May-30 12:40
*Interface storage and diffusion of sodium ions in titania-based Na-ion battery anodes
Ilie Hanzu, Denise Prutsch, Martin Wilkening
Technische Universität Graz, Austria

* Invited Presentation
E1 May-30 13:00
*Studies of degradation mechanisms of PEFC catalyst layers through an in-situ SEM/STEM technique
Akari Hayashi
Kyushu University, Japan

E1 May-30 13:20
*Evaluation of hot pressing parameters on the electrochemical performance of MEAs based on Aquивion® PFSA membranes
Irene Gatto, Ada Saccà, Vincenzo Baglio, Antonino Salvatore Aricò, Martina Corasaniti, Luca Merlo
CNR ITAE, Italy

Lunch break 13:40 - Sessions restarts at 14:10
Session: **E2**, Venue: (Room: Gallery A)

**Fuel Cells and Hydrogen Storage Technologies, Batteries, Supercapacitors and Thermoelectric Materials 2**

**Session Chairs: Maria di Vona, Italy & Yoshitsugu Kojima, Japan**

---

**E2 May-30 14:10 Keynote**
*Synergistic action of hydrophobic and hydrophilic zirconium phosphate nanofillers for efficient mechanical reinforcement of perfluorosulfonic acid membranes*
Mario Casciola, Anna Donnadio, Monica Pica, Alessandra Carbone, Irene Gatto
Università di Perugia, Italy

---

**E2 May-30 14:40**
*Advances in the electrochemical synthesis of polymer electrolytes for microbatteries*
Philippe Knauth
CNRS - Aix-Marseille University, France

---

**E2 May-30 15:00**
*Neutron scattering studies of aluminum-based hydrides by high intensity total diffractometer (NOVA)*
Kazutaka Ikeda, Toshiya Otomo, Hidetoshi Ohshita, Naokatsu Kaneko, Tomohiro Seya, Fumika Fujisaki, Kentaro Suzuya
High Energy Accelerator Research Organization (KEK), Japan

---

**E2 May-30 15:20**
Impact of the confinement on the in-cage dynamics of molecular hydrogen in clathrates hydrates
Margarita Russina, Ewout Kemner, Ferenc Mezei
ESS ERIC, Hungary

---

**Session E2: Fuel Cells and Hydrogen Storage Technologies, Batteries, Supercapacitors and Thermoelectric Materials**

Coffee / Tea break 15:40 to 16:10

---

**E2 May-30 16:10**
*Magnesium spinel oxides undergoing spinel-to-rocksalt transition for magnesium battery cathodes*
Tetsu Ichitsubo, Shinya Okamoto, Tomoya Kawaguchi, Kohei Shimokawa, Yu Kumagai, Fumiyasu Oba, Shunsuke Yagi, Eiichiro Matsubara
Kyoto University, Japan

---

* Invited Presentation
E2 May-30 16:30
*Effects of additional elements on hydrogen storage properties for vanadium alloys
Atsunori Kamegawa, Ryoichi Nammba, Masuo Okada
Muroran Institute of Technology, Japan

E2 May-30 16:50
*Temperature tolerant polymer electrolytes for PEMFC
Je Deok Kim
National Institute for Materials Science (NIMS), Japan

E2 May-30 17:10
*Ammonia for hydrogen storage
Martin Jones, Bill David, Josh Makepeace, Thomas Wood, Hazel Hunter
STFC, United Kingdom

D2 May-30 17:30
*Hydrogen storage materials for hydrogen economy
Yoshitsugu Kojima
Hiroshima University, Japan

E2 May-30 17:50
*Synthesis kinetics, stability and local order of amorphous La2Mo2O7-d, a potential SOFC anode material
Gaëtan Buvat, Jesus E. Vega Castillo, Uday K. Ravella, Houssem Sellemi, Philippe Lacorre
CNRS, France

E2 May-30 18:10
*Hydrogen production via thermochemical and electrochemical hybrid process by sodium alloy
Hiroki Miyaoka
Hiroshima University, Japan

E2 May-30 18:30
*Synthesis and corrosion effect on A2Ni7 intermetallics used as electrode material for Ni-MH batteries (A= La, Gd, Y, Sm or Mg)
Judith Monnier, Véronique Charbonnier, Junxian Zhang, Michel Latroche, Suzanne Joiret, Beatriz Puga, Vincent Vivier, Lionel Goubault, Patrick Bernard
UPEC and CNRS, France

E2 May-30 18:50
*Coupling experiments and models to interpret degradation in polymer electrolyte fuel cell
Andrea Casalegno, Andrea Baricci, Matteo Zago
Politecnico di Milano, Italy

E2 May-30 19:10
*Laser machining of ceramic electrolytes for solid oxide fuel cell applications
Angel Larrea, José Antonio Cebollero, Ruth Lahoz, Miguel Angel Laguna-Bercero, Jose Ignacio Peña, Victor Orera
Instituto de Ciencia de Materiales de Aragon (CSIC-U. Zaragoza), Spain
E2 May-30 19:10
*Investigation on sPEEK-porphyrin interaction for polymer electrolyte membranes portable applications
Alessandra Carbone, Ada Saccà, Rolando Pedicini, Irene Gatto, Massimiliano Gaeta, Andrea Romeo, Luigi Monsù Scolaro, Maria Angela Castriciano
CNR-ITAE, Italy
Session: E3, Venue: (Room: Gallery A)

Fuel Cells and Hydrogen Storage Technologies, Batteries, Supercapacitors and Thermoelectric Materials

Session Chairs: Mario Casciola, Italy & Benjamin Gould, USA

---

E3 May-31 8:30
*New materials for all-solid-state thin film Li and Li-ion batteries
Brigitte Pecquenard, Frédéric Le Cras, Florian Flamary, Vincent Pelé, Stéphane Cotte
ICMCB, France

E3 May-31 8:50
*Functionalization of the anodic 3D nanostructures by atomic layer deposition for energy applications
Lionel Santinacci, Loïc Assaud, Maïssa Barr, Elena Baranova, Nicolas Bazeau, Nareerat Plylahan, Thierry Djenizian, Julien Bachmann, Margrit Hanbucken
CNRS - Aix-Marseille University, France

E3 May-31 9:10
*All-solid-state argyrodite-based lithium batteries
Virginie Viallet, Sylvain Boulineau, Jean-Marie Tarascon, Jean-Bernard Leriche, Vincent Seznec
UMR CNRS 7314, France

E3 May-31 9:30
*A Microbattery Made from Monocrystalline Silicon
Martin Wilkening
Graz University of Technology, Austria

E3 May-31 9:50
*Processing and thermoelectric properties of new Si- Se- Sn-based intermetallics
Wilfried Wunderlich, Masashi Sato, Yoshihito Matsumura
Tokai University, Faculty of Engineering, Japan

E3 May-31 10:10
*Defects and charging processes in Li-ion battery cathodes studied by in-operando magnetometry and positron annihilation
Roland Würschum, Stefan Topolovec, Harald Kren, Gregor Klinser, Stefan Koller, Heinz Krenn, Christof Hugenschmidt, Frank Berkemeier, Martin Fiedler, Wolfgang Sprengel
Graz University of Technology, Austria

---

* Invited Presentation
**Session E3: Fuel Cells and Hydrogen Storage Technologies, Batteries, Supercapacitors and Thermoelectric Materials**

Coffee / Tea break 10:30 to 11:00

E3 May-31 11:00  
*Characterization of electrodeposited manganese oxide layer for advanced capacitor electrode*  
Cheng Xu, Jikang Liu, Zhenlun Song  
*Ningbo Institute of Material Technology and Engineering Chinese Academy of Sciences, China*

E3 May-31 11:20  
*Analysis of hydrogen solubility and diffusivity toward the design of V-based alloy membranes with high hydrogen permeability and strong resistance to hydrogen embrittlement*  
Hiroshi Yukawa  
*Nagoya University, Japan*

E3 May-31 11:40  
*Solid oxide fuel cell and stack development at Forschungszentrum Jülich*  
Ludger Blum, L.G.J. de Haart, Jürgen Malzbender, Nikolaos Margaritis, Norbert H. Menzler  
*Forschungszentrum Jülich GmbH, Germany*

E3 May-31 12:00  
*Interfaces in metal-supported electrochemical energy converters*  
Martin Bram, Daniel Roehrens, Veronika Rojek, Marco Brandner, Alexander Opitz  
*Forschungszentrum Jülich GmbH, Germany*

E3 May-31 12:20  
Fluorinated copolymer membranes via initiated chemical vapor deposition  
Paul Christian  
*TU Graz, Austria*

E3 May-31 12:40  
*Hydrogenation properties of supported metal nanoparticles on graphene*  
Shigehito Isobe  
*Hokkaido University, Japan*

E3 May-31 13:00  
Framework structures for magnesium battery cathodes  
Shunsuke Yagi, Masaaki Fukuda, Tetsu Ichitsubo, Eiichiro Matsubara  
*Osaka Prefecture University, Japan*

E3 May-31 13:20 Student  
*Lightweight titanium metal bipolar plates for PEM fuel cells*  
Benjamin Gould, Karen Swider-Lyons  
*US Naval Research Laboratory, USA*

**Lunch break 13:30 - Sessions restarts at 14:10**
Session: E4, Venue: (Room: Hall 11b)

Additive Manufacturing 1

Session Chairs: Aude Simar, Belgium & Jean-Yves Hascoet, France

E4 May-31 14:10 Keynote
*Large scale metal additive manufacture for engineering parts
Stewart Williams, Jialuo Ding, Filomeno Martina, Paul Colegrove
Cranfield University, United Kingdom

E4 May-31 14:40
*Additive manufacturing of parts from advanced materials by 3D screen printing
Olaf Andersen, Thomas Studnitzky, Bernd Kieback
Fraunhofer IFAM Dresden, Germany

E4 May-31 15:00
*Microstructure tailoring by selective laser melting pulse optimisation
M. Brochu, J. Milligan, R. Chou, R. Trespalacios, X. Wang
McGill University, Canada

E4 May-31 15:20
*Direct fabrication of hydroxyapatite by selective laser melting
Shihai Sun, Takeo Kurozumi, Takayoshi Nakano
Osaka University, Japan

Session E4: Additive Manufacturing

Coffee / Tea break 15:40 to 16:00

E4 May-31 16:00
*Rapid, high-throughput mechanical properties measurements of additively manufactured metals
Brad Boyce, Brad R. Salzbrenner, Bradley H. Jared, Jeffrey M. Rodelas, Jonathan D. Madison
Sandia National Lab, USA
E4 May-31 16:20
In situ X-ray diffraction studies on rapidly solidified alloys under additive manufacturing conditions
Empa, Switzerland

E4 May-31 16:40
Usability of Ti6Al4V powder via hydride-dehydride process for selective laser melting process
Naoko Sato, Masaki Ito, Takayuki Izumida, Toru Shimizu, Shizuka Nakano
National institute of advanced industrial science and technology, Japan

E4 May-31 17:00
*Rotary bending fatigue behavior of selective-laser-melted Type 630 stainless
Yoshihiko Uematsu, Toshifumi Kakiuchi, Masaki Nakajima, Masayuki Akita
Gifu University, Japan

E4 May-31 17:20
*Advances in process qualification for powder-bed electron beam additive manufacturing by temperature simulation and measurement
Kevin Chou
The University of Alabama, USA

E4 May-31 17:40
*Friction stir processing (FSP) of selective laser melting (SLM) produced Al-CNT composites
Zhenglin Du, Ming-Jen Tan, Junfeng Guo, Jun Wei, Chee Kai Chua
Nanyang Technological University, Singapore

E4 May-31 18:00
Feedstock development for enhanced control of the direct ink write additive manufacturing process
Andrew Schmalzer, Andrea Labouriau, Kwan-Soo Lee, Brittany Branch, Alexander Mueller, Denisse Ortiz-Acosta
Los Alamos National Laboratory, USA

E4 May-31 18:20
Microstructure of fiber laser deposited WC-Co cemented carbide and carbon steel
Pei-quan Xu, Leijun Li
University of Alberta, Canada

E4 May-31 18:40
Process parameter optimization of fused deposition modeling for helical surfaces using grey relational analysis
John Tharappel Devasia, Anusree T.G, Anjan R, Sivadasan M
Government College of Engineering, Kannur, India

E4 May-31 19:00
*Further development of a predictive tool for managing distortion in electron beam additive manufacturing
Vu Nguyen, Sri Lathabai, Yuqing Feng, John Barnes, Gary Coleman
CSIRO, Australia

* Invited Presentation
E4 May-31 19:20
Additive manufacturing of energetic materials: Enabling a new design parameter for controlled performance 970
Alexander Mueller
Los Alamos National Lab, USA

E4 May-31 19:40
The effect of post processing heat treatments on the microstructure of the nickel-based superalloy CM247LC following selective laser melting
Rocio Muñoz Moreno, V. D. Divya, Olivier Messé, Sarah Driver, Trevor Illston, Scarlett Baker, Michael Carpenter, Howard Stone
University of Cambridge, United Kingdom

E4 May-31 20:00
*Stereo-lithographic additive manufacturing of ceramic and metal components by using nanoparticle paste feeding
Soshu Kirihara
Osaka University, Japan

E4 May-31 20:00 Student
Analysis of Thin Strip Shape and Profile in cold rolling: A way to Improve Strip Profile and Mechanical Properties
Hasan Tibar, Zhentyi Jiang
University of Wollongong, Austria
Session: E5, Venue: (Room: Hall 11b)

Additive Manufacturing 2

Session Chairs: Olaf Andersen, Germany & Suman Das, USA

E5 June-01 8:30 Keynote
*Additive manufacturing – paving the way to industrial application
Christoph Leyens
TU-Dresden, Germany

E5 June-01 9:00
*Progress in the understanding of the microstructure evolution of direct laser fabricated TiAl
Marc Thomas
ONERA, France

E5 June-01 9:20
*In-situ neutron diffraction measurements during loading and annealing of additively manufactured materials
Donald Brown, Bjorn Clausen, Amanda Wu, David Adams, Benjamin Reedlunn
Los Alamos National Laboratory, USA

E5 June-01 9:40
*Laser deposition repair of AA7075 alloy components using Al-12Si powder
Xinjin Cao, P Wanjara, N. Penvern, J. Gholipour, R. Amos, K. Chiu
NRC, Canada

E5 June-01 10:00
*Effects of laser power on track profile and structure formation during selective laser melting of CoCrMo alloy
Zhan Chen, K. Darvish, T. Pasang
Auckland University of Technology, New Zealand

E5 June-01 10:20
*Electron beam melting of Ti-6Al-4V: Effect of post-processing conditions on the microstructure and mechanical properties
Stephane Godet, Sebastien Michotte, Adrien Dolimont, Charlotte de Formanoir
Université Libre de Bruxelles, Belgium

Session E5: Additive Manufacturing

Coffee / Tea break 10:40 to 11:10
E5 June-01 11:10
*New metallurgy of additive manufacturing in metal: experiences from the material and process development with electron beam melting technology (EBM)
Andrey Koptioug
Mid Sweden University, Sweden

E5 June-01 11:30
*Effects of powders on the EBM process and on as-built materials
Guilhem Martin, Rémy Dendievel, Jean-Jacques Blandin, Mathieu Suard, Edouard Chauvet
CNRS/Université de Grenoble, France

E5 June-01 11:50
*Challenges of material science in additive manufacturing. Some case studies with CLAD process
Surendar Marya, Jean Yves Hascoet
Ecole Centrale, France

E5 June-01 12:10
*Microstructural evolution during the heat treatment of laser beam melted AlSi10Mg
Anne Mertens, Olivier Dedry, David Reuter, Olivier Rigo, Jacqueline Lecomte-Beckers
University of Liège, Belgium

E5 June-01 12:30
*Development of a new powder/solid composite for bio-mimic anisotropic implant materials by electron-beam additive manufacturing
Takayoshi Nakano, Hidetsugu Fukuda
Osaka University, Japan

E5 June-01 12:50
*Influence of the scan speed on the microstructure of AlSi10Mg processed by additive manufacturing
Pauline Delroisse, Pascal Jacques, Olivier Rigo, Eric Maire, Aude Simar
Université Catholique de Louvain, Belgium

E5 June-01 13:10
*Additive processing of materials with a higher carbon content
Aziz Huskic
University of Applied Sciences Upper Austria, Austria

E5 June-01 13:30
*Additive manufacturing process development for turbine engine hot-section nickel-based superalloys through scanning laser epitaxy
Suman Das
Georgia Institute of Technology, USA

Lunch break 13:50 - Sessions restarts at 14:10
**Session: E6, Venue:** (Room: Hall 11b)

**Smart/Intelligent Materials and Processes 1**

**Session Chairs:** Kiyoshi Mizuuchi, Japan & Vladimir Brailvoski, Canada

---

**E6 June-01 14:10 Keynote**

*Thermo-mechanical training of Fe-Mn alloys to improve damping capacity*

Yoshimi Watanabe, Hisashi Sato

*Nagoya Institute of Technology, Japan*

---

**E6 June-01 14:40**

*Multi-functionality of nanostructured silicon*

Nobuyoshi Koshida

*Tokyo University, Japan*

---

**E6 June-01 15:00**

*Shape recovery of polymeric matrix composites by IR heating*

Loredana Santo, Denise Bellisario, Fabrizio Quadrini

*University of Rome Tor Vergata, Italy*

---

**E6 June-01 15:20**

*Enhanced sintering densification of yttria ceramics by means of field-assisted and flash sintering techniques*

Hidehiro Yoshida, Yoshio Sakka, Takahisa Yamamoto, Jean-Marie Lebrun, Rishi Raj

*National Institute for Materials Science, Japan*

---

**Session E6: Smart/Intelligent Materials and Processes**

Coffee / Tea break 15:40 to 16:10

---

**E6 June-01 16:10**

*Hot compaction of mechanically alloyed high nitrogen stainless steel powders by plasma sintering*

Hidenori Ogawa

*College of Industrial Technology Amagasai, Japan*

---

* Invited Presentation

Thermec’2016 Conference Programme

Intl' Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
E6 June-01 16:30
*Superelastic Ni-free alloys for biomedical applications processed by selective laser melting
Vladimir Brailovski, Sergey Prokoshkin, Alena Kreitcberg, Sergey Dubinskiy, Anton Konopatsky, Karine Inaekyan
Ecole de Technologie Superieure, Canada

E6 June-01 16:50
*Susceptor design and in-situ shrinkage-temperature measurement during microwave sintering of oxides
Sylvain Marinel, Rodolphe Macaigne, Anthony Thuault, Etienne Savary
CRISMAT laboratory, France

E6 June-01 17:10
*Anisotropy in microstructure and mechanical properties of superalloys (Inconel718) by selective laser forming (SLF)
Hideshi Miura
Kyushu University, Japan

E6 June-01 17:30
*Effects of particle size on fabrication of Al-TiO2 functionally graded materials by centrifugal mixed-powder method
Hisashi Sato, Junya Maeda, Motoko Yamada, Yoshimi Watanabe
Nagoya Institute of Technology, Japan

E6 June-01 17:50
*DSC analysis of martensitic transformation temperature in casted Ti–Ni shape memory alloy
Kazuhito Kitamura
Aichi University of Education, Japan

E6 June-01 18:10
Mechanical properties of shape memory alloy fiber / aluminum composite fabricated by spark plasma sintering
Yoshiki Komiya, Fumihiko Nabeshima, Hiroshi Izui
Nihon University, Japan

E6 June-01 18:30 Student
Ultrasound assisted hydrometallurgical process for Gold recovery from PCBs using thiosulphate as complexing agent
Pietrogiovannmi Cerchier, Katya Brunelli, Manuele Dabalà
University of Padova, Italy

* Invited Presentation

Thermec ’2016 Conference Programme
Int'l Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Session: E7, Venue: (Room: Hall 11b)

Smart/Intelligent Materials and Processes 2

Session Chairs: Loredana Santo, Italy & Hisashi Serizawa, Japan

E7 June-02 8:30 Keynote
* Development of high-temperature shape memory alloys above 673 K
Yoko Yamabe-Mitarai
NIMS, Japan

E7 June-02 9:00
* Supercritical fluids-based technologies for advanced materials
Cyril Aymonier
ICMCB-CNRS, France

E7 June-02 9:20
* Plasma-based aerosol process for the production of single digit nanometer-sized particles from metal, oxide, semi-conductor and polymer
Jean-Pascal Borra, Nicolas Jidenko, Alfred Weber
CNRS-Univ. Paris-Saclay, France

E7 June-02 9:40
* Heat treatment of biomedical Ni-Ti alloys – towards a one-step procedure for optimizing biocompatibility, pseudo elasticity and dimensional accuracy
Andreas Undisz, Robert Hanke, Katharina Freiberg, Markus Rettenmayr
Friedrich Schiller University, Germany

E7 June-02 10:00
* Crystal structure and microstructure of Ni-Mn-In martensite and the mechanical behaviour of martensite variants
Claude Esling, Haile Yan, Yudong Zhang, Xiang Zhao, Liang Zuo
LEM3 UMR 7239, CNRS, France

E7 June-02 10:20
* Design of functional oxide nanomaterials: From nanoparticle synthesis to original densification route
Graziella Goglio, Arnaud Ndayishimiye, Stéphane Mornet, Alain Largeteau
CNRS, France

* Invited Presentation

Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Session E7: Smart/Intelligent Materials and Processes

Coffee / Tea break 10:40 to 11:10

E7 June-02 11:10
*Magnetic shape memory effect in Ni-Mn-Ga single crystal
Oleg Heczko
Institute of Physics, Czech Republic

E7 June-02 11:30
*Development of an electrically-debondable smart dental cement
Noboru Kajimoto, Emi Uyama, Kazumitsu Sekine, Kenichi Hamada
Tokushima University, Japan

E7 June-02 11:50
*Crystal orientation control and magnetostrictive performance of RFe2-based alloys by high magnetic fields
Qiang Wang
Northeastern University, China

E7 June-02 12:10
*Development of joining method for zircaloy and SiC/SiC composite tubes by using diode laser
Hisashi Serizawa, Yuuki Asakura, Daichi Tanigawa, Hirotaka Motoki, Masahiro Tsukamoto, Joon-Soo Park, Hiroatsu Kishimoto, Akira Kohyama
Osaka University, Japan

E7 June-02 12:30
*Structure and microstructure of the phases involved in functional behavior in Co-Ni-Al and Ni-Mn-Ga systems
Jaromír Kopeček
Institute of Physics AS CR, Czech Republic

E7 June-02 12:50 Student
Torsional piezoelectric strain in monocrystalline paratellurite
Guillaume Boivin, Pierre Belanger, Ricardo J. Zednik
École de technologie supérieure Montréal, Canada

E7 June-02 13:00 Student
Phases stability study of the shape memory alloy CuAl-X (X = Be, Zn, Ti, Ni, Ag and Au) by ab initio calculations
Nassim Boudalia, Jean-Marc Raulot, Etienne Patoor, Claude Esling
University of Lorraine, France

Lunch break 13:20 - Sessions restarts at 14:10

* Invited Presentation
Session: E8, Venue: (Room: Hall 11b)

Smart/Intelligent Materials and Processes 3

Session Chairs: Yoshimi Watanabe, Japan & Bernhard B. Sonderreger, Austria

E8 June-02 14:10
*Synthesis of β-FeSi₂ by directly applied current sintering and its thermoelectric properties
Mikio Ito, Kenta Kawahara
Osaka University, Japan

E8 June-02 14:30
*Thermal conductivity of cubic boron nitride particle dispersed Al matrix composites fabricated by SPS
Kiyoshi Mizuuchi, Kanryu Inoue, Yasuyuki Agari, Motohiro Tanaka, Takashi Takeuchi, Jun-ichi Tani, Masakazu Kawahara, Yukio Makino, Mikio Ito
Osaka Municipal Technical Research Institute, Japan

E8 June-02 14:50
*Effects of alloy composition on phase transition temperatures of CoMnSi compounds
Katsunari Oikawa, Shun Saito, Nobuhumi Ueshima
Tohoku University, Japan

E8 June-02 15:10
*Soft matters containing self-propelled nanometer and micrometer-scale particles spontaneously generate large-scale mechanical network
Kazuhiro Oiwa
National Institute for Information and Communication Technology, Japan

Session E8: Smart/Intelligent Materials and Processes

Coffee / Tea break 15:30 to 16:00

E8 June-02 16:00
*Processing shape memory alloys and its composites by powder metallurgy
Jose San Juan, Gabriel A. López, Mariano Barrado, Oscar A. Ruano, Maria L. Nó
Universidad del Pais vasco, Bilbao, Spain

E8 June-02 16:20
*Magnetic shape memory - polymer hybrids
Ilkka Aaltio, Frans Nilsén, Joonas Lehtonen, Yanling Ge, Simo-Pekka Hannula
Aalto University, Finland

* Invited Presentation
*Invited Presentation

Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria

E8 June-02 16:40
*Fabrication and anisotropic properties of oriented Li1+x-yNb1-x-3yTi+y+xO3 solid solutions by slip casting in a high magnetic field
Hiromi Nakano, Shohei Furuya, Tohru Suzuki, Hitoshi Ohsato
Toyohashi University of Technology, Japan

E8 June-02 17:00
Dependence of frequency and electric conductivity on current distribution in SPS process
Tatsuya Misawa, Hiroaki Kodera, Yuji Kawakami, Masakazu Kawahara
Saga University, Japan

E8 June-02 17:20
Analysis of pre-strain in a hybrid forming process including stretch and incremental sheet forming
Fabio Lora, Bruno Caetano, Rodrigo S. Coelho, Lirio Schaeffer
Senai Cimatec, Brazil

E8 June-02 17:40
Determination of crystallographic orientation near a chill zone using ghost lines
Hisao Esaka, Takuya Ishida, Atsuya Yoshimoto, Kei Shinozuka
National Defence Academy, Japan
Session F

Room: Gallery C
**Session: F1, Venue: (Room: Gallery C)**

**Interfaces, Grain Boundaries and Structural Characterization Techniques 1**

**Session Chairs: Dmitri Molodov, Germany & Seiichiro Ii, Japan**

**F1 May-30 10:30 Keynote**
* Revisiting the hardening precipitates in high strength aluminum alloys by atomic-resolution electron microscopy

Jianghua Chen  
*Hunan University, China*

**F1 May-30 11:00**
* Formation and dissolution of hydride precipitates in zirconium alloys: Crystallographic orientation relationships and stability after temperature cycling

Egle Conforto, Cyril Berziou, Stephane Cohendoz, Patrick Girault, Xavier Feaugas  
*University of La Rochelle, France*

**F1 May-30 11:20**
* Quantitative microstructural analysis for age-hardenable Cu-based alloys using extraction technique

Satoshi Semboshi, Shigeo Sato, Akihiro Iwase  
*Tohoku University, Japan*

**F1 May-30 11:40**
* The interface structure between CIGS and Mo films

Limei Cha, Junfeng Han, Rong Huang, Liangliang Fan  
*Hunan University, China*

**F1 May-30 12:00**
* Characterization of interfacial segregation in magnesium alloys

Houwen Chen  
*Chongqing University, China*

**F1 May-30 12:20**
* Control of microstructure of high anisotropic FePt film through interface modification and doping

Jingsheng Chen  
*National University of Singapore, Singapore*

**F1 May-30 12:40**
* Atomically-resolved spectroscopy for emergent phenomena at oxide interfaces

Ming-Wen Chu  
*National Taiwan University, Taiwan*
F1 May-30 13:00
* Quantitative transmission electron microscopy studies on deformation mechanisms in nanotwinned copper
Kui Du, Ning Lu, Lei Lu, Hengqiang Ye
Institute of Metal Research, Chinese Academy of Sciences, China

F1 May-30 13:20
Size effects and plasticity of thin metallic materials: influence of the crystallographic structure and the stacking fault energy
Gwendoline Fleurier, Eric Hug, Pierre-Antoine Dubos, Mayerling Martinez
Normandie Université, CRISMAT, France

Lunch break 13:40 - Sessions restarts at 14:10
<table>
<thead>
<tr>
<th>Session: F2, Venue: (Room: Gallery C)</th>
</tr>
</thead>
</table>

### Interfaces, Grain Boundaries and Structural Characterization Techniques 2

#### Session Chairs: Eric Hug, France & Jianghua Chen, P. R. China

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2 May-30</td>
<td>14:10</td>
<td>* Alloying effects on grain boundary motion and nanocrystal stability</td>
<td>Stephen Foiles, Fadi Abdeljawad, Christopher O'Brien</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Sandia National Laboratories, USA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Max-Planck-Institut für Eisenforschung GmbH, Germany</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14:50</td>
<td>* Micro-scale strength evaluation for bonding interface of cold sprayed coatings</td>
<td>Yuji Ichikawa, Ryotaro Tokoro, Kauhiro Ogawa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Tohoku University, Japan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15:10</td>
<td>* Visualization of elastic strain around various interfaces by TEM image analysis</td>
<td>Seiichiro Ii</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* National Institute for Materials Science, Japan</td>
<td></td>
</tr>
<tr>
<td>F2 May-30</td>
<td>16:10</td>
<td>* Effects of deformation induced structural variations on recrystallization of metals</td>
<td>Dorte Juul Jensen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* DTU, Denmark</td>
<td></td>
</tr>
</tbody>
</table>

Coffee / Tea break 15:30 to 16:10

---

* Invited Presentation

Thermec '2016 Conference Programme

Intl' Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
F2 May 30 16:30
*Effect of grain boundary microstructure on electrical conductivity in gold thin films produced by sputtering and subsequent annealing
Shigeaki Kobayashi, Yoshihito Sugiyama, Kazuma Ishibashi
Ashikaga Institute of Technology, Japan

F2 May 30 16:50
Direct imaging of mechanically or thermally induced grain structure changes in nanocrystalline metals
Christian Kuebel, Aaron Kobler, Krishna Kanth, Horst Hahn
KIT, Germany

F2 May 30 17:10
*Phosphorus at grain boundaries of iron and steels: An overview
Pavel Lejček, Siegfried Hofmann, Mojmír Šob
Institute of Physics, AS CR, Czech Republic

F2 May 30 17:30
*Atomistic experimental and simulation investigation on the modification of Al-Si alloys
Jiehua Li
Montanuniversitaet Leoben, Austria

F2 May 30 17:50
*Real-time STEM imaging of nucleation, growth and transformation of the precipitates in age-hardening Al-Cu-(Mg) alloys during in-situ heating
Chunhui Liu, Limei Liu, Peipei Ma, Jianghua Chen, Henny Zandbergen
Center for High Resolution Electron Microscopy, College of Materials Science and Engineering, China

F2 May 30 18:10
*STEM and TEM observations of defects distribution of Ge/Si annealed by new heating method using plasma technique
Junji Yamanaka, Chiaya Yamamoto, Kazuki Kamimura, Hiroki Nakaie, Tetsuji Arai, Keisuke Arimoto, Kiyokazu Nakagawa
University of Yamanashi, Japan

F2 May 30 18:30
*Atomic structure and interface layers in thin films oxide heterostructures
Regina Ciancio
CNR IOM TASC, Italy

F2 May 30 18:50 Student
The effects of Fe on the microstructure and the interface between hypereutectoid Cu-Al-Fe coatings and steel substrate
Pawee Kucita, Shuncai Wang, Wen-Sheng Li, Marco Starink
University of Southampton, United Kingdom
Session: F3, Venue: (Room: Gallery C)

Interfaces, Grain Boundaries and Structural Characterization Techniques 3

Session Chairs: Douglas Medlin, USA & Pavel Lejček, Czech Republic

F3 May-31 8:30
* Grain boundary dynamics and grain rotation in aluminum bicrystals
Dmitri Molodov, Luis Barrales-Mora, Jann-Erik Brandenburg
RWTH Aachen University, Germany

F3 May-31 8:50
* Electric conductivity along lattice defects in lithium niobate
Atsutomo Nakamura, Yuho Furushima, Eita Tochigi, Yuichi Ikuhara, Kazuaki Toyoura, Katsuaki Matsumaga
Nagoya University, Japan

F3 May-31 9:10
* The effect of grain boundary segregation on embrittlement and magnetism in metallic systems
Mojmír Šob, Pavel Lejček, Monika Všianská
Masaryk University, Brno, Czech Republic

F3 May-31 9:30
* TEM study of dislocations and stacking faults in low-angle grain boundaries of alumina
Eita Tochigi, Atsutomo Nakamura, Teruyasu Mizoguchi, Naoya Shibata, Yuichi Ikuhara
The University of Tokyo, Japan

F3 May-31 9:50
* Strain rate dependent failure of material interfaces at nano-microscale via nanoimpact experiments
Vikas Tomar
Purdue University West Lafayette, USA

F3 May-31 10:10
* Grain boundary plane orientations in recrystallized high purity aluminum and iron
Weiguo Wang
Fujian University of Technology, China

Session F3: Interfaces, Grain Boundaries and Structural Characterization Techniques

Coffee / Tea break 10:30 to 11:00
F3 May-31 11:00
*Deformation mechanisms of a Fe-20Mn-3Al-3Si steel with different deformation processes
Cuilan Wu, Xie Pan, jianghua Chen, Yan Chen, Zhen Liu
Hunan University, China

F3 May-31 11:20
*Novel structures of TiO2 films prepared by modified hydrothermal method
Hangsheng Yang, Jie Ding, Xiaobin Zhang
Zhejiang University, China

F3 May-31 11:40
*Direct mapping of a periodic array of flux-closure quadrants in strain-mediated ferroelectric PbTiO3 films
Yinlian Zhu, Yunlong Tang, Xiuliang Ma
Institute of Metal Research, Chinese Academy of Sciences, China

F3 May-31 12:00
*Assessment of creep tendencies in Cu-Al thin wires: correlation with pure Cu and Al behaviors
Antoine Gueydan, Eric Hug
CRISMAT laboratory, France

F3 May-31 12:20
Grain boundary engineering of ECAPed OFHC copper
Wen Feng, Junhui Zhang, Sen Yang
Nanjing University of Science and Technology, China

F3 May-31 12:40
*Exploring the interface-induced phenomena in thin film materials using advanced transmission electron microscopy
Zaoli Zhang
Erich Schmid institute of Materials Science, Austria

F3 May-31 13:00
*Grain boundaries and their junctions by atomistic and mesoscopic simulations
Luis Barrales-Mora
RWTH Aachen University, Germany

F3 May-31 13:20
*Tunability of the domain structure of PbxSr1-xTiO3 thin film capacitors and its effect on the dielectric response
Stephanie Fernandez-Pena, Céline Lichtensteiger, Pavlo Zubko, Christian Weyman, Stefano Gariglio, Jean-Marc Triscone
University of Geneva, Switzerland

Lunch break 13:40 - Sessions restarts at 14:10
Session: F4, Venue: (Room: Gallery C)

Interfaces, Grain Boundaries and Structural Characterization Techniques 4

Session Chairs: Sadahiro Tsurekawa, Japan & Eita Tochigi, Japan

F4 May-31 14:10
* Combination of techniques for microstructure characterization as a tool for optimized and new pipe products
Juliane Mentz, Matthias Frommert, Charles Stallybrass

F4 May-31 14:30
* Exploring the interplay between grain boundary facet junctions and dislocations
Douglas Medlin
Sandia National Laboratories, USA

F4 May-31 14:50
* On interface boundary structures and compositions in aluminum alloys
Linghong Liu, Jianghua Chen, Touwen Fan, Dingwang Yuan, Zhen Liu
Hunan University, China

F4 May-31 15:10
* Nanoindentation study on incipient plasticity in the vicinity of grain boundaries in nickel and sulphur-doped nickel
Sadahiro Tsurekawa
Japan

Coffee / Tea break 15:30 to 16:10

F4 May-31 16:10
The role of structural contribution in grain boundary segregation and cohesion of Ti
Vsevolod Razumovskiy, Lorenz Romaner
Materials Center Leoben Forschung GmbH (MCL), Austria

F4 May-31 16:30
Observation of interactions between crystal defects by applying in situ nanoindentation in a TEM
Ling Zhang, Zhen Chen, Tianlin Huang, zongqiang Feng
Chongqing University, China

* Invited Presentation
F4 May-31 16:50
* Identification of oxide nano-octahedron and its chemical behaviours in stainless steels
Xiuliang Ma, Shijian Zheng, Yujia Wang, Bo Zhang, Yangtao Zhou
Institute of Metal Research, Chinese Academy of Sciences, China

F4 May-31 17:10
The interface character distribution and intergranular corrosion resistance of duplex stainless steel UNS S32304
Jiangsheng Zhang, Yanli Zhu, Xiaoying Fang, Wenhong Yin, Congxiang Qin
Shandong University of Technology, China

F4 May-31 17:30
B effect on hardenability of high thickness forged steel materials
Sabrina Mengaroni, Andrea Di Schino, Stefano Neri, Massimo Calderini
Centro Sviluppo Materiali, Italy

F4 May-31 17:50
* Reactive plasma depositions of gallium nitride thin films on amorphous substrates and their properties
Yuichi Sato
Akita University, Japan

F4 May-31 18:10
*Atomic-scale study on dopant atom segregation in oxide grain boundaries
Naoya Shibata, Eita Tochigi, Yuichi Ikuhara
The University of Tokyo, Japan

F4 May-31 18:30
*Interfaces in functional materials: a pathway to design better properties
Oana Cojocaru-Miredin
Aachen University, Germany

F4 May-31 18:50
Crystal growth under steady shear-flow field on molecular dynamic simulation
Hailong Peng, Thomas Voigtmann, Dieter Herlach
Ruhr-University Bochum, Germany

F4 May-31 19:00 Student
A Study on the microstructural characterization of René 142 deposited atop René 80 processed through scanning laser epitaxy
Amrita Basak, Suman Das
Georgia Institute of Technology, USA

* Invited Presentation
Session: F5, Venue: (Room: Gallery C)

Mg Alloys 1

Session Chairs: Karl U. Kainer, Germany & Patrik Dobron, Czech Republic

F5 June-01 8:30 Keynote
* Improving creep resistance of magnesium alloys
Norbert Hort, Hajo Dieringa
Helmholtz-Zentrum Geesthacht, Germany

F5 June-01 9:00
* Investigations on hot tearing susceptibility and its mechanism of Mg-Zn-Y alloys
Liu Zheng
Shenyang University of Technology, Republic of China

F5 June-01 9:20
* From single crystals to textured Mg alloys: Acoustic emission study
Patrik Dobroň, Daria Drozdenko, Jan Bohlen, František Chmelík
Charles University in Prague, Czech Republic

F5 June-01 9:40
* Deformation twinning in HCP metals: Nucleation, growth, and interactions
Jian Wang
University of Nebraska-Lincoln, USA

F5 June-01 10:00
* Activation stress of slip systems in magnesium single crystals by pure shear test
Shinji Ando, Kazutaka Fukuda, Yuta Koyanagi, Masayuki Tsushida, Hiromoto Kitahara
Kumamoto University, Japan

F5 June-01 10:20
* Hot deformation behavior and stability criteria of magnesium alloy WE54
Manuel Carsi, Ignacio Rieiro, Oscar Ruano
CENIM-CSIC, Spain

Session F5: Mg Alloys

Coffee / Tea break 10:40 to 11:10

* Invited Presentation

Thermec'2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
F5 June-01 11:10
* Microstructure, texture and mechanical properties of magnesium alloys under special processing conditions
Rongshi Chen, Jun Luo, Mingguang Jiang
Institute of Metal Research, Chinese Academy of Sciences, Republic of China

F5 June-01 11:30
Precipitation hardening against slip and twinning in magnesium alloys
Paloma Hidalgo-Manrique, María Teresa Pérez-Prado, Joseph D. Robson
The University of Manchester, United Kingdom

F5 June-01 11:50
*Formation of hydrogen by ball milling of Mg and Mg alloy in sea water
Kunio Matsuzaki, Takashi Murakami
National Institute of Advanced Industrial Science and Technology (AIST), Japan

F5 June-01 12:10
*Development of high-performing extruded magnesium alloy
Hyunkyu Lim, Youngkyun Kim, Bonghwan Kim, Daeguen Kim, Young-Ok Yoon, Shae K. Kim
Korea Institute of Industrial Technology, Republic of Korea

F5 June-01 12:30
*Bending deformation of Mg single crystals by three-point bending tests
Hiromoto Kitahara, Yuta Hirokawa, Masayuki Tsushida, Shinji Ando
Kumamoto University, Japan

F5 June-01 12:50
*Towards the development of Mg alloys formable at room temperature
Jinghuai Zhang, Alireza Zargaran, Jae H. Kim, Jihyun Hwang, Byeong-chan Suh, T. T. T. Trang, Nack Joon Kim
POSTECH, Republic of Korea

F5 June-01 13:10
*Influence of carbon addition on mechanical properties of thixomolded magnesium alloy
Makoto Hino, Yoshiaki Hashimoto, Koji Murakami, Yutaka Mitooka, Teruto Kanadani
Hiroshima Institute of Technology, Japan

Lunch break 13:30 - Sessions restarts at 14:10
Session: F6, Venue: (Room: Gallery C)

Mg Alloys 2

Session Chairs: Mayumi Suzuki, Japan & Manuel Carsi, Spain

F6 June-01 14:10 Keynote
*Microstructure and mechanical properties of twin roll cast magnesium alloy sheets
Kwang Seon Shin, Sang Jun Park
Seoul National University, Republic of Korea

F6 June-01 14:40
*Microstructural evolution of AZ31 under the application of high density electric current pulses
Xinli Wang, Meishuai Liu, Nan Wu, Wenbin Dai, Xiang Zhao
Northeastern University, Republic of China

F6 June-01 15:00
*Creep deformation mechanism in Mg-Y and Mg-Y-Zn dilute solid solution alloys
Mayumi Suzuki, Fumikli Kondo
Toyama Prefectural University, Faculty of Engineering, Japan

F6 June-01 15:20
*Directional solidification structures and room temperature mechanical properties of Mg-Gd magnesium alloys
Guangyu Yang, Shifeng Luo, Shaojun Liu, Jiahe Wang, Wanqi Jie
Northwestern Polytechnical University, China

Session F6: Mg Alloys

Coffee / Tea break 15:40 to 16:10

F6 June-01 16:10
*Research and development of an antibacterial biodegradable Mg alloy for orthopedic applications
Guangyin Yuan
Shanghai Jiao Tong University, China

* Invited Presentation

Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
F6 June-01 16:30
Investigations on hot tearing susceptibility and its mechanism of Mg-Zn-Y alloys
Zheng Liu, Li Liu, Sibo Zhang, Zhi Wang, Pingli Mao, Yue Wang
Shenyang University of Technology, China

F6 June-01 16:50
*Effect of rare earth additions on the deformation behavior of magnesium
Anna Kula, Xiaohui Jia, Raj Mishra, Marek Niewczas
University of Science and Technology, Poland

F6 June-01 17:10
*Revisiting the effect of solidification cooling rate on microstructure of cast magnesium alloys
Mingxing Zhang, Yahia Ali, Qiuyan Huang
University of Queensland, Australia

F6 June-01 17:30
*Orientation dependent nanoindentation response of single crystalline Mg
In-Suk Choi
Korea Institute of Science and Technology, Korea

F6 June-01 17:50 Student
The effects of interfacial heat transfer coefficient on the microstructure of high-pressure Die-cast magnesium alloy AM60B
Pouya Sharifi, Kumar Sadayappan, Jeff Wood
Western University, Canada

F6 June-01 18:00 Student
Effect of as-rolled microstructure on static recrystallization characteristics and texture evolution during annealing
Jing Su
McGill University, Canada
**Session: F7, Venue: (Room: Gallery C)**

Mg Alloys 3

**Session Chairs: Norbert Hort, Germany & Guangyin Yuan, PR China**

F7 June-02 8:30
*Thermo-mechanical treating of magnesium alloys and its influence on cold working plasticity*
Bartłomiej Plonka, Piotr Korczak, Krzysztof Remsak
*Institute of Non-Ferrous Metals, Poland*

F7 June-02 9:00
*Understanding grain size effects in pure Mg polycrystals*
Carmen María Cepeda-Jiménez, Jon Mikel Molina-Aldareguia, María Teresa Pérez-Prado
*IMDEA Materials Institute, Spain*

F7 June-02 9:20
*Simultaneous strengthening and toughening of Mg alloys by \{10-12\} twins*
Yunchang Xin, Hong Zhang, Xiaojun Zhou, Qing Liu
*Chongqing University, China*

F7 June-02 9:40
*Texture development during static recrystallization of Mg-Sn-Al-Zn alloys sheets*
Sangbong Yi, Maria Nienaber, Dietmar Letzig, Youngmin Kim
*Helmholtz-Zentrum Geesthacht, Germany*

F7 June-02 10:00
*Effect of alloying element on deformation behavior of binary magnesium alloys*
Jihyun Hwang, Byeong-chan Suh, Jae H. Kim, S.Y. Lee, B.J. Lee, Nack J. Kim
*POSTECH, Korea*

F7 June-02 10:20
*Effect of misch metal addition on thermal conductivity and mechanical properties of Mg-4Zn-0.5Ca alloys*
Gun-Young Oh, Shae K. Kim, Hyunkyu Lim, Young-Jig Kim
*KITECH, Korea*

**Session F7: Mg Alloys**

Coffee / Tea break 10:40 to 11:10
F7 June-02 11:10
Casting of an Mg alloy clad strip using a twin roll caster equipped with a scraper
Toshio Haga
Osaka Institute of Technology, Japan

F7 June-02 11:30
Analysis of electric pulsing effect on mechanical behaviour of magnesium alloy
Se-Jong Kim
Korea Institute of Materials Science, Korea

F7 June-02 11:50
Analysis of microtexture development and deformation heterogeneity in the weld region of friction stir welded AZ31 Mg alloy
Min-Seong Kim, Ji-Hyun Hwang, Amol B. Kale, Shi-Hoon Choi
Sunchon National University, Korea

F7 June-02 12:10
Revealing the mechanism of magnesium oxidation with a synchrotron light
Sandra Gardonio, Mattia Fanetti, Matjaz Valant, Dmytro Orlov
Lund University, Sweden

F7 June-02 12:30
New high performance non-flammable magnesium alloys for wrought applications
Young Min Kim, Yohan Go, Su Mi Jo, Sung Hyuk Park, Ha Sik Kim, Chang Dong Yim, Bong Sun You
Korea Institute of Materials Science, Korea

F7 June-02 12:50 Student
Deformation behavior of extruded ZN11 magnesium plate
Daria Drozdenko, Klaudia Horváth, Jan Bohlen, Sangbong Yi, Patrik Dobroň
Charles University in Prague, Czech Republic

F7 June-02 13:00 Student
Study of growth kinetics of deformation twins in AZ31 magnesium alloy
Wenwen Wei, Erwin Povoden-Karadeniz, Ernst Kozeschnik
TU Wien, Austria

---

Lunch break 13:10 - Sessions restart at 14:10

---
Session: F8, Venue: (Room: Gallery C)

Composites (MMC, CMC/Nanocomposites/Syntactic and Foams) 1

Session Chairs: Gen Sasaki, Japan & Parakash Parasivamurthy, India

F8 June-02 14:10 Keynote
* Metal matrix composites developed by severe plastic deformation: challenges and stakes
Marie Noelle Avettand Fenoel, Roland Taillard
Unité Matériaux Et Transformations (UMET), France

F8 June-02 14:40
* Manufacturing of aluminum metal matrix cast composites with carbon based additives for thermal management applications
Alexander Katz-Demyanetz, Rosario Squatrito, Ivan Todaro, Shai Essel, Henning Zeidler, Menachem Bamberger
Technion - Israel Institute of Technology, Israel

F8 June-02 15:00
* Experimental Investigation of Influence of High Strength Fiber Reinforcement on Concrete
Prakash Parasivamurthy
Dayananda College of Engineering, India

F8 June-02 15:20
* Effect of nature of chemical linker on the formation of a zeolitic layer on zirconia substrates
Adriana Medina Ramirez, Alicia Amairani Flores Diaz
University of Guanajuato, Division de Ciencias Naturales y Exactas, Mexico

Session F8: Composites (MMC, CMC/Nanocomposites/Syntactic and Foams)
Coffee / Tea break 15:40 to 16:10

F8 June-02 16:10
* Influence of material microstructure and thermal residual stresses on macroscopic fracture parameters and elastic properties of metal-ceramic composites
Michal Basista, Witold Węglewski, Kamil Bochenek
Institute of Fundamental Technological Research of the Polish Academy of Sciences, Poland

* Invited Presentation
F8 June-02 16:30
* Enhanced mechanical properties of bulk graphene/aluminum composites with a bio-inspired nanolaminated structure
Qiang Guo
Shanghai Jiao Tong University, China

F8 June-02 16:50
* An overview on perlite-metal syntactic foam
Thomas Fiedler, Mehdi Taherishargh, Irina Belova, Graeme Murch
The University of Newcastle, Australia

F8 June-02 17:10
* High performance magnesium based composites containing nano-length scale/amorphous/hollow reinforcements
Manoj Gupta
National University of Singapore, Singapore

F8 June-02 17:30
* Effect of CNT distribution on mechanical and physical properties of CNT reinforced aluminum matrix composites
Zong-yi Ma, Zheng-yu Liu, Bo-lv Xiao, Wen-guang Wang
Institute of Metal Research, Chinese Academy of Sciences, China

F8 June-02 17:50
* Effect of preparation conditions of TiB2 particle dispersed Al composites on microstructure
Gen Sasaki
Hiroshima University, Japan

F8 June-02 18:10
* Fabrication of composite structures of Nd-doped laser crystals and diamond crystals by use of the room-temperature-bonding technique
Ichiro Shoji
Chuo University, Japan

F8 June-02 18:30
* High toughness and self-lubricative carbon nanotubes-ceramic composites
Alicia Weibel, Christophe Laurent, Claude Estournès, Alain Peigney
Université Toulouse III - Paul Sabatier, France
Session: F9, Venue: (Room: Gallery C)

Composites (MMC, CMC/Nanocomposites/Syntactic and Foams) 2

Session Chairs: Manoj Kumar, Singapore & Zong-Yi Ma, PR China

F9 June-03 8:30 Keynote
* Spark plasma sintering of ceramic powders: from evidence of specific effects to the elaboration of complex architectures and shapes
Claude Estournes, Rachel Marder, Rachman Chaim, Geoffroy Chevallier, Charles Manière, Lise Durand
CNRS CRIMAT, France

F9 June-03 9:00
* Physical properties of aluminum-carbon composites fabricated by semi-liquid route
Jean-Francois Silvain, Gang Li, Akira Kawasaki, Yong Feng Lu
ICMCB-CNRS, France

F9 June-03 9:20
* Liquid composite moulding: A widely used group of FRPC processing techniques, but still a challenging topic
Ralf Schledjewski, Harald Grössing
Montanuniversität Leoben, Austria

F9 June-03 9:40
Pore-structure adjustment and mechanical property of porous TiAl alloy prepared using titanium hydride and aluminium compact
Hui Wang
University of Science & Technology Beijing, China

F9 June-03 10:00
* Metal matrix composites as environment-friendly protective coatings
Luca Magagnin, Roberto Bernasconi, Alessandro Tucci, Luca Nobili
Politecnico di Milano, Italy

F9 June-03 10:20
Effect of interfacial thermal resistance on effective thermal conductivity in aluminum matrix composites
Kenjiro Sugio, Rio Yamada, Yong-Bum Choi, Gen Sasaki
Hiroshima University, Japan

F9 June-03 10:40
Preparation and squeeze casting of nano-SiC/A356 composite assisted with ultrasonic vibration process
Shulin Lü, Pan Xiao, Shusen Wu, Xiaogang Fang
Huazhong University of Science and Technology, China

* Invited Presentation
F9 June-03 11:00
Integrated defect classification in manufacturing of carbon fibre reinforced thermoplastic polymer matrix composites
Michael Fischlschweiger, Alexander Stock, Markus Thurmeier
OTTRONIC Regeltechnik GmbH, Austria

F9 June-03 11:20
Precipitation process of silver nanowire in borosilicate glass by solid-state ion exchange assisted with forward and reverse electric fields
Souta Matsusaka, Hiroki Aoyama, Hirofumi Hidai, Akira Chiba, Noboru Morita
Chiba University, Japan

F9 June-03 11:40
Hemp Nanofibrils Reinforced Polycaprolactone Composites
Alessio Montarsolo, Raffaella Mossotti, Maria de Fatima V Marques, Vinicius Aguiar, Laura Crociani, Maurizio Avella, Martina Simionati, Sara Gavignano, Alessia Patrucco, Marina Zoccola, Claudio Tonin
Italian National Research Council, Italy
Session G

Room: Gallery B
Session: G1, Venue: (Room: Gallery B)

Metallic Glasses/ Bulk Metallic Amorphous Materials 1

Session Chairs: Junji Saida, Japan & Zhaoping Lu, China

G1 May-30 10:30 Keynote
* Phase formation and properties of advanced metastable metallic materials
Jürgen Eckert
Erich Schmid Institute of Materials Science, Austria

G1 May-30 11:00
*Dendrite growth kinetics in undercooled melts of Zr-based alloys
Dieter Herlach, Raphael Kobold, Peter Galenko, Stefanie Koch, Haifeng Wang
Ruhr-University Bochum, Germany

G1 May-30 11:20
* Preparation of high corrosion resistance Ni-based amorphous alloy and their thermal spray coatings
Kenji Amiya
Kanisai Center, Institute for Materials Research, Tohoku University, Japan

G1 May-30 11:40
*A comparative study of molecular motion cooperativity in polymeric and metallic glass forming liquids
Masaru Aniya, Masahiro Ikeda, Sahara S
Kumamoto University, Japan

G1 May-30 12:00
*Quantitative atomistic analysis of mechanical relaxation in metallic glasses
Michael Atzmon
University of Michigan, USA

G1 May-30 12:20
*Fatigue properties including fatigue free in bulk metallic glasses
Kazutaka Fujita, Wei Zhang, Baolong Shen, Kenji Amiya, Chaoli Ma, Nobuyuki Nishiyama, Yoshiihiko Yokoyama
National Institute of Technology, Ube College, Japan

G1 May-30 12:40
*Phonon excitations in Pd42.5Ni7.5Cu30P20 bulk metallic glass by inelastic x-ray scattering
Shinya Hosokawa, Koji Kimura, Masanori Inui, Yukio Kajihara, Tetsu Ichitsubo, Hidemi Kato, Kazuhiro Matsuda, Satoshi Tsutsui, Alfred Baron
Kumamoto University, Japan

* Invited Presentation
G1 May-30 13:00
*Structural change in melt-quenching Ni-Zr glassy alloy due to the deuterium absorption
Keiji Itoh, Junji Saida, Alex Hannon, Emma Barney
Okayama University, Japan

Lunch break 13:20 - Sessions restarts at 14:10
Session: G2, Venue: (Room: Gallery B)

Metallic Glasses/ Bulk Metallic Amorphous Materials 2

Session Chairs: Eun Soo Park, Korea & Paul Voyles, USA

-------------------------------------
G2 May-30 14:10 Keynote
* Process-property relations in bulk metallic glasses
Jörg F. Löffler
ETH Zurich, Switzerland

G2 May-30 14:40
* Structural rejuvenation for improved properties in metallic glasses
Junji Saida, Rui Yamada, Masato Wakeda, Shigenobu Ogata
Tohoku University, Japan

G2 May-30 15:00
Local atomic symmetry in metallic liquids and glasses
Maozhi Li
Renmin University of China, China

G2 May-30 15:20
* Ultrahigh-strength bulk metallic glasses
Ran Li, Tao Zhang
Beihang University, China

Session G2: Metallic Glasses/ Bulk Metallic Amorphous Materials

Coffee / Tea break 15:40 to 16:10

G2 May-30 16:10
* Enhancement of toughness by cooling rate control in bulk metallic glasses
Ka Ram Lim, Seon Yong Park, Young Sang Na
Korea Institute of Materials Science, Korea

* Invited Presentation
G2 May-30 16:30
*Development of novel Mo-Ni-Si-B metallic glass with high sustainability
Jinwoo Kim, Joon Seok Kyeong, Moon-Ho Ham, Andrew M. Minor, Do Hyang Kim,
Eun Soo Park
Seoul National University, Korea

G2 May-30 16:50
*Rapid solidification effects in powder metallurgy
Andrew Mullis
University of Leeds, United Kingdom

G2 May-30 17:10
*Magneto-impedance effect in soft-magnetic metallic glass nanowire and microwire
Koji Nakayama
Tohoku University, Japan

G2 May-30 17:30
*Glass-forming ability and crystallization behavior of Al-Ni-La alloys with other element additions
Jiaojiao Yi, Wanqiang Xu, Jinfu Li, Michael Ferry, Akihisa Inoue
Shanghai Jiao Tong University, China

G2 May-30 17:50
Enthalpy recovery and aging dynamics measurements reveal a stick-slip mechanism of atomic motion during physical aging of a fragile metallic glass
Isabella Gallino
Saarland University, Germany
Session: G3, Venue: (Room: Gallery B)

---

**Metallic Glasses/ Bulk Metallic Amorphous Materials 3**

---

**Session Chairs: Yoji Shibutani, Japan & Michael Atzmon, USA**

---

G3 May-31 8:30  
*Atomic structure and dynamics of bulk metallic glasses*  
Paul Voyles  
*University of Wisconsin-Madison, USA*

G3 May-31 8:50  
*Surface structural changes of Pd-Cu-Ge metallic glass thin films upon glass transition and crystallization*  
Tokujiro Yamamoto  
*Utsunomiya University, Japan*

G3 May-31 9:10  
*Atomistic prediction of relaxation state tuning of metallic glass by pressurized thermal loading process*  
Masato Wakeda, Narumasa Miyazaki, Shigenobu Ogata  
*Osaka University, Japan*

G3 May-31 9:30  
*A practical anodic and cathodic curve intersection model to understand multiple corrosion potentials of Fe-based glassy alloys in OH- contained solutions*  
Weimin Wang  
*Shandong University, China*

G3 May-31 9:50  
*Metallic glass composite with good tensile ductility, high strength and large elastic strain limit*  
Fu-Fa Wu  
*Liaoning University of Technology, China*

G3 May-31 10:10  
*Fatigue endurance limit and crack growth behavior of a high-toughness Zr61Ti2Cu25Al12 bulk metallic glass*  
Jian Xu, Zhen-Qiang Song, Qiang He, Evan Ma  
*Institute of Metal Research, Chinese Academy of Sciences, China*

---

**Session G3: Metallic Glasses/ Bulk Metallic Amorphous Materials**

Coffee / Tea break 10:30 to 11:00
* Enhanced fatigue-properties of high strength aluminium alloy by coating with metallic glass thin films
  Jason Shian-Ching Jang, Peggy Pei Hua Tsai, Tsung-Hsiung Li, Kai-Ti Hsu, Jacob Chih Ching Huang
  National Central University, Taiwan
  G3 May-31 11:00

* Effects of Au and Pd additions on plastic deformation of Zr-Cu-Ni-Al bulk metallic glasses
  Tohru Yamasaki, Yuta Mukai, Kazutaka Fujita, Kenji Amiya, Hidemi Kato
  University of Hyogo, Japan
  G3 May-31 11:20

* Research on the crystallization kinetics and glass-forming ability of a Ti-based bulk metallic glass
  Ke-Fu Yao, Pan Gong, Jia-Lun Gu
  Tsinghua University, China
  G3 May-31 11:40

* Fracture and strength of bulk metallic glasses
  Zhefeng Zhang, Ruitao Qu, Zengqian Liu
  IMR, China
  G3 May-31 12:00

* Influence of small Cu addition on the crystallization behavior of soft magnetic FeCoBSiNb bulk metallic glass
  Mihai Stoica, Parthiban R, Ivan Kaban, Sergio Scudino, Jonathan Wright, Jürgen Eckert
  Leibniz Institute for Solid State and Materials Research Dresden, Germany
  G3 May-31 12:20

* Properties of mechanically rejuvenated Zr-based metallic glass
  Koichi Tsuchiya, Jian Qiang, Fanqiang Meng, Karin Dahmen, Seiichiro Ii, Peter Liaw
  NIMS, Japan
  G3 May-31 12:40

Lunch break 13:10 - Sessions restarts at 14:10
Session: G4, Venue: (Room: Gallery B)

Metallic Glasses/ Bulk Metallic Amorphous Materials 4

Session Chairs: Juergen Eckert, Austria & Jason S. C. Jang, Taiwan

G4 May-31 14:10
*Multiaxial stress states of Zr-base bulk metallic glasses by elastic-plastic finite element analyses
Yoji Shibutani, Bo Pan
Osaka University, Japan

G4 May-31 14:30
Evaluation of coating thickness on the cutting sharpness and durability of Zr-based metallic glass thin film coated surgical blades
Peggy Pei Hua Tsai, Tsung-Hsiung Li, Kai-Ti Hsu, Jason Shian-Ching Jang, Jinn P. Chu, Jyh-Wei Lee
National Central University, Taiwan

G4 May-31 14:50
Effect of Ga additions on the glass formation and mechanical behavior of Ti40Zr10Cu36-xPd14Gax (x = 2-10 at. %) bulk metallic glasses
Supriya Bera, Ramasamy Parthiban, Mihai Stoica, Mariana Calin, Jürgen Eckert
IFW Dresden, Germany

G4 May-30 15:10
*Rapid solidification effects in powder metallurgy
Andrew Mullis
University of Leeds, United Kingdom

Session G4: Metallic Glasses/ Bulk Metallic Amorphous Materials

Coffee / Tea break 15:40 to 16:10

G4 May-30 16:10
Granulation of bulk metallic glass forming alloys as a feedstock for thermoplastic forming and their compaction into bulk samples
David Geissler, Jacob Grosse, Sven Donath, David Ehinger, Mihai Stoica, Jürgen Eckert, Uta Kühn
IFW Dresden, Germany

* Invited Presentation
Anelastic behaviour of amorphous TiAl measured by in-situ electron scattering
Rohit Sarkar, Christian Ebner, Jagannathan Rajagopalan, Christian Rentenberger
University of Vienna, Austria

*Dependence of film thickness and laser annealing parameters on the optical and electrical properties of ITO/metallic glass alloy bi-layer films
H. K. Lin, P. F. Chung, J. C. Huang
National Pingtung University of Science and Technology, Taiwan

Hydrogen transport properties through Ni-Nb-Zr amorphous metallic ribbons and hydrogen effect on their mechanical properties
Jin-Yoo Suh, Yakai Zhao, Jae-il Jang
Korea Institute of Science and Technology, Korea

*Understanding glass formation from the atomic structure perspective in metallic glasses
X. J. Liu, Z. P. Lu
University of Science and Technology Beijing, China
**Session: G5, Venue:** (Room: Gallery B)

**Materials Under Extreme Conditions 1**

**Session Chairs:** Sven Vogel, USA & Yusheng Zhao, USA

---

**G5 June-01 8:30 Keynote**

* The role of microstructure in creep strength of 9-12%Cr steels
Rustam Kaibyshev, Roman Mishnev, Alexandra Fedoseeva, Nadezhda Dudova
Belgorod State University, Russia

---

G5 June-01 9:00

*New trends in high-pressure chemistry of materials*
Hubert Huppertz
*Universität Innsbruck, Austria*

---

G5 June-01 9:20

*Radiation effects in ionic crystals: To create or not to create metallic colloids?*
Igor Alencar
*Universidade Federal do Rio Grande do Sul, Brazil*

---

G5 June-01 9:40

*Materials research at University of Nevada, Las Vegas*
Andrew Cornelius
*University of Nevada, Las Vegas, USA*

---

G5 June-01 10:00

*Pressure Tuned Insulator-Metal Transition in Mott systems*
Yang Ding
*Argonne National Laboratory, USA*

---

G5 June-01 10:20

*Exploring materials through time-resolved X-ray powder diffraction experiment during fast compression*
Lars Ehm, Melissa Sims
*Stony Brook University, USA*

---

**Session G5: Materials Under Extreme Conditions**

Coffee / Tea break 10:40 to 11:10
G5 June-01 11:10
* Mixed-valence vanadates at high pressures
  Andrzej Grzechnik
  RWTH Aachen University, Germany

G5 June-01 11:30
* New trends of materials synthesis and science under ultra-high pressures using diamond anvil cell
  Masashi Hasegawa, Ken Niwa, Yuichi Shirako
  Nagoya University, Japan

G5 June-01 11:50
* High pressure synthesis of boron nitride polymorphic phases and their applications
  Taniguchi Takashi
  NIMS, Japan

G5 June-01 12:10
* Phase transformations driven by the severe plastic deformation
  Boris Straumal, Andrei Mazilkin, Yulia Ivanisenko, Askar Kilmametov, Brigitte Baretzky
  Institute of Solid State Physics RAS, Russia

G5 June-01 12:30
* Development of chalcongen-excess metal chalcogenides with using high-pressure synthesis technique
  Ayako Yamamoto
  Shibaura Institute of Technology, Japan

G5 June-01 12:50
* Ion irradiation effects on nanocluster precipitation in steels
  Zhongwu Zhang, C. T Liu, X-L. Wang, Mike Miller
  Harbin Engineering University, China

G5 June-01 13:10
* Dynamic recrystallization mechanism of coarse grained oxide dispersion strengthened ferritic steel
  Rosalia Rementeria, Maria M. Aranda, Carlos Capdevila Montes
  CENIM-CSIC, Spain

Lunch break 13:30 - Sessions restarts at 14:10
Session: G6, Venue: (Room: Gallery B)

Materials Under Extreme Conditions 2

Session Chairs: Masashi Hasegawa, Japan & Rustam Kaibyshev, Russia

G6 June-01 14:10 Keynote
* Reactions and pressure-induced phase transitions in the diamond anvil cell
Bjoern Winkler
Goethe University, Germany

G6 June-01 14:40
*New materials from extreme conditions processing
Ulrich Häussermann
Stockholm University, Sweden

G6 June-01 15:00
*Deep ultraviolet photodetector based on sulphur-doped cubic boron nitride thin film
Yubo Lee, Jiawei Zhong, Chaolun Sun, Xiao Wang, Hangsheng Yang, Milne William
Zhejiang University, China

G6 June-01 15:20
*Nano-sized surface structures and bubbles in W exposed to high flux D plasma
Wei Liu, Yuzhen Jia, Guang-Nan Luo, Ben Xu, Shilian Qu, Chun Li, Thomas Morgan,
Gregory De Temmerman
Tsinghua University, China

Coffee / Tea break 15:40 to 16:10

G6 June-01 16:10
*Spectroscopic studies on graphite and graphene under high pressure
Atsuko Nakayama
Niigata University, Japan

* Invited Presentation
G6 June-01 16:30
*High pressure synthesis of new transition metal nitrides with using laser-heated diamond anvil cell
Ken Niwa, Toshiki Terabe, Yuichi Shirako, Shunsuke Muto, Kazuyoshi Tatsumi, Tatsuya Mizui, Kazuo Soda, Masashi Hasegawa
Nagoya University, Japan

G6 June-01 16:50
*Dynamic tensile extrusion behavior of metals (Cu, IF-Steel, and Ta)
Kyung-Tae Park, Leeju Park, Hack Jun Kim, Seok Bong Kim
Hanbat National University, Korea

G6 June-01 17:10
*Understanding chemical reactions of small molecules at extreme conditions by means of high pressure pair distribution function analysis
Nadine Schrodt, Lkhamsuren Bayarjargal, Wolfgang Morgenroth, Björn Winkler
Goethe University Frankfurt, Germany

G6 June-01 17:30
*High-pressure synthesis of skutterudite-type thermoelectric materials
Chihiro Sekine
Muroran Institute of Technology, Japan

G6 June-01 17:50
*Difference of development of local structure with high-pressure between early and late transition metal oxides
Yuichi Shirako, Ken Niwa, Masashi Hasegawa, Jianshi Zhou
Nagoya University, Japan

G6 June-01 18:10
*High pressure neutron study of energy materials
Yusheng Zhao
University of Nevada, Las Vegas, USA
Session: G7, Venue: (Room: Gallery B)

Materials Under Extreme Conditions 3

Session Chairs: Bjoern Winkler, Germany & Wei Liu, P. R. China

G7 June-02 8:30 Keynote
*Neutrons for materials characterization under extreme conditions
Sven Vogel, Edith Bourret-Courchesne, Matt Reiche, Adrian Losko, Anton Tremsin
Los Alamos National Laboratory, USA

G7 June-02 9:00
*Effect of cryomilling on the microstructure, high temperature compression and creep properties of oxide dispersion strengthened steel
Kee-Ahn Lee, Jin-Han Gwon, Jeoung-Han Kim
Andong National University, Korea

G7 June-02 9:20
*Elasticity and plasticity of earth’s mantle minerals under pressure
Carmen Sanchez-Valle
WWU Muenster, Germany

G7 June-02 9:40
*High temperature optical spectroscopy characterizations of semiconductor materials
Yong Zhang
UNC Charlotte, USA

G7 June-02 10:00
*Effect of powder outgazing conditions on mechanical and microstructural properties of oxides dispersed strengthened steel foreseen for nuclear applications
Denis Sornin, Pierre-François Giroux, Damien Fabrègue, Pauline Mas
CEA, France

G7 June-02 10:20
The wet and hot corrosion behavior of iron aluminides
Vera M. Marx, Martin Palm
Max-Planck-Institut für Eisenforschung GmbH, Germany

Session G7: Materials Under Extreme Conditions
Coffee / Tea break 10:40 to 11:10

* Invited Presentation
G7 June-02 11:10
Effect of severe plastic deformation behaviour of aluminium alloys on friction surfacing process characteristics
Stefanie Hanke, Tobias Bucken, Jorge F. dos Santos
Helmholtz-Zentrum Geesthacht, Germany

G7 June-02 11:20
*Novel elastic properties of iron carbide at extreme conditions
Catherine McCammon, Clemens Prescher, Ilya Kupenko, Konstantin Glazyrin, Anastasia Kantor, Valerio Cerantola, Rudolf Rüffer, Aleksandr Chumakov, Leonid Dubrovinsky
Universität Bayreuth, Germany

G7 June-02 11:40
Low temperature impact on glass and carbon composite laminates
Valentina Lopresto, Antonio Langella, Giancarlo Caprino
University of Naples, Italy

G7 June-02 12:00
The possible role of grain boundary complexions on the diffusion of silver through SiC in TRISO nuclear fuel particles
Felix Cancino Trejo, Eddie Lopez-Honorato, Romelia Salomon Ferrer, Ross Walker
CINVESTAV, Mexico

Lunch break 13:20 - Sessions restarts at 14:10
Session H

Room: Hall 1b
Session: H1, Venue: (Room: Hall 1b)

Nanomaterials for Structural and Energy Applications 1

Session Chairs: Leon Shaw, USA & Mineo Hiramatsu, Japan

H1 May-30 10:30 Keynote
*Optimization of fabrication routes for ferritic ODS steel cladding tubes: Metallurgical approach combined with thermo-mechanical simulations
Roland Logé, Denis Sornin, Katia Mocellin, Abdellatif Karch, Esteban Vanegas-Marquez, Benjamin Hary, Louise Toualbi, Yann de Carlan
EPFL, Switzerland

H1 May-30 11:00
*Nanotechnology for aluminum mechanical properties improvement
Konstantin Borodianskiy, Michael Zinigrad
Ariel University, Israel

H1 May-30 11:20
*Metallic muscles: Nanoporous materials at work
Jeff DeHosson
University of Groningen, The Netherlands

H1 May-30 11:40
*Imprinting strain in nanostructured ferroelectric ceramics using spark plasma sintering: New strategy towards properties control
Catherine Elissalde, Gilles Philippot, Marjorie Albino, Romain Epherre, Geoffroy Chevallier, Yannick Beynet, Charles Manière, Alicia Weibel, Alain Peigney, Michaël Josse, Marco Deluca, Cyril Aymonier, Claude Estournès, Mario Maglione
ICMCB-CNRS, France

H1 May-30 12:00
*Vertical free-standing ferromagnetic MnAs/semiconducting InAs heterojunction nanowires
Shinjiro Hara
Hokkaido University, Japan

H1 May-30 12:20
*Exploring the thermal, mechanical, and radiation stability of nanocrystalline metals via in-situ transmission electron microscopy
Khalid Hattar, Daniel Bufford, Brittany Muntifering
Sandia National Labs, USA
H1 May-30 12:40
*Nanoplatform based on vertical nanographene for green technology applications
Mineo Hiramatsu, Hiroki Kondo, Masaru Hori
Meijo University, Japan

H1 May-30 13:00
*Infrared solar cells using plasma processed semiconducting single-walled carbon nanotubes thin films
Toshiro Kaneko, Toshiki Akama, Toshiaki Kato
Tohoku University, Japan

H1 May-30 13:20 Student
Electrodeposited molybdenum oxide films and patterned submicrometer motifs: structure and mechanical properties
Alberto Quintana, Aida Varea, Miguel Guerrero, Santiago Suriñach, Maria Dolors Baró, Jordi Sort, Eva Pellicer
Universitat Autònoma de Barcelona, Spain

Lunch break 13:30 - Sessions restarts at 14:10
Session: H2, Venue: (Room: Hall 1b)

Nanomaterials for Structural and Energy Applications 2

Session Chairs: Claude Estournes, France & Kei Ameyama, Japan

H2 May-30 14:10 Keynote
*Hierarchical design and synthesis of nanomaterials to enable high capacity rechargeable battery electrodes
Leon Shaw
Illinois Institute of Technology, USA

H2 May-30 14:40
*Reactive Nanosystems: Billion Atom Reactive and Quantum Molecular Dynamics Simulations
Priya Vashishta
University of Southern California, USA

H2 May-30 15:00
*Local deformation and fracture investigated using in situ electron microscopy
Daniel Kiener, Peter Imrich, Subin Lee, Jiwon Jeong, EricHintsala, Ruth Treml, Sang Ho Oh
Montanuniversität Leoben, Austria

H2 May-30 15:20
*Nanoparticles-supported carbon nanowalls for green energy applications
Hiroki Kondo, Mineo Hiramatsu, Masaru Hori
Nagoya University, Japan

Session H2: Nanomaterials for Structural and Energy Applications

Coffee / Tea break 15:40 to 16:10

H2 May-30 16:10
*High strength - high conductivity carbon nanotube - copper composite wires prepared by spark plasma sintering and room-temperature wire drawing
Christophe Laurent, Claire Arnaud, Florence Lecouturier, David Mesguich, Nelson Ferreira, Geoffroy Chevallier, Alicia Weibel, Claude Estournès
Université Toulouse, France

* Invited Presentation
H2 May-30 16:30
*Characterization of light emission from Si quantum dots with Ge core
Seiichi Miyazaki
Nagoya University, Japan

H2 May-30 16:50
*Nanoscale transformation toughening of the hardest oxide: Nanocrystalline bulk SiO2 stishovite
Norimasa Nishiyama, Fumihiro Wakai, Kimiko Yoshida
DESY, Germany

H2 May-30 17:10
*Fabrication of nano/micro structure of III-V semiconductors by anodic etching and their application
Sachiko Ono, Hidetaka Asoh
Kogakuin University, Japan

H2 May-30 17:30
*Nanostructured transition metal oxides: Application in conversion and storage of energy
Mireille Richard-Plouet, Luc Brohan
CNRS, France

H2 May-30 17:50
*Nanostructure-driven control of defects in GaN grown by the Na flux method
Akira Sakai, Hirotada Asazu, Shotaro Takeuchi, Yoshiaki Nakamura, Masayuki Imanishi, Mamoru Imade, Yusuke Mori
Osaka University, Japan

H2 May-30 18:10
Modeling and experimental results in core-shell ferroelectric ceramics
Jean-Michel Kiat
CNRS-Centrale Supelec, France
Session: H3, Venue: (Room: Hall 1b)

Nanomaterials for Structural and Energy Applications

Session Chairs: Seiichi Miyazaki, Japan & Priya Vashista, USA

H3 May-31 8:30 Keynote
*Recent findings in bulk nanostructured materials produced by SPD processing
Ruslan Valiev
Ufa State Aviation Technical University, Russia

H3 May-31 9:00
*Fluctuation of position and energy of a fine particle in plasma nanofabrication
Masaharu Shiratani, Kazunori Koga
Kyushu University, Japan

H3 May-31 9:20
*InGaAs quantum wells and wires embedded in GaAs for high-efficiency solar cells
Masakazu Sugiyama
The University of Tokyo, Japan

H3 May-31 9:40
*Ni-Fe alloy nanoparticles for hydrogen and syngas production by steam reforming of biomass tar
Keiichi Tomishige
Tohoku University, Japan

H3 May-31 10:00
*Alloy anodization towards the structural and compositional design of nanostructured oxide layers
Hiroaki Tsuchiya, Min-Su Kim, Yuki Otani, Toshiaki Erami, Shinji Fujimoto
Osaka University, Japan

H3 May-31 10:20
*Catalytic properties of Ni3Sn intermetallic nanoparticles fabricated by thermal plasma process
Ya Xu, Shiyu Ma, Jianxin Zhang, Masahiko Demura, Toshiyuki Hirano
National Institute for Materials Science, Japan

Session H3: Nanomaterials for Structural and Energy Applications

Coffee / Tea break 10:40 to 11:00
H3 May-31 11:00
*Materials development for the realization of carbon-neutral energy cycles
Miho Yamauchi
Kyushu University, Japan

H3 May-31 11:20
*Magneto-electric switching of interfacial spins toward magnetic recording/memory
Yu Shiratsuchi
Osaka University, Japan

H3 May-31 11:40
A solid-state chemistry approach to design spinel cobalt oxides with high electronic conductivity for the positive electrode of asymmetric aqueous supercapacitors
Liliane Guerlou-Demourgues, Gérôme Godillot, Pierre-Louis Taberna, Laurence Croguennec, Michel Ménétier, Lydie Bourgeois, François Weill, Patrice Simon, Claude Delmas
Institut de Chimie de la Matière Condensée de Bordeaux (ICMCB)-CNRS, France

H3 May-31 12:00
*Driven mixing and nanostructure formation of metallic multilayers with repeated cold rolling and folding
Rainer Hebert
University of Connecticut, USA

H3 May-31 12:20
*Nano-oxides derived from hydrotalcites as catalysts for dry methane reforming reaction – effect of [Ni(EDTA)]2- adsorption time
Patrick Da Costa, Radoslaw Debek, Monika Motak, Maria Elena Galvez, Teresa Grzybek
UPMC, France

H3 May-31 12:40
*Use of carbon nanocoil as a catalyst support in fuel cell
Yoshiyuki Suda
Toyohashi University of Technology, Japan

H3 May-31 13:00
*Magneto-structural stability of magnetic shape memory alloys quenched from high-temperature
J. Iñaki Pérez-Landazábal, Vicente Recarte, Vicente Sánchez-Alarcos, Silvia Larumbe, Cristina Gómez-Polo, O. Agustín Lambri, F. Guillermo Bonifacich, David Merida, J. Ángel García, Iraultza Unzueta, Fernando Plazaola
Public University of Navarra and INAMAT, Spain

---

Lunch break 13:20 - Sessions restarts at 14:10

* Invited Presentation
**Session: H4, Venue:** (Room: Hall 1b)

**Nanomaterials for Structural and Energy Applications**

**Session Chairs:** Rainer Hebert, USA & Dorte Juul Jensen, Denmark

---

**H4 May-31 14:10 Keynote**

* Surface modifications for engineering the Properties of Inorganic Two-dimensional Nanostructured materials

S. C. Scharma
*Dayananda Sagar College of Engineering, India*

---

**H4 May-31 14:40**

*Nanostructure and thermal stability of the oxide dispersion strengthened ferritic steel PM2000 after dynamic plastic deformation*

Zhenbo Zhang, Nairong Tao, Oleg Mishin, Wolfgang Pantleon
*Technical University of Denmark, Denmark*

---

**H4 May-31 15:00**

*Gate stack technology for silicon carbide based metal-oxide-semiconductor devices*

Takuji Hosoi
*Osaka University, Japan*

---

**H4 May-31 15:20**

*Materials tuning of titania nanotubes for enhancing physical-photochemical multifunctions*

Tohru Sekino
*Osaka University, Japan*

---

**Coffee / Tea break 15:40 to 16:10**

---

**H4 May-31 16:10**

*Spatio-temporal behaviors of atmospheric-pressure dielectric barrier discharge plasma jets for reactive interactions with materials*

Yuichi Setsuhara, G. Uchida, A. Nakajima, K. Kawabata, K. Takenaka
*Osaka University, Japan*
H4 May-31 16:30
*Fabrication of ductile bulk nanocrystalline Ni-W and Fe-Ni alloys by electrodeposition
Yorinobu Takigawa, Isao Matsui, Tokuteru Uesugi, Kenji Higashi
Osaka Prefecture University, Japan

H4 May-31 16:50
*Towards highly efficient wavelength-stable red light-emitting diodes using Eu-doped GaN
Yasufumi Fujiwara, Tomohiro Inaba, Brandon Mitchell, Takanori Kojima, Atsushi Koizumi
Osaka University, Japan

H4 May-31 17:10
*Decoration and doping of graphene by RF sputtering and atomic layer deposition processes
Nadhira Laidani, Hafeez Ullah, Ruben Bartali, Victor Micheli, Flavio Rossi, Gloria Gottardi
Fondazione Bruno Kessler, Italy

H4 May-31 17:30
*A new carbon phase constructed by long-range ordered amorphous carbon clusters from compressing fullerene solvates
Bingbing Liu
State Key Lab for Superhard Materials, China
Session: H5, Venue: (Room: Hall 1b)

Welding /Joining of Advanced Materials and FSW/P

Session Chairs: Norbert Enzinger, Austria & Emanuella Cerri, Italy

H5 June-01 8:30 Keynote
* Joining techniques by sintering of nanoparticles derived from metal oxides
Akio Hirose, Tomokazu Sano, Tomo Ogura
Osaka University, Japan

H5 June-01 9:00
* Mechanical analyses of welding in practical field
Kwang Choi, GyuBaek An
POSCO, Korea

H5 June-01 9:20
* Deformation behavior of inhomogeneous layered microstructure
Vivek Pancholi
IIT Roorkee, India

H5 June-01 9:40
* Effect of IMC interlayer on mechanical property of dissimilar metal joint made by FSW
Masahiro Fukumoto, Morihiko Yamaguchi, Toshiaki Yasui
Toyohashi University of Technology, Japan

H5 June-01 10:00
* Linear friction welding of IN718 to Ti6Al4V
Priti Wanjara, Javad Gholipour, Kosuke Watanabe, Koji Nezaki
National Research Council Canada, Canada

H5 June-01 10:20
* Properties of friction stir processed Al-alloy, nanoparticle reinforced composites
Adrian Gerlich, F. Khodabakhshi, S. Sahraeinejad, A.H. Kokabi, H. Izadi
University of Waterloo, Canada

Session H5: Welding /Joining of Advanced Materials and FSW/P

Coffee / Tea break 10:40 to 11:10
H5 June-01 11:10
Friction stir welding of a 5024 alloy subjected to cold rolling
Diana Yuzbekova, Anna Mogucheva, Rustam Kaibyshev
Belgorod State University, Russia

H5 June-01 11:30
*Microstructure and mechanical properties of friction stir welded 40 mm thick Al-Zn-Mg (A7N01-T5) alloy plate
Changshu He, Jian Liu, Daquan Yang, Wexiao Li, Xiang Zhao, Liang Zuo
Northeastern University, China

H5 June-01 11:50
*Solidification cracking susceptibility for dissimilar weld metal of austenitic metals
Kota Kadoi, Kenji Shinozaki, Motomichi Yamamoto
Hiroshima University, Japan

H5 June-01 12:10
*Resistance upset welding of ODS steel fuel claddings - experimental and simulation approach
Brendan Le Gloannec, Olivier Doyen, Cédric Pouvreaux, Angéline Poulon-Quintin
CEA, France

H5 June-01 12:30
*Friction stir welding on light-weight metal – aluminum alloy Al6061
Bilal Mansoor
TAMU Doha, Qatar

H5 June-01 12:50
*Effects of hybrid structures on the stress reduction and thermal properties of the joints in electronics devices
Michiya Matsushima, Noriyasu Nakashima, Satoshi Nishioka, Shinji Fukimoto, Kozo Fujimoto
Osaka University, Japan

H5 June-01 13:10
*Measurement of residual stresses in linear friction welded in-service Inconel 718 superalloy by neutron diffraction
Lukas Bichler, Mathew Smith, Spiro Yannacopoulos, Priti Wanjara, Dimitry Sediako
University of British Columbia, Canada

---

Lunch break 13:30 - Sessions restarts at 14:10
**Session: H6, Venue:** (Room: Hall 1b)

**Welding /Joining of Advanced Materials and FSW/P**

**Session Chairs: Akio Hirose, Japan & Raj Shabadi, France**

H6 June-01 14:10
*Self-consistent thermomechanical model of friction stir welding*
Patricio Mendez, Jordan Tsui, Alberto Missael Solis Serrano, Kareem Tello
*University of Alberta, Canada*

H6 June-01 14:30
*Evaluation of solidification crack susceptibility in laser beam welds of reduced activation ferritic/martensitic steel F82H*
Hiroaki Mori, Takaya Hitomi, Masakazu Shibahara, Hideo Sakasegawa, Takanori Hirose, Hiroyasu Tanigawa
*Osaka University, Japan*

H6 June-01 14:50
*Dissimilar metal joining of A5052 aluminium alloy and AZ31 magnesium alloy using laser brazing*
Tomo Ogura
*Osaka University, Japan*

H6 June-01 15:10
*Diffusion brazing of single crystal aerospace superalloys using composite powder as interlayer material*
Olanrewaju Ojo
*University of Manitoba, Canada*

**Session H6: Welding /Joining of Advanced Materials and FSW/P**

Coffee / Tea break 15:30 to 16:00

H6 June-01 16:00
Quantitative evaluation of reheat cracking susceptibility by in-situ observation and measurement using laser confocal microscope
Lina Yu
*Osaka University, Japan*
**Microstructural Changes During Creep Process of Friction Stir Welded AZ31B-H24**

*Invited Presentation*

**Michael Regev, Mohamad El Mehtedi, Stefano Spigarelli**

*ORT Braude College, Israel*

**Electron beam welding of the softmartensitic steel 1.4317 (CA6NM)**

*Invited Presentation*

**Yassar Ghanimi, Norbert Enzinger**

*Andritz AG, Austria*

**Quantitative evaluation of aging embrittlement cracking susceptibility in weld metal of heat-resistant alloys**

*Invited Presentation*

**Kazuyoshi Saida**

*Osaka University, Japan*

**Development of the strongest welding consumables**

*Invited Presentation*

**Ronald Schnitzer, Phillip Haslberger, Daniel Schwarz, Wolfgang Ernst, Norbert Enzinger**

*voestalpine Böhler Welding Austria GmbH, Austria*

**Influence of corrosive conditions on the mechanical performance of flow drill screw joints between light metals**

*Invited Presentation*

**Carmen S. Scholz, Gundolf Kopp, Horst E. Friedrich**

*DLR Institute of Vehicle Concepts, Germany*

**Robotic friction stir welding and online trajectory corrections**

*Invited Presentation*

**Sandra Zimmer-Cevret, Ben Attar, Langlos Abba, Leonard H. Bigot**

*Paris Tech and Institut de Sudure, France*

**Numerical and experimental investigation on dissimilar friction stir welded butt joints made of AA7020-T651 and AA6060-T6**

**Invited Presentation**

**Hugo Robe, Landry Giraud, Amevi Tongne, Jean-Michel Bergheau, Christophe Desrayaud, Philippe Bocher, Eric Feulvarch**

*LTDS, France*
Session: H7, Venue: (Room: Hall 1b)

Welding /Joining of Advanced Materials and FSW/P

Session Chairs: Masahiro Fukumoto, Japan & Aferdita Vevecka Priftaj, Albania

H7 June-02 8:30
The energy balance of GMAW processes and it’s quantification
Gerald Wilhelm
Lorch Schweißtechnik GmbH, Germany

H7 June-02 8:50
*Microstructure evolution of AA 6061-T6 weld joints in ultrasonic vibration enhanced friction stir welding
ChuanSong Wu, G.K. Padhy, S. Gao
Shandong University, China

H7 June-02 9:10
*Development of a parameter window for fibre-laser beam welding of aluminium-lithium alloy without filler material
Stefan Riekehr, Camilla Carrarin, Josephin Enz, Volker Ventzke, Nikolai Kashaev
Helmholtz-Zentrum Geesthacht GmbH, Germany

H7 June-02 9:30
Thermal Effect during Electromagnetic Pulse Welding Process
Thaneshan Sapanathan, Dmitrii Chernikov, Rija Nirina Raoelison, Kang Yang, Vladimir Gluschenkov, Nicolas Buiron, Mohamed Rachik
Sorbonne universités, Université de technologie de Compiègne, France

H7 June-02 9:50
*Simulation of roll bonding and further rolling of roll bonded material including bond strength development
Matthias Schmidtchen, Rudolf Kawalla
TU Bergakademie Freiberg, Germany

H7 June-02 10:10
*Microstructural Characterization and Mechanical Properties of Stainless Steel Inlay Welded Dissimilar Materials
Young Sik Pyun and Seky Chang.
Sun Moon University, Korea

Session H7: Welding /Joining of Advanced Materials and FSW/P

Coffee / Tea break 10:30 to 11:00
H7 June-02 11:00
* Influence of cross section on the parameters for linear friction welding of high-strength chains
Gerald Rath, Franz Fuchs, Norbert Enzinger
Graz University of Technology, Austria

H7 June-02 11:20
* Effect of focusing condition on molten area in micro-welding of glass by picosecond pulsed laser
Yasuhiro Okamoto, Imaduddin Helmi Wan Nordin, Motoki Ota, Togo Shinonaga, Akira Okada
Okayama University, Japan

H7 June-02 11:40
Recent advancements towards industrialization of magnetic pulse welding
Prabu Manoharan, Aurélien Robineau, Surendar Marya, Guillaume Racineux
Institut de Soudure, France

H7 June-02 12:00
Experimental investigation of welding parameters on automatic TIG welding of aluminium 5083 plate
Peethambaran K M, John Tharappel Devasia, Praveen V.V
Government College of Engineering, Kannur, India

H7 June-02 12:20
Electron beam welding of high strength quenched and tempered steel
Marek Weglowski, Sylwester Blacha, Dymek Stanislaw, Mateusz Kopuscianski
Institute of Welding, Poland

H7 June-02 12:40 Student
Technical challenges in narrow-gap root pass welding during tandem and hybrid laser-arc welding of a thick martensitic stainless steel
Fatemeh Mirakhorli, Xinjin Cao, Tan Pham, Priti Wanjara, Jean-Luc Fihey
École de Technologie Supérieure, Canada

H7 June-02 12:50 Student
Temperature field evolution during flash butt welding of railway rails
Leonhard Weingerll, Norbert Enzinger
TU Graz, Austria

Lunch break 13:10 - Sessions restarts at 14:10
Session: H8, Venue: (Room: Hall 1b)

Welding /Joining of Advanced Materials and FSW/P

Session Chairs: Kazuyoshi Saida, Japan & Stefan Riekehr, Germany

H8 June-02 14:10
*Interfacial microstructure of 3A21 aluminum alloy/mild carbon joint by magnetic pulse welding
Lin Liu
Huazhong University of Science and Technology, China

H8 June-02 14:30
*Anodization behaviour of friction stir processed aluminium surface composites
Rajashekhara Shabadi, Visweswara Gudla, Ambat Rajan, Flemming Jensen, Aude Simar
Université Lille, Sciences et Technologies, France

H8 June-02 14:50
*Welding of automotive aluminium alloys by laser wobbling process
Giuseppe Barbieri, Francesco Cognini, Massimo Moncada, Antonio Rinaldi, Gabriele Lapi
ENEA, Italy

H8 June-02 15:10
*IN792 DS superalloy: Optimization of EB welding and post-welding heat treatments
Giuseppe Barbieri, Peiman Soltani, Saulius Kaciulis, Roberto Montanari, Alessandra Varone
ENEA, Italy

Session H8: Welding /Joining of Advanced Materials and FSW/P

Coffee / Tea break 15:30 to 16:00

H8 June-02 16:00
*Development of advanced flux cored wires for modern thermal power plants
Susanne Baumgartner, Daniel Schwarz, Ronald Schnitzer
Voestalpine Böhler Welding Austria GmbH, Austria

* Invited Presentation
H8 June-02 16:20
*Solid state welding of different material – a comparison between steel/aluminum and copper/aluminum
Jean Pierre Bergmann
TU Ilmenau, Germany

H8 June-02 16:40
*Fracture surface characterisation of friction stir processed magnesium alloy after mechanical tests
Emanuela Cerri, Maria Teresa Di Giovanni, Tiziano Rimoldi, Luigi Cristofolini
University of Parma, Italy

H8 June-02 17:00
Microstructure and residual stress in rotary friction welded dissimilar metals (Al7020-T6/316L)
Weimin Gan, Michael Hofmann, Volker Ventzke, Christian Randau, Yuanding Huang, Armin Kriele, Emad Maawad, Heinz-Guenter Brokmeier, Martin Mueller
Helmholtz-Zentrum Geesthacht, Germany

H8 June-02 17:20
*Thermal joining of highly conductive bonds by means of reactive multilayered Al-Ni nanofoils
Georgios Theodossiadis
Technische Universität München, Germany

H8 June-02 17:40
Cooling curve based estimation of mechanical properties in high strength steel welds
Rahul Sharma, Uwe Reisgen
RWTH Aachen University, Germany

H8 June-02 18:00
Tensile stress analyses through digital image correlation of single lap joints of high strength steel and aluminum alloy using adhesive bonding
P.A.M.G.P. Bamberg, U. Reisgen, B. Marx, J.D.V. Barbosa and R.S. Coelho
SENAI CIMATEC, Institute of Innovation for Forming and Joining of Materials, Brazil

H8 June-02 18:20 Student
Evaluation of weld parameters on the mechanical properties of friction stir welded dissimilar Al alloy lap joints
Michael Booth, Olga Gopkalo, Xu Liu, Brad Diak, Adrian Gerlich
University of Waterloo, Canada
Session I

Room: Hall 11a
**Session: I1, Venue:** (Room: Hall 11a)

**Materials Performance 1**

**Session Chairs: Roberto Montanari, Italy & Blythe Clark, USA**

---

**I1 May-30 10:30 Keynote**

* Fatigue life extension by crack repair using double stop-hole technique  
Majid R. Ayatollahi, S.M.J. Razavi, Christof Sommitsch, Christian Moser  
*Iran University of Science and Technology, Iran*

**I1 May-30 11:00**

* Residual stress measurements on IN718 fatigue specimens using X-ray diffraction techniques  
Yifei Gao, Wang Shulan  
*CISRI, China*

**I1 May-30 11:20**

* Innovative experimental approaches and physical measurement methods for fatigue monitoring and life assessment  
Tilmann Beck, Marcus Klein, Marek Smaga, Frank Balle, Dietmar Eifler  
*TU Kaiserslautern, Germany*

**I1 May-30 11:40**

Novel concepts for the application of magnesium sheets and profiles in crash loaded vehicle areas  
Horst E. Friedrich, Elmar Beeh, Ping Zhou, Philipp Straßburger, Thomas Grünheid, William Altenhof, Michael Worsswick, Samuel Kim  
*DLR-Institute of Vehicle Concepts, Germany*

**I1 May-30 12:00**

* Functional materials deposition by magnetron sputtering  
Marie-Paule Besland  
*Institut des Matériaux Jean Rouxel (IMN), France*

**I1 May-30 12:20**

* Thermal plasticity index of nanostructured N-based coatings on HSS 6-5-2 (1.3343) tool steel  
Marcello Cabibbo, Stefano Spigarelli, Nicola Clemente, Farayi Musharavati  
*Università Politecnica delle Marche, Italy*

**I1 May-30 12:40**

* Optimal deformation hardening in lead base anodes for copper electrowinning for an appropriate working life  
Carlos Camurri, Claudia Carasco, Yasmil maril  
*University of Concepcion, Chile*
II May-30 13:00
* Characterization of void-dominated ductile failure in pure Ta
Blythe Clark
Sandia National Labs, USA

II May-30 13:20
*SPD processed materials mechanical properties determination with the use of miniature specimens
Jan Dzugan, Pavel Konopik, Radek Procházka, Zuzanka Trojanova
COMTES FHT, Czech Republic

Lunch break 13:40 - Sessions restarts at 14:10
Session: **I2**, **Venue:** (Room: Hall 11a)

Materials Performance 2

**Session Chairs:** Jilt Sietsma, Netherland & Xiao-Wu Li, PR China

**I2 May-30 14:10 Keynote**  
* Revision of ISO 27306 for CTOD toughness correction for constraint loss  
Fumiyoshi Minami, Mitsuru Ohata  
*Osaka University, Japan*

**I2 May-30 14:40**  
*In-situ Atomic Resolution Transmission Microscopy Study on mechanical property of Low Dimensional Materials under Strain Manipulation*  
Ze Zhang  
*Zhejiang University, China*

**I2 May-30 15:00**  
*High-voltage scanning-transmission electron microscopic observation of labyrinth structure developed by cyclic deformation in a [001] copper single crystal*  
Toshiyuki Fujii, Takahiro Kajita, Tomotaka Miyazawa, Shigeo Arai  
*Tokyo Institute of Technology, Japan*

**I2 May-30 15:20**  
*Unraveling the age hardening response in U-Nb alloys*  
Robert Hackenberg, Geralyn Hemphill, Robert Forsyth, Pallas Papin, Ann Kelly, Tim Tucker, Robert Aikin, Jr., David Alexander, Mike Lopez, Amy Clarke  
*Los Alamos National Laboratory, USA*

---

**Session I2: Materials Performance**

Coffee / Tea break 15:40 to 16:10

**I2 May-30 16:10**  
*Pre-hardened engineering and tool steel*  
Per Hansson, Magnus Andersson  
*SSAB Special Steels, Sweden*
I2 May-30 16:30
* Deformation dilatometry to study the mechanical stability of austenite at different temperatures
Javier Hidalgo Garcia, Jilt Sietsma, Maria Jesus Santofimia Navarro
TU Delft, The Netherlands

I2 May-30 16:50
* Prestrain memory on subsequent cyclic behavior of FCC metallic materials presenting different dislocation slip character
Clément Keller, Gael Marnier, Lakhdar Taleb
Material Physics Group, Rouen, France

I2 May-30 17:10
* Morphology evolution of grain boundary carbide in Inconel alloy 690 after grain boundary engineering
Hui Li, Shuang Xia, Bangxin Zhou
Shanghai University, China

I2 May-30 17:30
* Fatigue deformation and damage behavior of Fe-18Cr-18Mn-0.63N high nitrogen austenitic stainless steel
Xiao-Wu Li, Chen-Wei Shao, Feng Shi
Northeastern University, China

I2 May-30 17:50
* Evaluation of the hardening capacity of low-alloyed steels quenched by HPGQ in vacuum furnaces
Bozidar Liscic, Bozo Smoljan
Croatian Academy of Sciences and Arts, Croatia

I2 May-30 18:10
* Influence of the composition and sintering conditions on the thermomechanical properties of SPSed carbides
Alexandre Maitre, Nicolas Pradeilles, Guy Antou, Remy Belon, Mathias Georges
Laboratory SPCTS, France

I2 May-30 18:30
* Non conventional mechanical testing of thick Al-Li alloys sheets welded by Solid State Capacitor Discharge (SS-CDW) for aeronautical applications
Giovanni Maizza, Roberto Cagliero
Politecnico di Torino, Italy

I2 May-30 18:50
Local residual stress depth distribution in the inner gearing of a case hardened sliding collar
Jens Gibmeier, J. Rebelo-Kornmeier
Karlsruhe Institute of Technology, Germany

I2 May-30 19:10
Lightweight sandwich structures in innovative vehicle design under crash load cases
Simon Brueckmann, Horst E. Friedrich, Michael Kriescher, Gundolf Kopp, Michael Wissler, Roman Gätzi
Institute of Vehicle Concepts, German Aerospace Center, Germany
Session: I3, Venue: (Room: Hall 11a)

Materials Performance 3

Session Chairs: Fumiyoshi Minami, Japan & Zhefeng Zhang, PR China

I3 May-31 8:30 Keynote
* Anelastic phenomena preceding the melting of pure metals and alloys
Roberto Montanari, Alessandra Varone
University of Rome Tor Vergata, Italy

I3 May-31 9:00
* Fundamental aspects of rolled zn alloy sheet formability: Structure-property and failure mode relationships
George Pantazopoulos, Anagnostis Toufatzis, Athanasios Vazdirvanidis, Andreas Rikos
ELKEME S.A., Greece

I3 May-31 9:20
* Doping nanocrystalline alloys to improve strength and toughness
Timothy Rupert
University of California, USA

I3 May-31 9:40
* Linking microstructural evolution and friction in metals
Michael Chandross, Shengfeng Cheng, Nicolas Argibay
Sandia National Laboratories, USA

I3 May-31 10:00
* Fabrication of high porosity mullite foams and their properties
Toru Shimizu, Harumi Furue, Kunio Matsuzaki
AIST, Japan

I3 May-31 10:20
* Advanced evaluation of fatigue phenomena using non-destructive testing methods
Peter Starke, Christian Boller
Saarland University, Germany

Session I3: Materials Performance

Coffee / Tea break 10:40 to 11:00
I3 May-31 11:00
*3-D dynamic explicit FE-analysis of Charpy impact test
Yasuhito Takashima, Tsunehisa Handa, Fumiyoshi Minami
Osaka University, Japan

I3 May-31 11:20
Relationship between microstructure and mechanical properties in Q&P-steels
Richard Thiessen
ThyssenKrupp Steel Europe AG, Germany

I3 May-31 11:40
*Tensile deformation mechanisms of Cu-Al alloys with high strength and good ductility
Yanzhong Tian, Nobuhiro Tsuji, Zhefeng Zhang
Institute of Metal Research, Chinese Academy of Sciences, China

I3 May-31 12:00
* Influence of heat treatments on the behavior of maraging steels in phenomena of hydrogen embrittlement
Renzo Valentini, Arianna De Marco, Bernardo Disma Monelli, Massimo De Sanctis
University of Pisa, Italy

I3 May-31 12:20
Improving intergranular corrosion and stress corrosion cracking resistance in a high-nitrogen austenitic stainless steel through GBCD optimization
Feng Shi, Pengcheng Tian, Zhihao Ye, Chunming Liu, Xiaowu Li
Northeastern University, China

I3 May-31 12:40
* Uniaxial tensile behavior of Cu-Al alloys subjected to low-cycle pre-fatigue deformation
Ying Yan, Na Peng, Cheng-Jun Qi, Wei-Wei Guo, Meng-Qi Zhang, Xiao-Wu Li
Northeastern University, China

I3 May-31 13:00
A study on the metallurgical factors for development of creep resistance of alloy 617 at 950°C
Ji-Won Lee, Hyun Uk Hong
Changwon National University, Korea

I3 May-31 13:20 Student
Effect of the secondary phase precipitation on the corrosion resistance of different duplex stainless steels
Luca Pezzato, M. Lago, M. Breda, K. Brunelli, I. Calliari
University of Padova, Italy

I3 May-31 13:30 Student
Multilayer thin films: How residual stresses influence the fracture properties
Ruth Treml, Darjan Kozic, Ronald Schöngrundner, Roland Brunner, Hans-Peter Gänser, Daniel Kiener
Montanuniversität Leoben, Austria

Lunch break 13:40 - Sessions restarts at 14:10

* Invited Presentation
Session: I4, Venue: (Room: Hall 11a)

Materials Performance 4

Session Chairs: Tillmann Beck, Germany & George Pantzapoulos, Greece

I4 May-31 14:10
Influence of the microstructure on the shot peening of automotive springs
Konstantinos Goulas, Carlos Jimenez Pena, Maria-Giuseppina Mecozzi, Roumen Petrov, Jilt Sietsma
Delft University of Technology, The Netherlands

I4 May-31 14:30
* Fatigue deformation and crack growth behavior of Fe-Mn-C-(Al) TWIP steels
Lihe Qian, Penghui Ma, Shuai Liu, Pengcheng Guo, Jiangying Meng, Fucheng Zhang
Yanshan University, China

I4 May-31 14:50
* The behaviour of graphitized steels in machining processes
Hans Roelofs, Nicolas Renaudot, Darko Smolenicki, Jens Boos, Fredy Kuster
Swiss Steel AG, Switzerland

I4 May-31 15:10
An experimental investigation of the microforming process of high-purity thin metallic sheets
Pierre-Antoine Dubos, Eric Hug, Gwendoline Fleurier
ENSICAEN, France

Session I4: Materials Performance

Coffee / Tea break 15:30 to 16:10

I4 May-31 16:10
Deformation behaviour of BCC metals investigated by small- and macro-scale testing techniques
Reinhard Fritz, Alexander Leitner, Verena Maier, Daniel Kiener
Montanuniversität Leoben, Austria

* Invited Presentation
I4 May-31 16:30
Effect of Ni on the coefficient of thermal expansion and Young’s modulus of Fe-Ni-Nb-Ti Invar alloys
Kazuma Ito, Kaori Kawano, Yasuaki Tanaka
_Nippon Steel & Sumitomo Metal Corporation, Japan_

I4 May-31 16:50
Effect of red scale on the bendability of ultra-high-strength steel
Antti Kaijala, Mia Liimatainen, Severi Anttila, Vili Kesti, Pasi Suikkanen, David Porter
_University of Oulu, Centre for Advanced Steels Research, Finland_

I4 May-31 17:10
Evaluation of rolling contact fatigue by using an X-ray diffraction ring analyzer
Naoya Kamura, Takumi Fujita, Toshihiko Sasaki
_NTN Corporation, Japan_

I4 May-31 17:30
Short-time procedure to quantify the cyclic hardening potential of metallic materials by cyclic hardness tests - PhyBaL-CHT
Marcus Klein, Kramer Hendrik, Tilmann Beck, Dietmar Eifler
_TU Kaiserslautern, Germany_

I4 May-31 17:50
Deformation behavior analysis of the single-phase ferritic steel using by the digital image correlation method and crystal plasticity fast Fourier transform method
Sunao Sadamatsu, Jun Heshikiri, Hiroaki Tsuruzono, Yoshitaka Adachi
_Kagoshima University, Japan_

I4 May-31 18:10
Damage healing and twinning mechanisms of a nano-grained high-nitrogen austenitic stainless steel processed by electropulsing treatment
Huajie Yang, Fuyuan Dong, Yunrui Ma, J. D. Guo, Zhefeng Zhang
_Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, China_

I4 May-31 18:30
Mechanical behaviour of materials during creep with changing loads
Riccardo Donnini, Giuliano Angella, Maurizio Maldini, Dario Ripamonti
_CNR-IERI, Chemistry and Materials Science, Italy_

I4 May-31 18:50
Introduction of a new class of creep resistant engine materials based on the Al-Si-Mn-Mo system: creep properties and microstructure
Amir Rezaei Farkoosh
_McGill University, Canada_

I4 May-31 19:10
Long-term performance analysis of geomembrane considering stress cracking resistance
Han-Yong Jeon
_Inha University, Korea_
I4 May-31 19:30 Student
Fatigue crack growth in forged and flow formed IN718
Costa Coleman, Martin Bache, Carl Boettcher
Swansea University, United Kingdom

I4 May-31 19:40 Student
Microstructural and micromechanical characterization of damage initiation in DP steels
Fady Archie, Stefan Zaefferer
Max-Planck-Institut für Eisenforschung GmbH, Germany
Session: I5, Venue: (Room: Hall 11a)

Ultra Fine - Grained Materials 1

Session Chairs: Hyoung Seop Kim, Korea & Nobuhiro Tsuji, Japan

I5 June-01 8:30 Keynote
*The development of superplasticity in ultrafine-grained magnesium alloys
Roberto Figueiredo, Megumi Kawasaki, Terence Langdon
University of Southampton, United Kingdom

I5 June-01 9:00
*Mechanically driven martensite formation in ultra-strong pearlitic steel
G. Dehm, S. Djaziri, Y.J. Li, A. Nematollahi, C. Kirchlechner, B. Grabowski, J. Neugebauer, D. Raabe, S. Goto
Max-Planck-Institute, Germany

I5 June-01 9:20
*Scaling-up the high pressure torsion for processing of ultrafine-grained billets
Yulia Ivanisenko, Roman Kulagin, Andrey Mazilkin, Brigitte Baretzky, Horst Hahn
Karlsruhe Institute for Technology, Germany

I5 June-01 9:40
*Combination of strength and ductility in nanotwinned austenitic 304 stainless steels
Nairong Tao, H.Y. Yi, F.K. Yan, K. Lu
Institute of Metal Research, Chinese Academy of Sciences, China

I5 June-01 10:00
*Microstructure evolution and deformation mechanisms of harmonic structure designed materials
Kei Ameyama
Ritsumeikan University, Japan

I5 June-01 10:20
*Magnetic hardening of iron and FeCo alloys via severe plastic deformation and bulk metal forming
Enrico Bruder, Thorsten Gröb, Clemens Müller
TU Darmstadt, Germany

Session I5: Ultra Fine - Grained Materials

Coffee / Tea break 10:40 to 11:10

* Invited Presentation
I5 June-01 11:00
*Grain boundary hardening and dislocation pile-ups: The effect of misorientation
Rafael Schouwenaars
Universidad Nacional Autonoma de Mexico, Mexico

I5 June-01 11:20
*Deformation induced lattice defects and their recovery in nanoscale carbon-rich ferrite lamellae of cold-drawn pearlitic steel wires
Yuzeng Chen
Northwestern Polytechnical University, China

I5 June-01 11:40
*Effects of deformation induced vacancies in SPD processed nanomaterials
Michael Zehetbauer
University of Vienna, Faculty of Physics, Austria

I5 June-01 12:00
*Microstructure and mechanical properties of Nb alloyed steel processed by hot equal channel angular extrusion
Akira Yanagida, Ryo Aoki, Masataka Kobayashi
Tokyo Denki University, Japan

I5 June-01 12:20
*Flow behavior of severely deformed titanium at elevated temperatures
Guney Guven Yapici, Seyed Vahid Sajadifar
Ozyegin University, Turkey

I5 June-01 12:40
Superplastic behavior of hot rolled Al-Mg-Sc sheets joined by friction stir welding
Sergey Malopheyev
Belgorod State University, Russia

I5 June-01 13:00
The role of preliminary heat treatment in the formation of ultrafine-grained structure in the implementation of the combined process rolling
Abdrakhman Naizabekov, Sergey Lezhnev, Yevgeniy Panin, Irina Volokitina
Kazakh National Technical University, Kazakhstan

I5 June-01 13:20 Student
On the influence of microstructure and thermally activated processes on anomalous yielding point phenomena during nanoindentation
Oliver Renk, Anton Hohenwarter, Reinhard Pippan
Austrian Academy of Sciences, Austria

| Lunch break 13:30 - Sessions restarts at 14:10 |

* Invited Presentation

Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Session: I6, Venue: (Room: Hall 11a)

Ultra Fine - Grained Materials 2

Session Chairs: Yi Huang, UK & Praveen Kumar, India

I6 June-01 14:10 Keynote
*Shear stress and hydrostatic pressure effect in severe plastic deformation
Hyoung Seop Kim
POSTECH, Korea

I6 June-01 14:40
Formation of new metastable phases and intermetallics in magnesium-based systems by high-pressure torsion
Kaveh Edalati, Hoda Emami, Etsuo Akiba, Zenji Horita
Kyushu University, Japan

I6 June-01 15:20
*Fatigue and fracture of ultrafine-grained and nanocrystalline materials
Anton Hohenwarter, Thomas Leitner, Bernhard Völker
Montanuniversität Leoben, Austria

Coffee / Tea break 15:40 to 16:10

I6 June-01 16:10
*Recovery or non-recovery in Al-0.1 Mg and Al-1 Mg alloy during high-pressure torsion processing
Yi Huang, Justine Millet, Nian Xian Zhang, Pedro H.R. Pereira, Terence G. Langdon
University of Southampton, United Kingdom

* Invited Presentation

Thermec’2016 Conference Programme
Intl’ Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
I6 June-01 16:30
Microstructure evolution induced by sliding-based surface mechanical treatments – application to pure copper
Guillaume Kermouche, David Tumbajoy, cedric courbon, Joel Rech, Yinyin Zhang, Richard Chromik
Ecole des Mines de Saint-Etienne, France

I6 June-01 16:50
*Resolving the strength
Praveen Kumar, Megumi Kawasaki, Terence Langdon
Indian Institute of Science, India

I6 June-0117:10
Continuous high pressure tube shearing process
Rimma Lapovok, Yuri Estrin
Deakin University, Australia

I6 June-01 17:30
*Effect of grain refinement and nanosized precipitates on the self-organized dynamics of dislocations in Al-Mg alloys
Tatiana Lebedkina, Mikhail Lebyodkin, Daria Zhemchuzhnkova, Rustam Kaibyshev
Université de Lorraine, France

I6 June-01 17:50
*Dislocation density of ultrafine grained Cu fabricated by severe plastic deformation
Yoji Miyajima
Tokyo Institute of Technology, Japan

I6 June-01 18:10
*Heterogeneous nano-structures in austenitic and duplex stainless steels developed by heavy cold rolling and the specific mechanical properties
Hiromi Miura, M. Kobayashi, N. Sugiura, N. Yoshinaga
Toyohashi University of Technology, Japan

I6 June-01 18:30
*Enhanced strength and ductility by architecturing laminate structures of alternative fine and coarse grain sizes
Xiaoxu Huang
Chongqing University, China

I6 June-01 18:50
Evolution of plastic zone size at a crack tip with ultra-fine grains in metastable austenite
Arnaud Macadre, Toshihiro Tsuchiyama, Setsuo Takaki
I2CNER - Kyushu University, Japan

* Invited Presentation

Thermec’2016 Conference Programme
Int’l Conf. on Processing & Manufacturing of Advanced Materials, May 29-June 03, 2016, Graz, Austria
Session: **I7**, **Venue:** (Room: Hall 11a)

**Ultra Fine - Grained Materials 3**

**Session Chairs:** Michael Zehetbauer, Austria & Hiromi Miura, Japan

**I7 June-02 8:30 Keynote**
*Microscale mechanical behaviour of unique ultrafine-grained materials*
Megumi Kawasaki, Jae-il Jang, Byungmin Ahn, Terence Langdon  
*Hanyang University, Korea*

**I7 June-02 9:00**
*Effect of the severe plastic deformation on magnetic properties in superconductors*
Terukazu Nishizaki, Kaveh Edalati, Zenji Horita, Tadahiro Akune, Nobuyoshi Sakamoto, Tsutomu Nojima, Satoshi Iguchi, Takahiko Sasaki  
*Kyushu Sangyo University, Japan*

**I7 June-02 9:20**
*Evolution of ni structure under ecap and dcap and further annealing*
Vladimir Popov, Elena Popova, Dmitriy Kuznetsov, Alexey Stolbovsky, Gerrit Reglitz, Sergiy Divinski, Gerhard Wilde, Evgeniy Shorohov  
*M.N. Miheev Institute of Metal Physics, Russia*

**I7 June-02 9:40**
*Kinetics of submicrocrystalline structure formation in a Cu-Cr-Zr alloy during large plastic deformation*
Iaroslava Shakhova, Andrey Belyakov, Rustam Kaibyshev  
*Belgorod State University, Russia*

**I7 June-02 10:00**
*Effect of SPD processing technique on grain refinement and properties of an austenitic stainless steel*
Marina Tikhonova, Iaroslava Shakhova, Ruslan Valiev, Rustam Kaibyshev, Andrey Belyakov  
*Belgorod State University, Russia*

**I7 June-02 10:20**
Role of microstructure on mechanical properties of ultrafine grained Cu processed by different ECAP pass-numbers
Masahiro Goto, Seung-zeon Han, Junichi Kitamura, Takaei Yamamoto, Terutoshi Yakushiji, Jee-hyuk Ahn, Testuya Fujimura  
*Oita University, Japan*
Session I7: Ultra Fine - Grained Materials

Coffee / Tea break 10:40 to 11:00

I7 June-02 11:00
*Potential application in micro-forming technology with ultrafine-grained materials
Jie Xu, Debin Shan, Bin Guo, Terence G. Langdon
Harbin Institute of Technology, China

I7 June-02 11:20
*Tailored sever plastic deformation by a novel repetitive continuous extrusion forming (R-Conform process) in Al alloy
Xiankun Ji, Hui Zhang, Fulin Jiang, Xiangxin Kong, Dingfa Fu
Hunan University, China

I7 June-02 11:40
*Transparent fluoride ceramics for laser applications
Michel Mortier, Pierre Aballea, Akiko Suganuma, Julia Sarthou, Patrick Gredin, Gilles Patriarche, Frédéric Druon, J Hostalrich, Patrick Georges
CNRS, France

I7 June-02 12:00
*Analysis of excellent mechanical properties balance of 0.1%C-2%Si-5%Mn ultrafine fresh martensite and ferrite austenite steels
Shiro Torizuka, Mia Kumakura, Hiroki Adachi, Akihiro Maeda, Toshihiro Hanamura
University of Hyogo, Japan

I7 June-02 12:20
*Special twinning behaviours induced by dynamic plastic deformation
Yanjun Li, Shenbao Jin, Knut Marthinsen
Norwegian University of Science and Technology, Norway

I7 June-02 12:40
Investigation of annealing behavior of ultrafine-grained aluminum processed by different cooling rates after hot rolling
Pei-Ling Sun, Chia-Hao Chang
National Sun Yat-sen University, Taiwan

I7 June-02 13:00
Deformation induced strong and stable nanolaminated structures in nickel
Hong Wang Zhang, K. Lu
Yanshan University, China

I7 June-02 13:20 Student
Structural evolution of Cu-Fe alloys deformed by high pressure torsion
Jinming Guo, Julian Rosalie, Zaoli Zhang
Austrian Academy of Sciences, Austria

Lunch break 13:10 - Sessions restarts at 14:10
Session: I8, Venue: (Room: Hall 11a)

Ultra Fine - Grained Materials 4

Session Chairs: Megumi Kawasaki, Korea & Marcello Cabibbo, Italy

I8 June-02 14:10 Keynote
*Plasticity induced grain boundary migration
Reinhard Pippan, Oliver Renk, Marlene Kapp, Bo Yang, Verena Maier, Pradipta Ghosh, Anton Hohenwarter
Austrian Academy of Sciences, Austria

I8 June-02 14:40 Keynote
*Mechanically-induced grain coarsening in gradient nano-grained copper
Lei Lu
IMR, CAS, China

I8 June-02 15:10
*Nanostructured Cu-based shape memory alloys obtained by high-pressure torsion
Gabriel A. López, Iñaki López-Fereño, Boris B. Straumal, Askar R. Kilmametov, Mariano Barrado, K. I. Kolesnikova, Horst Hahn, Brigitte Baretzky, María L. Nó, Jose San Juan
University of the Basque Country, Spain

I8 June-02 15:30
*Manufacturing of ODS RAFM Steel: Mechanical and Microstructural Characterization
Claudio Testani, Paolo Emilio Di Nunzio, Ilaria Salvatori
Centro Sviluppo Materiali S.p.A, Italy

Session I8: Ultra Fine - Grained Materials

Coffee / Tea break 15:50 to 16:20

I8 June-02 16:20
Near-threshold fatigue crack growth behavior of ultrafine-grained metals
Thomas Leitner, Anton Hohenwarter, Reinhard Pippan
Montanuniversität Leoben, Austria
18 June-02 16:40
Quantitative evaluation of creep curve in compression by strain acceleration and transition objective index
Hiroyuki Sato, Yutaro Maeda
Hirosaki University, Japan

18 June-02 17:00
Interface of ultrafine grained Al/Mg multilayered disks prepared by high pressure torsion
Xiaoguang Qiao, Xingyu Zhang, Mingyi Zheng, Chao Xu, Shigeharu Kamado, Ying Chen, Nong Gao, Marco J Starink
Harbin Institute of Technology, China

18 June-02 17:20
Microstructure refinement in the CoCrFeNiMn high entropy alloy under plastic straining.
Nikita Stepanov, Nikita Yurchenko, Dmitry Shaysultanov, Margarita Klimova, Sergey Zherebtsov, Gennady Salishchev
Belgorod State University, Russia

18 June-02 17:40
Electrochemical behaviors of biomedical nano-grained β-type titanium alloys
Hakan Yilmazer, Burak Dikici, Mitsuo Niinomi, Masaaki Nakai, Huihoung Lui, Yoshikazu Todaka, Ahmet Nuri Ozcivan
Yildiz Technical University, Turkey

18 June-02 18:00
Extraordinary structural stability and hardness by decomposition of metastable nanocrystalline solid solutions
Andrea Bachmaier Jörg Schmauch, Hisham Aboulfadal, Mohammad Zamanzade, Andreas Verch, Christian Motz
Austrian Academy of Sciences, Austria

18 June-02 18:20
Shock-induced reaction characteristics of an Al/Ni composite processed via accumulative roll-bonding
Chuan Ting Wang
Nanjing University of Science & Technology, China

18 June-02 18:40
On the strength effects in hydrogenated palladium subjected to HPT processing
Daria Setman, Wolfgang Ress, Andreas Grill, Erhard Schafler, Yuzeng Chen, Reiner Kirchheim, Michael Zehetbauer
University of Vienna, Austria

18 June-02 19:00
Microstructural and mechanical comparison of Ti and Ti-alloys after severe plastic deformation
Bernhard Völker, Nilolaus Jäger, Anton Hohenwarter, Reinhard Pippan
Montanuniversität Leoben, Austria

* Invited Presentation
Session J
Room: Hall 10
Session: J1, Venue: (Room: Hall 10)

Modelling and Simulation 1 (Prof. W. Bleck Symposium)

Session Chairs: Ernest Kozeschnik, Austria & Sylvain Dancette, France

J1 May-30 10:30 Keynote
*On the calculation and impact of phase boundary energies on precipitate kinetics in complex alloys at high temperatures
Bernhard Sonderegger, Ernst Kozeschnik
Graz University of Technology, Austria

J1 May-30 11:00
*Multi-scale modelling of advanced steel processing
Matthias Militzer
The University of British Columbia, Canada

J1 May-30 11:20
*Cinematographic observation of GTAW arc and weld pool surface phenomena in the presence of Marangoni convection
Jean-Luc Fihey, Bruce Hazel
École de Technologie Supérieure, Canada

J1 May-30 11:40
*Irreversible thermodynamics applied to diffusional phase transformations
Ernst Gamsjäger, Volkmar Kircher
Montanuniversität Leoben, Austria

J1 May-30 12:00
*Modelling of diffusion limited growth in multicomponent systems
Charles-Andre Gandin, Gildas Guillemot
MINES ParisTech, France

J1 May-30 12:20
Nonlinear optimization methods for the determination of heat source model parameters
Udo Hartel, Alexander Ilin, Steffen Sonntag, Vesselin Michailov
Robert Bosch GmbH, Germany

J1 May-30 12:40
*Tension density as counter force to the Lorentz force density
Hiroo Nozaki, Masato Senami, Kazuhide Ichikawa, Akitomo Tachibana
Kyoto University, Japan

* Invited Presentation
J1 May-30 13:00
*Kinetic analysis of densification by grain-boundary sliding/diffusion
Byung-Nam Kim
National Institute for Materials Science, Japan

J1 May-30 13:20
*Analytical-numerical modelling approach for calculation of the structural distortions after welding and thermal straightening
Vesselin Michailov, Nikolay Doynov
BTU CS, Germany

Lunch break 13:40 - Sessions restarts at 14:10
Session: J2, Venue: (Room: Hall 10)

Modelling and Simulation 2 (Prof. W. Bleck Symposium)

Session Chairs: Elena Pereloma, Australia & Marciej Pietrzyk, Poland

J2 May-30 14:10
*First-principles local-energy and local-stress calculations of materials interfaces
Masanori Kohyama, Shingo Tanaka, Yoshinori Shiihara
AIST, Japan

J2 May-30 14:30
*Surface effects on L10 ordering processes in nanostructured intermetallics with magnetic anisotropy: Atomistic simulation
Rafal Kozubski, Sylwia Brodacka, Miroslaw Kozlowski, Christine Goyhenex, Graeme E. Murch
Jagiellonian University in Krakow, Poland

J2 May-30 14:50
*Metamodel of a thermodynamic simulation applied to multiscale modelling
Piotr Macioł, Łukasz Sztangret, Danuta Szeliga
AGH University of Science and Technology, Poland

J2 May-30 15:10
Application of Thermo-Calc TCFE7 to high-alloyed mottled cast iron
Armin Paar, Leonel Elizondo, Michael Brandner, Thomas Trickl, Bernhard Sonderegger, Coline Beal, Christof Sommitsch
Eisenwerk Sulzau-Werfen, R. & E. Weinberger AG, Austria

Session J2: Modelling and Simulation (Prof. W. Bleck Symposium)

Coffee / Tea break 15:30 to 16:10

J2 May-30 16:10
*Computer system for comprehensive optimization of material processing technologies
Maciej Pietrzyk
AGH University of Science and Technology, Poland

* Invited Presentation
J2 May-30 16:30
*Coupling of computational thermodynamics with kinetic models for predictive simulations of materials properties
Erwin Povoden-Karadeniz, Ernst Kozeschnik
TU Wien, Austria

J2 May-30 16:50
*A model for strain hardening, recovery, recrystallization and grain growth with applications to forming processes of nickel base alloys
Hermann Riedel, Jiri Svoboda
Fraunhofer IWM, Germany

J2 May-30 17:10
*Quench sensitivity of Al-Mg-Si and Al-Zn-Mg-Cu alloys. Part 1 experiments
Benjamin Milkereit, Christoph Schick, Yong Zhang, Paul A Rometsch, Olaf Kessler
University of Rostock, Germany

J2 May-30 17:30
*Quench sensitivity of Al-Mg-Si and Al-Zn-Mg-Cu alloys. Part 2 predictive modelling
Marco J. Starink, Benjamin Milkereit, Yong Zhang, Paul A Rometsch
University of Southampton, United Kingdom

J2 May-30 17:50
*Multiscale modeling of deformation and fracture in polymers
Yoshitaka Umeno, Atsushi Kubo, Nobuhiro Yoshikawa
The University of Tokyo, Japan

J2 May-30 18:10
*Paracrystalline materials and high-entropy alloys
Shaoqing Wang
Institute of Metal Research, CAS, China

J2 May-30 18:30
Physical simulation of industrial hot rolling of steels
Fulvio Siciliano, Brian Allen, Vinod Kumar, David Ferguson
DSI-Dynamic Systems Inc, USA
Session: J3, Venue: (Room: Hall 10)

Modelling and Simulation 3 (Prof. W. Bleck Symposium)

Session Chairs: Mahesh Somani, Finland & Yoshitaka Umeno, Japan

---

J3 May-31 9:00
*Multiscale modeling of solidification
Menghuai Wu, Andreas Ludwig, Abdellah Kharicha
University of Leoben, Austria

J3 May-31 9:20
*Solidification of Al-Pb alloy under the effect of micro-alloying element Ti and C
Jiuzhou Zhao, Qian Sun, Hongxiang Jiang
Institute of Metal Research, Chinese Academy of Sciences, China

J3 May-31 9:40
*Multiphysics and multiscale modeling of solidification in casting processes
Miha Založnik, Hervé Combeau
Institut Jean Lamour, CNRS - Université de Lorraine, France

J3 May-3110:00
*Cellular automaton modeling of ferrite growth in ternary Fe-C-Mn alloys
Chengwu Zheng, Wenxiong Chen, Dianzhong Li
Institute of Metal Research Chinese Academy of Sciences, China

J3 May-3110:20
Bridging the gap between ab initio and large scale studies – a Monte Carlo study of Cu precipitation in Fe
Alice Redermeier, David Reith, Tobias Kerscher, Raimund Podloucky, Ernst Kozeschnik
TU Wien, Austria

Session J3: Modelling and Simulation (Prof. W. Bleck Symposium)

Coffee / Tea break 10:40 to 11:00

J3 May-3111:00
*Image based modeling of plasticity in polycrystals: From 2D to 3D
Sylvain Dancette
INSA Lyon, Université de Lyon, France
J3 May-31 11:20
*Experimental study and thermokinetic modelling of carbides precipitation sequences in 2.25Cr-1Mo bainitic steel
Caroline Toffolon-Masclet, Sylvain Dépinoy, Anne-Françoise Gourgues-Lorenzon, Ernst Kozeschnik, Bernard Marini, François Roch
CEA, France

J3 May-31 11:40
Multiscale micromechanical modelling for advanced high strength steels including both the TRIP and TWIP effect
Su Leen Wong, Franz Roters
Max-Planck-Institut für Eisenforschung, Germany

J3 May-31 12:00
*Hybrid quantum/classical simulations for dopant segregation and optical response of nanomaterials
Kenji Tsuruta
Okayama University, Japan

J3 May-31 12:20
*Modelling of phase separation under electropulsing processing
Rongshan Qin
Imperial College London

J3 May-31 12:40
*Phase-field modeling of metal oxidation at elevated temperatures
Youhai Wen
US Department of Energy – NETL, Albany, USA

J3 May-31 13:00
*Physical modeling of chosen metallurgical processes
Mariola Saternus, Tomasz Merder, Jacek Pieprzyca
Silesian University of Technology, Poland

J3 May-31 13:20 Student
Continuous modelling of dislocation cores using a mechanical theory of dislocation fields
Kodjovi Gbemou, Jean-Marc Raulot, Vincent Taupin, Claude Fressengeas
University of Lorraine, France

Lunch break 13:30 - Sessions restarts at 14:10
Session: J4, Venue: (Room: Hall 10)

Modelling and Simulation 4 (Prof. W. Bleck Symposium)

Session Chairs: Roland Loge, Switzerland, & Jean-Luc Fihey, Canada

J4 May-3114:10
Modeling of the hot rolling: towards the industrial applicability
Kirill Khlopkov, Geord Paul, Thomas Baron
ThyssenKrupp Steel Europe AG, Germany

J4 May-3114:30
Precipitation and recrystallization interaction in Nb microalloyed steels
Hyun Seong Noh, Yong Jae Yu, Kwang Soon Jang, Kyung Jong Lee
Hanyang University, Korea

J4 May-3114:50
Material modelling and fracture behaviour of thin film systems
Darjan Kozic, Ruth Treml, Ronald Schöngrundner, Daniel Kiener, Thomas Antretter, Hans-Peter Gänser, Roland Brunner
Materials Center Leoben, Austria

J4 May-3115:10
DFT simulations of dislocations with mixed character in BCC metals
Lorenz Romaner, Gunther Schöck
Materials Center Leoben Forschung GmbH, Austria

Session J4: Modelling and Simulation (Prof. W. Bleck Symposium)

Coffee / Tea break 15:30 to 16:10

J4 May-31 16:10
Phase field modelling of bainite formation in low carbon steels
Maria Giuseppina Mecozzi, Jilt Sietsma
Delft University of Technology, The Netherlands

* Invited Presentation
J4 May-31 16:30
Iron-water interface under electrochemical condition
Norio Nunomura, Satoshi Sunada
University of Toyama, Japan

J4 May-31 16:50
Modelling and simulation of Q&P steels
Georg Paul, Richard Thiessen
ThyssenKrupp Steel Europe, Germany

J4 May-31 17:10
A statistical methodology to reconstruct nucleation pathways in the Fe-Cu system
Lin Qin, Alice Redermeier, Ernst Kozeschnik, Christoph Dellago
TU Wien, Austria

J4 May-31 17:30
Finite element modelling of powder densification during spark plasma sintering process
Joseph Diatta, Guy Antou, Mathias Georges, Nicolas Pradeilles, Alexandre Maitre
SPCTS laboratory, France

J4 May-31 17:50
*The numerical simulation of precipitates dissolution interacting with grain boundary
Gou Kijima
JFE-Steel, Japan

J4 May-31 18:10
*Low temperature spinodal decomposition of virgin martensite in steels: an atomic-scale mean-field model
Phillipe Maugis, M. Goune, M. Dumont, D. Kandaskalov, S. Chentouf, S. Cazottes, H. Zapolsky, F. Daniox
Aix-Marseille University, France
Session: J5, Venue: (Room: Hall 10)

Modelling and Simulation 5 (Prof. W. Bleck Symposium)

Session Chairs: Matthias Militzer, Canada & Rogshen Qin, UK

J5 June-01 8:30
*Modelling grain coarsening in the framework of rational extended thermodynamics
Lukas Kertsch, Dirk Helm
Fraunhofer IWM, Germany

J5 June-01 8:50
Modelling and simulation of pore formation in chromium steels during creep
Mohammad Reza Ahmadi, Bernhard Sonderegger, Surya Deo Yadav, Cecilia Maria Poletti
Graz University of Technology, Austria

J5 June-01 9:10
Modelling the local microstructure properties due to multi-pass welding
Gancho Genchev, Nikolay Doynov, Ralf Ossenbrink, Vesselin Michailov
Brandenburg University of Technology, Germany

J5 June-01 9:30
Mathematical modelling of steel quenching
Božo Smoljan, Dario Iljikić, Lovro Štic, Zvonimir Kolumbić
University of Rijeka, Croatia

J5 June-01 9:50
Prediction of crack initiation and growth from white-etching areas in bearing steels
Isaac Toda-Caraballos, Gael Guetard, Hanwei Fu, Pedro Rivera-Diaz-del-Castillo
The University of Cambridge, United Kingdom

J5 June-01 10:10
Practical use of computer model STAN 2000 for improvement and creation of regimes of steels hot rolling on mill 2000 of SEVERSTAL
Alexey Ogolots, Dmitry Sokolov, Semen Sokolov, Alexander Vasilyev
Severstal, Russia

Session J5: Modelling and Simulation (Prof. W. Bleck Symposium)

Coffee / Tea break 10:30 to 11:00
J5 June-01 11:00
Applicability of interatomic potentials for Fe-C systems to simulate martensitic transformations with molecular dynamics
Shivraj Karewar, Maria Santofimia, Jilt Sietsma
TU Delft, The Netherlands

J5 June-01 11:20
Artificial intelligence approach to predict strain-stress curve of steels
Yoshitaka Adachi
Kagoshima University, Japan

J5 June-01 11:40
Quantitative understanding of anomalous slip in bcc metals
Jinbo Yang, Zhenjun Zhang, Ziya Xia, Zhefeng Zhang
Institute of Metal Research, Chinese Academy of Sciences, China

J5 June-01 12:00
Effect of chlorine atoms for development of aluminum corrosion
Jun Yamashita, Norio Nunomura
YAZAKI Corporation, Japan

J5 June-01 12:20
Simultaneous precipitation and recrystallization during hot deformation of Ti, Nb and V micro-alloyed steel
Heinrich Buken, Pavel Sherstnev, Ernst Kozeschnik
TU Vienna, Austria

J5 June-01 12:40
Damage modelling in a gamma-TiAl alloy during hot deformation
Dilek Halici, Daniel Huber, Cecilia Poletti
IWS TU Graz, Austria

J5 June-01 13:00
Solidification of immiscible alloys under the effect of a direct current
Hongxiang Jiang, Jiuzhou Zhao
Institute of Metal Research, Chinese Academy of Sciences, China

Lunch break 13:20 - Sessions restarts at 14:10
Session: J6, Venue: (Room: Hall 10)

Neutron Scattering and X-Ray Studies of Advanced Materials 1

Session Chairs: Shinji Kohara, Japan & Thomas Connelly, UK

J6 June-01 14:10 Keynote
*Structural evolution of metals at high temperature, pressure and plastic deformation: In-situ and real-time investigations with neutron and synchrotron quantum beams
Klaus-Dieter Liss
Australian Nuclear Science and Technology Organisation, and University of Wollongong, Australia

J6 June-01 14:40
* Study on strain distribution in high-temperature superconducting coils by using synchrotron X-ray diffraction
Xinzhe Jin, Kozo Osamura, Shutaro Machiya, Kentaro Kajiwara, Takahisa Shobu, Hideaki Maeda
RIKEN, Japan

J6 June-01 15:00
* Structure of a non-glass forming oxide liquid
Shinji Kohara
National Institute for Materials Science, Japan

J6 June-01 15:20
* Microstructure analysis of magnesium-based foams through X-ray micro-computed tomography
Qizhen Li
Washington State University, USA

Session J6: Neutron Scattering and X-Ray Studies of Advanced Materials

Coffee / Tea break 15:40 to 16:10

J6 June-01 16:10
* Development of dislocation densities under uniaxial loading in Ni 201 and SS 316
Ondrej Muransky, Levente Balogh, Minh Tran, Mark Daymond
ANSTO, Australia

* Invited Presentation
J6 June-01 16:30
* Misorientation measurement of individual grains in fatigue of polycrystalline alloys by diffraction contrast tomography using ultrabright synchrotron radiation
Yoshikazu Nakai, Daiki Shiozawa, Ryota Nakao, Naoya Asakawa, Shoichi Kikuchi
Kobe University, Japan

J6 June-01 16:50
* Structural study of the electrolyte material Li2S-P2S5 glasses at SPring-8
Koji Ohara, Akio Mitsui, Masahiro Mori, Yohei Onodera, Yoshiharu Uchimoto, Zempachi Ogumi
Japan Synchrotron Radiation Research Institute, Japan

J6 June-01 17:10
* Structure and ionic conductivity of Na-P-S superionic conductors studied by neutron and X-ray scattering
Yohei Onodera, Hiroshi Nakashima, Toshiya Otomo, Toshiharu Fukunaga
Kyoto University, Japan

J6 June-01 17:30
* High speed X-ray stress measurement with a monolithic SOI pixel detector
Toshihiko Sasaki, Shingo Mitsui, Toshinobu Miyoshi, Yasuo Arai
Kanazawa University, Japan

J6 June-01 18:10 Student
Phase progression during reactive sintering of NiTi using in situ neutron diffraction
Dan Cluff, Stephen Corbin, Michael Gharghouri
Dalhousie University, Canada
**Session: J7, Venue:** (Room: hall 10)

Neutron Scattering and X-Ray Studies of Advanced Materials 2

**Session Chairs:** Klaus –Dieter Liss, Australia & Peter Staron, Germany

**J7 June-02 8:30 Keynote**
*Mapping the precipitation kinetics in compositional space: a combinatorial approach to microstructure characterization*
Alexis Deschamps, Frederic De Geuser
*Grenoble Institute of Technology, France*

**J7 June-02 9:00**
*Picosecond time-resolved X-ray diffraction studies on phase-transition dynamics under non-equilibrium high pressures*
Kazutaka Nakamura
*Tokyo Institute of Technology, Japan*

**J7 June-02 9:20**
*High speed in-situ X-ray tomography applied to advanced materials processing and development*
Robert C. Atwood, Nghia T. Vo, Peter D. Lee, S. Karagadde, Mahmoud Mostafavi, Michael Drakopoulos
*Diamond Light Source, United Kingdom*

**J7 June-02 9:40**
*Order and disorder in some photovoltaic materials*
Davor Balzar
*University of Denver, USA*

**J7 June-02 10:00**
Load partition and microstructural evolution during hot tensile tests of unreinforced and TiC particle reinforced in Ti-6Al-6V-2Sn
David Canelo Yubero, Guillermo Requena, Cecilia Poletti
*Graz University of Technology, Austria*

**J7 June-02 10:20**
*Measurement of stress field in deformed material at the micron scale: Combining Laue microdiffraction with digital image correlation, and related accuracy*
Olivier Castelnau, Fengguo Zhang, Johann Petit, Michel Bornert, Odile Robach, Jean-Sebastien Micha
*CNRS, France*

* Invited Presentation
Session J7: Neutron Scattering and X-Ray Studies of Advanced Materials

Coffee / Tea break 10:40 to 11:10

J7 June-02 11:10
* Lattice strain measurement and simulation for non-proportional biaxial deformation
David Collins, Tomiwa Erinsho, Fionn Dunne, Richard Todd, Angus Wilkinson
* University of Oxford, United Kingdom

J7 June-02 11:30
* In-situ x-ray observations of the effect of ultrasound on liquid and semi-solid metal alloys
Thomas Connolley, Chuangnan Wang, Feng Wang, Mahmoud Mostafavi, Ahmet Cinar, Dmitry Eskin, Jiawei Mi
* Diamond Light Source, United Kingdom

J7 June-02 11:50
* In-situ experiments for the study of advanced welding processes using high-energy X-rays
Peter Staron, Jie Liu, Nikolai Kashaev, Luciano Bergmann, Jorge F. dos Santos, Norbert Huber, Malte Blankenburg, Norbert Schell, Martin Müller, Andreas Schreyer
* Helmholtz-Zentrum Geesthacht, Germany

J7 June-02 12:10
* Neutron and synchrotron studies on self healing of creep damage in Fe-based alloys
Niels van Dijk
* TU Delft, The Netherlands

J7 June-02 12:30
* X-ray diffraction in nano-objects: effect of electron density modulation in the surrounding media
Emil Zolotoyabko
* Technion, Israel

J7 June-02 12:50
* Heat treatments and hot forming of titanium aluminide alloys studied by in situ synchrotron radiation experiments
Andreas Stark, Marcus Rackel, Michael Oehring, Norbert Schell, Lars Lottermoser, Andreas Schreyer, Florian Pyczak
* Helmholtz-Zentrum Geesthacht, Germany

Lunch break 13:10 - Sessions restarts at 14:10

* Invited Presentation
Session: J8, Venue: (Room: Hall 10)

Neutron Scattering and X-Ray Studies of Advanced Materials 3

Session Chairs: Toshihiko Sasaki, Japan & Christian Klinkenberg, Germany

J8 June-02 14:10
*Application of diffraction-amalgamated grain-boundary tracking to deforming aluminium polycrystals
Hiroyuki Toda, Masakazu Kobayashi, Kyosuke Hirayama
Kyushu University, Japan

J8 June-02 14:30
*Neutron studies of geometrically frustrated layered manganese oxides
Donna Arnold, Laura Vera Stimpson
University of Kent, United Kingdom

J8 June-02 14:50
In situ synchrotron radiation diffraction during hot compression at 350°C of ZK40 (Gd,Nd) magnesium alloys
Ricardo Henrique Buzolin, Domonkos Tolnai, Chamini Mendis, Andreas Stark, Norbert Schell, Norbert Hort, Haroldo Cavalcanti Pinto, Karl Ulrich Kainer
University of São Paulo, Brazil

J8 June-02 15:10
Behavior of tubes from Zr-based alloys under prolonged neutron irradiation
Yuriy Perlovich, Margarita Isaenko, Vladimir Fesenko, Olga Krymskaya, Gennadiy Kobylyanskiy, Yuriy Goncharenko
National Research Nuclear University MEPhI, Russia

Session J8: Neutron Scattering and X-Ray Studies of Advanced Materials

Coffee / Tea break 15:30 to 16:00

J8 June-02 16:00
Effects of T4 heat treatment on residual stress in friction stir welding metal matrix composites: neutron diffraction and multiscale modeling
Xingxing Zhang
Institute of Metal Research, Chinese Academy of Sciences, China

J8 June-02 16:20
X-ray and neutron scattering studies of the 9% Ni cryogenic steel and its weld joint
Sara Hany, Benoit Duponchel, Antoine Aboukaïs, Eugène Bychkov, Edmond Abi Aad
ULCO, France

* Invited Presentation
J8 June-02 16:40
*Recent advances in real-time studies of metal solidification under external fields
Jiawei Mi
University of Hull, United Kingdom

J8 June-02 17:00
Small-angle X-ray scattering contrast imaging in grating-based X-ray interferometry
Wataru Yashiro
Tohoku University, Japan

J8 June-02 17:10 Student
Strain induced martensitic transformation in Austempered Ductile Iron (ADI)
Xiaohu Li, Michael Hofmann, Patrick Saal, Markus Hölzel
FRM2-Garching, Germany
Session K
Room: Hall 3
Session: K3, Venue: (Room: Hall 3)

Texture of Materials 1

Session Chairs: Werner Skrotzki, Germany & Laszlo Toth, France

K3 May-31 8:30 Keynote
*Effect of high temperature deformation on the texture development in alloys and oxides
Hiroshi Fukutomi
Yokohama National University, Japan

K3 May-31 9:00
Crystallography and self-accommodation of martensitic transformation in epitaxial Ni-Mn-Ga thin film
Yang Bo, Zongbin Li, Yudong Zhang, Gaowu Qin, Claude Esling, Xiang Zhao, Liang Zuo
Northeastern University, China

K3 May-31 9:20
*Effects of cross-rolling on deformation texture evolution in unalloyed titanium
Osamu Umezawa, Norimitsu Koga
Yokohama National University, Japan

K3 May-31 9:40
*Formation of transformation textures enhanced by deformation
Ping Yang, Ting Jin, Louwen Zhang, Kai Li, Weimin Mao
University of Science and Technology Beijing, China

K3 May-31 10:00
Microstructure evolution during high pressure torsion of W-20Cu bimetallic composite
Pradipta Ghosh, Anna Chavez Rodriguez, Karoline Kourmout, Reinhard Fritz, Daniel Kiener, Reinhard Pippan
Erich Schmid Institute of Material Science, Austria

K3 May-31 10:20
The influence of the deformed texture components on Cube-oriented grains formation during recrystallization of AA1050 aluminium alloy
Magdalena Maria Miszczyszk, Jagoda Poplewska, Henryk Paul
Polish Academy of Sciences, Institute of Metallurgy and Materials Science, Poland

Session K3: Texture of Materials

Coffee / Tea break 10:40 to 11:10
K3 May-31 11:10
*Rapid measurement of texture of metals by time-of-flight neutron diffraction at iMATERIA and its applications
Yusuke Onuki, Akinori Hoshikawa, Shigeo Sato, Toru Ishigaki
* Ibaraki University, Japan

K3 May-31 11:30
* Recrystallization twinning during primary recrystallization in stable single crystals of fcc metals
Henryk Paul, Magdalena Miszczyk, Julian Driver, Piotr Drzymała
* Polish Academy of Sciences, Institute of Metallurgy and Materials Science, Poland

K3 May-31 11:50
* Stress relaxation characteristics of oxygen-free copper and Cu-Ni-Si alloy sheets subjected to continuous cyclic bending
Yoshimasa Takayama, Tasuku Sasaki, Sharifah Norhafizah, Hideo Watanabe
* Utsunomiya University, Japan

K3 May-31 12:10
* The limits of grain fragmentation in severe plastic deformation
Laszlo S. Toth
* Universite de Lorraine, France

*Lunch break 13:10 - Sessions restarts at 14:10

* Invited Presentation
Session: K4, Venue: (Room: Hall 3)

Texture of Materials 2

Session Chairs: Masahiko Demura, Japan & Hirofumi Inue, Japan

K4 May-31 14:10 Keynote
*Texture: The “fingerprint” of deformation mechanisms in nanomaterials
Werner Skrotzki, Andy Eschke, Aurimas Pukenas, Tamas Ungar, Bertalan Jóni, Laszlo Tóth, Julia Ivanisenko
TU Dresden, Germany

K4 May-31 14:40
*Mechanism of recrystallization texture evolution during solution treatment for age-hardenable Al-Mg-Si alloy sheets fabricated by cold rolling and asymmetric warm rolling
Hirofumi Inoue
Osaka Prefecture University, Japan

K4 May-31 15:00
*Effect of buffer layer on microstructure, crystallographic texture and magnetic properties of Co/Cu multilayers
Leng Chen, Wei Li, Xiaowen Peng
University of Science and Technology Beijing, China

K4 May-31 15:20
*Computational analysis of irregular rolling deformation in Nickel Aluminide single crystals
Masahiko Demura, Dierk Raabe, Franz Roters, Toshiyuki Hirano
The University of Tokyo, Japan

Session E4: Texture of Materials

Coffee / Tea break 15:40 to 16:10

K4 May-31 16:10
*Evolution of recrystallization textures in cold-rolled commercially pure aluminium
Dong Nyung Lee
Seoul National University, Korea

* Invited Presentation
K4 May-31 16:30
*Analysis of recrystallization behavior of hot-deformed austenite reconstructed from EBSD orientation maps of lath martensite
Manabu Kubota, Kohsaku Ushioda, Goro Miyamoto, Tadashi Furuhara
*Nippon Steel & Sumitomo Metal Corp., Japan

K4 May-31 16:50
*Weighted individual crystallographic orientations capturing a given texture
Florian Bachmann, Jean-Jacques Fundenberger, Helmut Schaeben
*TU Bergakademie Freiberg, Germany

K4 May-31 17:10 Student
Microstructure and texture evolution in nickel during accumulative roll bonding
Jiaqi Duan, Michael Ferry, Quadir Zakaria
*University of NSW, Australia

K4 May-31 17:20 Student
The effect of final annealing heating rate to the abnormally growth grains in the Fe-3%Si steel
Fatayalkadri Citrawati, Md Zakaria Quadir, Paul Munroe
*University of NSW, Australia
Authors Index
AALTIO, Ilkka E8
ADACHI, Yoshitaka J5
AHMADI, Mohammad Reza J5
AKAHORI, Toshikazu P101
ALAWADHI, Meshal SP501
ALBU, Mihaela C4
ALENCAR, Igor G5
ALSUBAIE, Saad A. SP502
AMEYAMA, Kei I5
AMIYA, Kenji G1
ANDERSEN, Olaf E4
ANDO, Shinji F5
ANDRIOTIS, Orestis C8
ANIYA, Masaru G1
ANSELME, Karine C8
ANTOU, Guy J4
ARCHIE, Fady I4; SP503
ARECHABALET, Zaloa A5
ARITA, Ryoma SP504
ARNOLD, Donna J8
ASFAHANI, Riad B7
ATWOOD, Robert C. J7
ATZMON, Michael G1
AVETTAND FENOEL, Marie Noelle F8
AYATOLLAHI, Majid R. I1
AYMONIER, Cyril E7
AZINA, Clio D5; SP505
AZZEDDINE, Hiba P102; P103
BACHMAIER, Andrea I8
BAE, Cheoljun P230
BALZAR, Davor J7
BANG, Jae Chul P104
BARBIERI, Giuseppe  H8
BARBOSA, Ronaldo  B7
BARON, Christian  SP506
BARRALES-MORA, Luis  F3
BASAK, Amrita  F4; SP588
BASISTA, Michal  F8
BATTAGLIA, Eleonora  SP507
BAUMGARTNER, Susanne  H8
BÉAL, Coline  B6
BECK, Tilmann  I1
BEEH, Elmar  I1
BELLAVOINE, Marion  SP509
BELYAKOV, Andrey  A1
BERA, Supriya  G4
BERGMANN, Jean Pierre  H8
BESLAND, Marie-Paule  I1
BIASETTO, Lisa  C3
BICHLER, Lukas  H5
BLANKENSHIP, Alec  SP510
BLECK, Wolfgang  A6
BLUM, Ludger  E3
BO, Yang  K3
BOCHAROVA, Ekaterina  A3
BOCHKAREV, Anton  SP511
BOCZKAL, Sonia  P105
BÖHME, Andrea  A9; SP683
BOIVIN, Guillaume  E7; SP512
BOOTH, Michael  H8; SP513
BORODIANSKIY, Konstantin  H1
BORRA, Jean-Pascal  E7
BÖTTGER, P. H. Michael  D1
BOUDALIA, Nassim  E7; SP689
<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOYCE, Brad</td>
<td>E4</td>
</tr>
<tr>
<td>BRAGLIA, Michele</td>
<td>P217</td>
</tr>
<tr>
<td>BRAILOVSKI, Vladimir</td>
<td>E6</td>
</tr>
<tr>
<td>BRAM, Martin</td>
<td>E3</td>
</tr>
<tr>
<td>BRAUN, Reinhold</td>
<td>D4</td>
</tr>
<tr>
<td>BROCHU, M.</td>
<td>E4</td>
</tr>
<tr>
<td>BROWN, Donald</td>
<td>E5</td>
</tr>
<tr>
<td>BRUDER, Enrico</td>
<td>I5</td>
</tr>
<tr>
<td>BRUECKMANN, Simon</td>
<td>I4</td>
</tr>
<tr>
<td>BRUNA-ROSSO, Claire</td>
<td>SP515</td>
</tr>
<tr>
<td>BUASRI, Taywin</td>
<td>SP516</td>
</tr>
<tr>
<td>BUKEN, Heinrich</td>
<td>J5</td>
</tr>
<tr>
<td>BUREAU, Romain</td>
<td>SP517</td>
</tr>
<tr>
<td>BUZOLIN, Ricardo Henrique</td>
<td>J8; P107</td>
</tr>
<tr>
<td>CABALLERO, Francisca</td>
<td>A7</td>
</tr>
<tr>
<td>CABIBBO, Marcello</td>
<td>I1</td>
</tr>
<tr>
<td>CALIARI, Daniele</td>
<td>SP518</td>
</tr>
<tr>
<td>CALIN, Mariana</td>
<td>C8</td>
</tr>
<tr>
<td>CAMURRI, Carlos</td>
<td>I1</td>
</tr>
<tr>
<td>CANDIANI, Gabriele</td>
<td>C8</td>
</tr>
<tr>
<td>CANELO YUBERO, David</td>
<td>J7</td>
</tr>
<tr>
<td>CAO, Jun</td>
<td>SP519</td>
</tr>
<tr>
<td>CAO, Lingfei</td>
<td>C4</td>
</tr>
<tr>
<td>CAO, Xinjin</td>
<td>E5</td>
</tr>
<tr>
<td>CAPDEVILA MONTES, Carlos</td>
<td>G5</td>
</tr>
<tr>
<td>ČAPEK, Jaroslav</td>
<td>SP520</td>
</tr>
<tr>
<td>CARBONE, Alessandra</td>
<td>E2</td>
</tr>
<tr>
<td>CARSI, Manuel</td>
<td>F5</td>
</tr>
<tr>
<td>CASALEGNO, Andrea</td>
<td>E2</td>
</tr>
<tr>
<td>CASCIOLA, Mario</td>
<td>E2</td>
</tr>
<tr>
<td>CASTELNAU, Olivier</td>
<td>J7</td>
</tr>
<tr>
<td>CASTRO, Felipe</td>
<td>A5</td>
</tr>
</tbody>
</table>
CAVALLIERE, Pasquale D3
CAVALLIERE, Sara E1
CERCHIER, Pietrogiovanni E6; SP521
CERRI, Emanuela H8; P110
CHA, Byungchul P111
CHA, Limei F1
CHAI, Guocai B1; P171
CHANDROSS, Michael I3
CHANG, Che-Min SP522
CHANG, Seky D4
CHASTUKHIN, Andrei B7
CHEN, Giin-Shan P112; P125
CHEN, Hao-Chun SP523
CHEN, Houwen F1
CHEN, Huiqin C7; P113
CHEN, Jianghua F1
CHEN, Jingsheng F1
CHEN, Leng K4
CHEN, Liqing A4
CHEN, Minghui D4
CHEN, Rongshi F5
CHEN, Sung-Te D2
CHEN, Xiaobo D1
CHEN, Yan D6
CHEN, Yuzeng I5
CHEN, Zhan E5
CHENG, Wei-Chun A1
CHENG, Yi-Lung P114
CHOI, In-Suk F6; P115
CHOI, Kwang H5
CHOI, Shi-Hoon F7
CHONG, Yan D6
<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHOU, Kevin</td>
<td>E4</td>
</tr>
<tr>
<td>CHRIST, Hans-Juergen</td>
<td>D7</td>
</tr>
<tr>
<td>CHRISTIAN, Paul</td>
<td>E3; SP524</td>
</tr>
<tr>
<td>CHU, Ming-Wen</td>
<td>F1</td>
</tr>
<tr>
<td>CIANCIO, Regina</td>
<td>F2</td>
</tr>
<tr>
<td>CITRAWATI, Fatayalkadri</td>
<td>K4; SP525</td>
</tr>
<tr>
<td>CLARK, Blythe</td>
<td>I1</td>
</tr>
<tr>
<td>CLARK, Samuel</td>
<td>B6</td>
</tr>
<tr>
<td>CLEMENS, Helmut</td>
<td>B1</td>
</tr>
<tr>
<td>CLUFF, Dan</td>
<td>J6; SP526</td>
</tr>
<tr>
<td>COELHO, Rodrigo S.</td>
<td>H8</td>
</tr>
<tr>
<td>COJOCARU-MIREN, Oana</td>
<td>F4</td>
</tr>
<tr>
<td>COLEMAN, Costa</td>
<td>I4; SP672</td>
</tr>
<tr>
<td>COLLINS, David</td>
<td>J7</td>
</tr>
<tr>
<td>COLOMBO, Marco</td>
<td>C6</td>
</tr>
<tr>
<td>CONFORTO, Egle</td>
<td>F1</td>
</tr>
<tr>
<td>CONNOLLEY, Thomas</td>
<td>J7</td>
</tr>
<tr>
<td>CORBIN, Stephen</td>
<td>D7</td>
</tr>
<tr>
<td>CORNELIUS, Andrew</td>
<td>G5</td>
</tr>
<tr>
<td>CORNU, Jerome</td>
<td>SP527</td>
</tr>
<tr>
<td>COSTA DIAS, Rita de Cassia</td>
<td>SP692</td>
</tr>
<tr>
<td>COSTIL, Sophie</td>
<td>D1</td>
</tr>
<tr>
<td>COURET, Alain</td>
<td>B1</td>
</tr>
<tr>
<td>CURELEA, Sergiu</td>
<td>A2</td>
</tr>
<tr>
<td>DA COSTA, Patrick</td>
<td>H3</td>
</tr>
<tr>
<td>DANCETTE, Sylvain</td>
<td>J3</td>
</tr>
<tr>
<td>DAS, Suman</td>
<td>E5</td>
</tr>
<tr>
<td>DAS, Yadunandan</td>
<td>SP693</td>
</tr>
<tr>
<td>DE BARTOLO, Loredana</td>
<td>C1</td>
</tr>
<tr>
<td>DE CASTILLA, Hector</td>
<td>SP528</td>
</tr>
<tr>
<td>DE FORMANOIR, Charlotte</td>
<td>P116</td>
</tr>
<tr>
<td>DE MATTEIS, Fabio</td>
<td>A8</td>
</tr>
</tbody>
</table>
ECKERT, Jürgen          G1
EDALATI, Kaveh           I6
EDMONDS, David           A1
EHM, Lars               G5
EISENHUT, Lena           SP529
ELISSALDE, Catherine     H1
EL-SHENAWY, Eman         B6; P202
EL-TAHAWY, Moustafa      SP535
ENZINGER, Norbert        H7
ERDELY, Petra            SP536
ESAKA, Hisao            E8
ESLING, Claude          E7
ESMAEILLI, Shahrzad     C4
ESTOURNES, Claude       F9
FABREGUE, Damien        D7
FADONOUGBO, Julien       SP537
FANG, Jau-Shiung        P120
FANG, Xiaogang          SP538
FANG, Xiaoying          F4; P205
FEDOSEEEVA, Alexandra   A7; SP539
FENG, Zongqiang        C5
FERNÁNDEZ GUTIÉRREZ, Ricardo C4
FERNANDEZ-PENA, Stephanie F3
FIEDLER, Thomas         F8
FIHEY, Jean-Luc         J1
FINDLEY, Kip            A4
FINKE, Birgit           C8
FISCHER, Jens           C1
FISCHLSCHWEIGER, Michael F9
FLEISCHER, Monika       C1
FLEURIER, Gwendoline    F1
FLUCH, Rainer A5
FOILES, Stephen F2
FONTANANOVA, Enrica E1
FORNALCZYK, Agnieszka P121
FORNELL, Jordina C3
FRAGNER, Werner C7
FREUND, Lisa B4
FRIAK, Martin B1; P173
FRITZ, Reinhard I4
FROEBEL, Ulrich B1
FU, Qian-Gang D1
FUJII, Toshiyuki I2
FUJITA, Kazutaka G1
FUJIWARA, Yasufumi H4
FUKUMOTO, Masahiro H5
FUKUTOMI, Hiroshi K3
FURUHARA, Tadashi B7
FURUI, Mitsuaki P122
FURUKAWA, Haruka SP541
FURUSHO, Chihiro A2
GALLINO, Isabella G2
GALVIN, Deri P119
GAMSJÄGER, Ernst J1
GAN, Weimin H8
GANDIN, Charles-Andre J1
GAO, Nong I6
GAO, Yifei I1
GARCES, Gerardo B8
GARIBOLDI, Elisabetta D5
GATOMSKI, Gregor SP677
GATTO, Irene E1
GAUDIO, Pasquale A9
<table>
<thead>
<tr>
<th>Name</th>
<th>Paper or Page-ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA, Tae Kwon</td>
<td>P128; P129</td>
</tr>
<tr>
<td>HAAS, Franz</td>
<td>D7</td>
</tr>
<tr>
<td>HABISCH, Stefan</td>
<td>SP547</td>
</tr>
<tr>
<td>HACKENBERG, Robert</td>
<td>I2</td>
</tr>
<tr>
<td>HAGA, Toshio</td>
<td>F7</td>
</tr>
<tr>
<td>HAGIHARA, Koji</td>
<td>B4</td>
</tr>
<tr>
<td>HALD, John</td>
<td>B1</td>
</tr>
<tr>
<td>HALICI, Dilek</td>
<td>J5</td>
</tr>
<tr>
<td>HAMADA, Kenichi</td>
<td>C2; P131</td>
</tr>
<tr>
<td>HAN, Heung Nam</td>
<td>A5</td>
</tr>
<tr>
<td>HAN, Junhyun</td>
<td>D5</td>
</tr>
<tr>
<td>HANAWA, Takaö</td>
<td>C2</td>
</tr>
<tr>
<td>HANKE, Stefanie</td>
<td>G7</td>
</tr>
<tr>
<td>HANNARD, Florent</td>
<td>SP548</td>
</tr>
<tr>
<td>HANSSON, Per</td>
<td>I2</td>
</tr>
<tr>
<td>HANY, Sara</td>
<td>J8</td>
</tr>
<tr>
<td>HANZU, Ilie</td>
<td>E1</td>
</tr>
<tr>
<td>HAO, Yulin</td>
<td>C8</td>
</tr>
<tr>
<td>HARA, Shinjiro</td>
<td>H1</td>
</tr>
<tr>
<td>HARADA, Yasunori</td>
<td>D5</td>
</tr>
<tr>
<td>HARTEL, Udo</td>
<td>J1</td>
</tr>
<tr>
<td>HARUNA, Takumi</td>
<td>C3</td>
</tr>
<tr>
<td>HASEGAWA, Masashi</td>
<td>G5</td>
</tr>
<tr>
<td>HASHIGUCHI, Sadao</td>
<td>P127</td>
</tr>
<tr>
<td>HASLBERGER, Phillip</td>
<td>SP550</td>
</tr>
<tr>
<td>HATTAR, Khalid</td>
<td>H1</td>
</tr>
<tr>
<td>HÄUSSELMANN, Ulrich</td>
<td>G6</td>
</tr>
<tr>
<td>HAVLÍK, Petr</td>
<td>D8</td>
</tr>
<tr>
<td>HAYASHI, Akari</td>
<td>E1</td>
</tr>
<tr>
<td>HAYASHI, Yawara</td>
<td>P109</td>
</tr>
<tr>
<td>HAYASHI, Yuki</td>
<td>SP551</td>
</tr>
<tr>
<td>HAYASHI, Yumi</td>
<td>P218</td>
</tr>
<tr>
<td>Name</td>
<td>Session</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>HAZRA, Sujoy</td>
<td>B6</td>
</tr>
<tr>
<td>HE, Changshu</td>
<td>H5</td>
</tr>
<tr>
<td>HE, Lizi</td>
<td>P132</td>
</tr>
<tr>
<td>HEBERT, Rainer</td>
<td>H3</td>
</tr>
<tr>
<td>HEBESBERGER, Thomas</td>
<td>A5</td>
</tr>
<tr>
<td>HECKMANN, Simon</td>
<td>B5</td>
</tr>
<tr>
<td>HECZEL, Anita</td>
<td>SP553</td>
</tr>
<tr>
<td>HECZKO, Oleg</td>
<td>E7</td>
</tr>
<tr>
<td>HELM, Dirk</td>
<td>J5</td>
</tr>
<tr>
<td>HENMI, Yoko</td>
<td>SP554</td>
</tr>
<tr>
<td>HENTOUR, Karim</td>
<td>SP555</td>
</tr>
<tr>
<td>HERBIG, Michael</td>
<td>F2</td>
</tr>
<tr>
<td>HERLACH, Dieter</td>
<td>G1</td>
</tr>
<tr>
<td>HIDALGO GARCIA, Javier</td>
<td>I2</td>
</tr>
<tr>
<td>HIDALGO-MANRIQUE, Paloma</td>
<td>F5</td>
</tr>
<tr>
<td>HIGASHINO, Yukihiro</td>
<td>SP556</td>
</tr>
<tr>
<td>HIGASIDA, Kenji</td>
<td>B8</td>
</tr>
<tr>
<td>HILGENBERG, Kai</td>
<td>D1</td>
</tr>
<tr>
<td>HINO, Makoto</td>
<td>F5</td>
</tr>
<tr>
<td>HIRAMATSU, Mineo</td>
<td>H1</td>
</tr>
<tr>
<td>HIROSE, Akio</td>
<td>H5</td>
</tr>
<tr>
<td>HOHENWARTER, Anton</td>
<td>I6</td>
</tr>
<tr>
<td>HOJO, Tomohiko</td>
<td>A2</td>
</tr>
<tr>
<td>HOLMESTAD, Randi</td>
<td>C4</td>
</tr>
<tr>
<td>HORT, Norbert</td>
<td>F5</td>
</tr>
<tr>
<td>HORVÁTH, Klaudia</td>
<td>SP557</td>
</tr>
<tr>
<td>HOSODA, Hideki</td>
<td>C2</td>
</tr>
<tr>
<td>HOSODA, Takashi</td>
<td>A6</td>
</tr>
<tr>
<td>HOSOI, Takuji</td>
<td>H4</td>
</tr>
<tr>
<td>HOSOKAWA, Shinya</td>
<td>G1</td>
</tr>
<tr>
<td>HUANG, Guangjie</td>
<td>P133</td>
</tr>
<tr>
<td>HUANG, Huilan</td>
<td>SP558</td>
</tr>
<tr>
<td>Author</td>
<td>Paper No.</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>HUANG, Ke</td>
<td>B7</td>
</tr>
<tr>
<td>HUANG, Mingxin</td>
<td>A3; P233</td>
</tr>
<tr>
<td>HUANG, Shuhui</td>
<td>C7</td>
</tr>
<tr>
<td>HUANG, Tianlin</td>
<td>C5</td>
</tr>
<tr>
<td>HUANG, Xiaoxu</td>
<td>I6</td>
</tr>
<tr>
<td>HUANG, Yi</td>
<td>I6</td>
</tr>
<tr>
<td>HUANG, Yuanding</td>
<td>P123</td>
</tr>
<tr>
<td>HUBER, Daniel</td>
<td>B3</td>
</tr>
<tr>
<td>HUBER, Gerhard</td>
<td>C7</td>
</tr>
<tr>
<td>HUG, Eric</td>
<td>F3</td>
</tr>
<tr>
<td>HUPPERTZ, Hubert</td>
<td>G5</td>
</tr>
<tr>
<td>HUSKIC, Aziz</td>
<td>E5</td>
</tr>
<tr>
<td>HUYGHE, Pierre</td>
<td>A7; SP676</td>
</tr>
<tr>
<td>HWANG, Jihyun</td>
<td>F7</td>
</tr>
<tr>
<td>HWANG, Nong-Moon</td>
<td>D1</td>
</tr>
<tr>
<td>HYUN, Yong-Taek</td>
<td>D7</td>
</tr>
<tr>
<td>ICHIKAWA, Kazuhide</td>
<td>J1</td>
</tr>
<tr>
<td>ICHIKAWA, Yuji</td>
<td>F2</td>
</tr>
<tr>
<td>ICHITSUBO, Tetsu</td>
<td>E2</td>
</tr>
<tr>
<td>IENAGA, Yuichi</td>
<td>B8</td>
</tr>
<tr>
<td>II, Seiichiro</td>
<td>F2</td>
</tr>
<tr>
<td>IKEDA, Kazutaka</td>
<td>E2</td>
</tr>
<tr>
<td>IKEDA, Masahiko</td>
<td>D7</td>
</tr>
<tr>
<td>IKEUCHI, Takehito</td>
<td>SP559</td>
</tr>
<tr>
<td>INAMURA, Tomonari</td>
<td>P134</td>
</tr>
<tr>
<td>INOUE, Hirofumi</td>
<td>K4</td>
</tr>
<tr>
<td>INUI, Haruyuki</td>
<td>B2</td>
</tr>
<tr>
<td>IONESCU, Mihail</td>
<td>P135</td>
</tr>
<tr>
<td>ISAENKOVA, Margarita</td>
<td>C2</td>
</tr>
<tr>
<td>ISHIKAWA, Kazuhiro</td>
<td>B9; P136</td>
</tr>
<tr>
<td>ISHIKAWA, Kunio</td>
<td>C8</td>
</tr>
<tr>
<td>ISHIMOTO, Takuya</td>
<td>C9</td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>ISOBE, Shigehito</td>
<td>E3</td>
</tr>
<tr>
<td>ITO, Kazuma</td>
<td>I4</td>
</tr>
<tr>
<td>ITO, Mikio</td>
<td>E8</td>
</tr>
<tr>
<td>ITOH, Keiji</td>
<td>G1</td>
</tr>
<tr>
<td>ITOI, Takaomi</td>
<td>B8</td>
</tr>
<tr>
<td>IVANISENKO, Yulia</td>
<td>I5</td>
</tr>
<tr>
<td>IWAMOTO, Chihiro</td>
<td>B8</td>
</tr>
<tr>
<td>IZUI, Hiroshi</td>
<td>P139</td>
</tr>
<tr>
<td>JANG, Jason Shian-Ching</td>
<td>G3</td>
</tr>
<tr>
<td>JANIK, Vit</td>
<td>B7</td>
</tr>
<tr>
<td>JANOVSZKY, Dora</td>
<td>P140</td>
</tr>
<tr>
<td>JANSTO, Steven</td>
<td>B6</td>
</tr>
<tr>
<td>JAWALI, Veena</td>
<td>P219</td>
</tr>
<tr>
<td>JEANDIN, Michel</td>
<td>D2</td>
</tr>
<tr>
<td>JEON, Han-Yong</td>
<td>I4</td>
</tr>
<tr>
<td>JIA, Hailong</td>
<td>SP561</td>
</tr>
<tr>
<td>JIA, Zhihong</td>
<td>C6</td>
</tr>
<tr>
<td>JIANG, Hongxiang</td>
<td>J5</td>
</tr>
<tr>
<td>JIANG, Huixue</td>
<td>C6</td>
</tr>
<tr>
<td>JIANG, Lu</td>
<td>SP562</td>
</tr>
<tr>
<td>JIMENEZ MENA, Norberto</td>
<td>SP563</td>
</tr>
<tr>
<td>JIN, Xinzhe</td>
<td>J6</td>
</tr>
<tr>
<td>JOHANSSON, Sten</td>
<td>D5</td>
</tr>
<tr>
<td>JONAS, John</td>
<td>A5</td>
</tr>
<tr>
<td>JONES, Martin</td>
<td>E2</td>
</tr>
<tr>
<td>JONES, Nicholas</td>
<td>B4</td>
</tr>
<tr>
<td>JORGE-BADIOLA, Denis</td>
<td>A7</td>
</tr>
<tr>
<td>JUNG, Jaimyun</td>
<td>SP564</td>
</tr>
<tr>
<td>JUUL JENSEN, Dorte</td>
<td>F2</td>
</tr>
<tr>
<td>JUUTI, Timo</td>
<td>A1</td>
</tr>
<tr>
<td>KADOI, Kota</td>
<td>H5</td>
</tr>
<tr>
<td>KAIBYSHEV, Rustam</td>
<td>G5</td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------</td>
</tr>
<tr>
<td>KAIJALAINEN, Antti</td>
<td>I4</td>
</tr>
<tr>
<td>KAJIMOTO, Noboru</td>
<td>E7</td>
</tr>
<tr>
<td>KALTZAKORTA, Idurre</td>
<td>A7</td>
</tr>
<tr>
<td>KAMEGAWA, Atsunori</td>
<td>E2</td>
</tr>
<tr>
<td>KAMURA, Naoya</td>
<td>I4</td>
</tr>
<tr>
<td>KANADANI, Teruto</td>
<td>P141</td>
</tr>
<tr>
<td>KANEKO, Toshiro</td>
<td>H1</td>
</tr>
<tr>
<td>KANG, Jee-Hyun</td>
<td>A6</td>
</tr>
<tr>
<td>KAREWAR, Shivraj</td>
<td>J5</td>
</tr>
<tr>
<td>KASHAEV, Nikolai</td>
<td>D7</td>
</tr>
<tr>
<td>KASUGA, Toshihiro</td>
<td>C2</td>
</tr>
<tr>
<td>KATZ-DEMYANETZ, Alexander</td>
<td>F8</td>
</tr>
<tr>
<td>KAWAKAMI, Keisuke</td>
<td>P220</td>
</tr>
<tr>
<td>KAWAMURA, Marino</td>
<td>SP569</td>
</tr>
<tr>
<td>KAWAMURA, Yoshihito</td>
<td>B8</td>
</tr>
<tr>
<td>KAWASAKI, Megumi</td>
<td>I7</td>
</tr>
<tr>
<td>KELLER, Clément</td>
<td>I2</td>
</tr>
<tr>
<td>KENEL, Christoph</td>
<td>E4</td>
</tr>
<tr>
<td>KENTHESWARAN, Vasuki</td>
<td>SP570</td>
</tr>
<tr>
<td>KERMOUCHE, Guillaume</td>
<td>I6</td>
</tr>
<tr>
<td>KHLOPKOV, Kirill</td>
<td>J4</td>
</tr>
<tr>
<td>KIAT, Jean-Michel</td>
<td>H2</td>
</tr>
<tr>
<td>KIENER, Daniel</td>
<td>H2</td>
</tr>
<tr>
<td>KIJIMA, Gou</td>
<td>J4</td>
</tr>
<tr>
<td>KIKUCHI, Masanori</td>
<td>C9</td>
</tr>
<tr>
<td>KIM, Bij-Na</td>
<td>A6</td>
</tr>
<tr>
<td>KIM, Byung-Nam</td>
<td>J1</td>
</tr>
<tr>
<td>KIM, Dae Hwan</td>
<td>C6</td>
</tr>
<tr>
<td>KIM, Heung-Ju</td>
<td>P232</td>
</tr>
<tr>
<td>KIM, Hyoung Seop</td>
<td>I6</td>
</tr>
<tr>
<td>KIM, Je Deok</td>
<td>E2; P142</td>
</tr>
<tr>
<td>KIM, Jeong Min</td>
<td>SP572</td>
</tr>
</tbody>
</table>
KIM, Ki-Chul P143
KIM, Kwonhoo P144
KIM, Min-Seong SP690
KIM, Nack Joon F5
KIM, Se-Jong F7
KIM, Su-Hyeon C6
KIM, Suk Jun C4
KIM, Sung-Joon A1
KIM, Young-Min F7
KIM, Yu-Mi SP571
KIMURA, Koji B9
KIMURA, Yuuji A3
KIRIHARA, Soshu E4
KISHIDA, Kyosuke B2
KISHORE, Krishna SP573
KITAEVA, Daria P146
KITAHARA, Hiromoto F5
KITAMURA, Kazuhiro E6
KITAOKA, Satoshi D2
KITASHIMA, Tomonori D8
KLEIN, Marcus I4
KLEMENT, Uta D5
KLIMOVA-KORSMIK, Olga B4
KLINKENBERG, Christian B6
KNABL, Wolfram B3
KNAUTH, Philippe E2
KOBAYASHI, Kyosuke P221
KOBAYASHI, Sengo D7
KOBAYASHI, Shigeaki F2
KOBAYASHI, Yukiko B7
KODZHASPIROV, Georgii A4
KOHARA, Shinji J6
<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOHYAMA, Masanori</td>
<td>J2</td>
</tr>
<tr>
<td>KOIVULUOTO, Heli</td>
<td>D1</td>
</tr>
<tr>
<td>KOJIMA, Kentaro</td>
<td>SP576</td>
</tr>
<tr>
<td>KOJIMA, Yoshitsugu</td>
<td>E2</td>
</tr>
<tr>
<td>KOLB, Gernot</td>
<td>C5</td>
</tr>
<tr>
<td>KOMENDA, Jacek</td>
<td>B6</td>
</tr>
<tr>
<td>KOMIYA, Yoshiki</td>
<td>E6</td>
</tr>
<tr>
<td>KONDO, Hiroki</td>
<td>H2</td>
</tr>
<tr>
<td>KOPECEK, Jaromir</td>
<td>E7</td>
</tr>
<tr>
<td>KOPTIOUG, Andrey</td>
<td>E5</td>
</tr>
<tr>
<td>KORCZAK, Piotr</td>
<td>F7</td>
</tr>
<tr>
<td>KORMOUT, Karoline</td>
<td>SP577</td>
</tr>
<tr>
<td>KOSHIDA, Nobuyoshi</td>
<td>E6</td>
</tr>
<tr>
<td>KOSTOVA, Jordanka</td>
<td>A8</td>
</tr>
<tr>
<td>KOTZUREK, Jaromir</td>
<td>SP578</td>
</tr>
<tr>
<td>KOZESCHNIK, Ernst</td>
<td>B3</td>
</tr>
<tr>
<td>KOZIC, Darjan</td>
<td>J4</td>
</tr>
<tr>
<td>KOZUBSKI, Rafal</td>
<td>J2</td>
</tr>
<tr>
<td>KRÄMER, Lisa</td>
<td>SP579</td>
</tr>
<tr>
<td>KRASOWSKY, Arnold</td>
<td>P222</td>
</tr>
<tr>
<td>KREITCBERG, Alena</td>
<td>B2</td>
</tr>
<tr>
<td>KREYCA, Johannes</td>
<td>C7</td>
</tr>
<tr>
<td>KRIZAN, Daniel</td>
<td>A3</td>
</tr>
<tr>
<td>KRUK, Adam</td>
<td>B2</td>
</tr>
<tr>
<td>KRYMSKAYA, Olga</td>
<td>P148</td>
</tr>
<tr>
<td>KUBOTA, Kazumasa</td>
<td>A3</td>
</tr>
<tr>
<td>KUBOTA, Manabu</td>
<td>K4</td>
</tr>
<tr>
<td>KUCITA, Pawee</td>
<td>F2; SP581</td>
</tr>
<tr>
<td>KUEBEL, Christian</td>
<td>F2</td>
</tr>
<tr>
<td>KULA, Anna</td>
<td>F6</td>
</tr>
<tr>
<td>KUMAR, Manoj</td>
<td>C5</td>
</tr>
<tr>
<td>KUMAR, Praveen</td>
<td>I6</td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
</tr>
<tr>
<td>--------------------</td>
<td>------</td>
</tr>
<tr>
<td>KURODA, Kensuke</td>
<td>C9</td>
</tr>
<tr>
<td>KUROKAWA, Shu</td>
<td>B8</td>
</tr>
<tr>
<td>KWAK, Juho</td>
<td>SP583</td>
</tr>
<tr>
<td>KWAK, Kwangsik</td>
<td>SP584</td>
</tr>
<tr>
<td>KWON, Yong-Nam</td>
<td>C6; P174</td>
</tr>
<tr>
<td>KWON, Young Jin</td>
<td>SP585</td>
</tr>
<tr>
<td>LACORRE, Philippe</td>
<td>E2</td>
</tr>
<tr>
<td>LAIDANI, Nadhira</td>
<td>H4</td>
</tr>
<tr>
<td>LANGDON, Terence</td>
<td>I5</td>
</tr>
<tr>
<td>LAPI, Gabriele</td>
<td>H8</td>
</tr>
<tr>
<td>LAPOVOK, Rimma</td>
<td>I6</td>
</tr>
<tr>
<td>LARREA, Angel</td>
<td>E2</td>
</tr>
<tr>
<td>LAURENT, Christophe</td>
<td>H2</td>
</tr>
<tr>
<td>LE BOUAR, Yann</td>
<td>B2</td>
</tr>
<tr>
<td>LE BOURHIS, Eric</td>
<td>D2</td>
</tr>
<tr>
<td>LE GLOANNEC, Brendan</td>
<td>H5</td>
</tr>
<tr>
<td>LEBEDKINA, Tatiana</td>
<td>I6</td>
</tr>
<tr>
<td>LEBYODKIN, Mikhail</td>
<td>D7</td>
</tr>
<tr>
<td>LECH-Grega, Marzena</td>
<td>P106</td>
</tr>
<tr>
<td>LEE, Chong Soo</td>
<td>D6</td>
</tr>
<tr>
<td>LEE, Dong Nyung</td>
<td>K4</td>
</tr>
<tr>
<td>LEE, Han-Joo</td>
<td>SP589</td>
</tr>
<tr>
<td>LEE, Insup</td>
<td>P150</td>
</tr>
<tr>
<td>LEE, Jeong Han</td>
<td>SP587</td>
</tr>
<tr>
<td>LEE, Jeong Hun</td>
<td>P149</td>
</tr>
<tr>
<td>LEE, Ji-Won</td>
<td>I3</td>
</tr>
<tr>
<td>LEE, Kee-Ahn</td>
<td>G7</td>
</tr>
<tr>
<td>LEE, Kwang Seok</td>
<td>B6; P175</td>
</tr>
<tr>
<td>LEE, Kyooyoung</td>
<td>A3</td>
</tr>
<tr>
<td>LEE, Kyung Jong</td>
<td>J4</td>
</tr>
<tr>
<td>LEE, Yubo</td>
<td>G6</td>
</tr>
<tr>
<td>LEITNER, Thomas</td>
<td>I8</td>
</tr>
</tbody>
</table>
LIU, Chunhui F2; P176
LIU, Erjia D2
LIU, Fang A4
LIU, Feng C4
LIU, Lin H8; P177
LIU, Linghong F4
LIU, Qing C5
LIU, Rui P155
LIU, Wei G6
LIU, Wenjun P156
LLORCA-ISERN, Nuria P157; P158
LÖFFLER, Jörg F. G2
LOGÉ, Roland H1
LOPEZ, Beatriz B7
LÓPEZ, Gabriel A. I8
LOPEZ-HONORATO, Eddie G7
LOPRESTO, Valentina G7
LORA, Fabio E8
LOUCIF, Abdelhalim A3
LU, Fu-Hsing D2
LU, Lei I8
LÜ, Shulin F9
LU, Z.P. G4
LUPOI, Rocco D5
MA, Xiuliang F4
MA, Yue C5
MA, Zong-yi F8
MACADRE, Arnaud I6; P161
MACIOL, Piotr J2
MAITRE, Alexandre I2
MAIZZA, Giovanni I2
MALIZIA, Andrea A9
MALOPHEYEV, Sergey  I5
MANAKA, Toshiaki  SP593
MANGELINCK, Dominique  D2
MANOHARAN, Prabu  H7
MANSOOR, Bilal  H5
MANTOVANI, Diego  C1
MARINELI, Sylvain  E6
MARTHINSEN, Knut  C5
MARTIN, Guilhem  E5
MARX, Vera M.  G7
MARYA, Surendar  E5
MASUMURA, Takuro  A1
MATOUGUI, Nedjoua  D7
MATSUDA, Kenji  C6
MATSUSAKA, Souta  F9
MATSUSHIMA, Michiya  H5
MATSUZAKI, Kunio  F5
MAUGIS, Phillipe  J4
MCCAMMON, Catherine  G7
MCDERMID, Joseph  A3
MECOZZI, Maria Giuseppina  J4
MEDINA RAMIREZ, Adriana  F8
MEDLIN, Douglas  F4
MENDEZ, Patricio  H6
MENGARONI, Sabrina  F4
MENZT, Juliane  F4
MERTENS, Anne  E5; P159
MEZEI, Ferenc  E2
MI, Jiawei  J8
MICHAILOV, Vesselin  J1
MILITZER, Matthias  J1
MILKEREIT, Benjamin  J2
MINAMI, Fumiyoshi  I2
MINAMI, Hidekazu  A6
MINE, Yoji  A1
MINGLER, Bernhard  C2
MIRAKHORLI, Fatemeh  H7; SP594
MISAWA, Tatsuya  E8
MISHNEV, Roman  A7; SP596
MISHRA, Brajendra  D3
MISZCZYK, Magdalena Maria  K3
MITHIEUX, Jean-Denis  A7
MITSCHE, Stefan  P162
MIURA, Hideshi  E6
MIURA, Hiromi  I6
MIURA, Tsuyoshi  SP597
MIURA-FUJIWARA, Eri  D6
MIYABE, Sayaka  C2
MIYAJIMA, Yoji  I6
MIYAOKA, Hiroki  E2
MIYAZAKI, Seiichi  H2
MIZUUCHI, Kiyoshi  E8
MOGUCHEVA, Anna  P163
MOLETI, Arturo  A8
MOLODOV, Dmitri  F3
MONFARED, Amir  SP598
MONNIER, Judith  E2
MONTANARI, Roberto  I3
MONTARSOLO, Alessio  F9
MONTHEILLET, Frank  D6
MOREAU, Eric  SP599
MORI, Hiroaki  H6
MORIKAWA, Tatsuya  P207
MORIMOTO, Yoshiki  A2
MORISHITA, Hironori        SP600
MOROZOVA, Anna             SP601
MORTIER, Michel            I7
MOSSOTTI, R.               P201
MUELLER, Alexander         E4
MUGNAINI, Stefano           A8
MULLIS, Andrew             G4
MUÑOZ MORENO, Rocio        E4
MURAKAMI, Hideyuki          D2
MURAKAMI, Takashi           D2
MURANSKY, Ondrej            J6
MURAYAMA, Yonosuke          P164
MUTSCHLER, Angela           C2; SP681
NAGARAJAN, Balasubramanian D6
NAGASE, Takeshi             P165; P166
NAGODE, Ales                P231
NAKAI, Masaaki              C9
NAKAI, Yoshikazu            J6
NAKAMOTO, Masashi           D2
NAKAMURA, Atsutomo          F3
NAKAMURA, Kazutaka          J7
NAKANO, Hiromi              E8
NAKANO, Takayoshi           E5
NAKATANI, Masashi           A6; SP602
NAKAYAMA, Atsuko            G6
NAKAYAMA, Kei               SP603
NAKAYAMA, Koji              G2
NAKAYAMA, Noboru            P167
NANYA, Daiki                A4; SP613
NARAYAN, Roger              C1
NARESH, Parumandla          SP605
NARUSHIMA, Takayuki         C3
NAVARRO-LÓPEZ, Alfonso SP606
NDAYSHIMYE, Arnaud E7
NEBE, Barbara C8
NEUMEIER, Steffen B2
NGUYEN, Vu E4
NIE, Jian-Feng D8; P178
NIEßEN, Frank A4; SP607
NIINOMI, Mitsuo C2
NING, Jing P168
NISHIYAMA, Norimasa H2
NISHIZAKI, Terukazu I7
NIWA, Ken G6
NOBILI, Luca F9
NOMOTO, Masashi SP608
NOMURA, Naoyuki C1
NUNOMURA, Norio J4
NYGREN, Håkan C8
OBA, Yojiro P169
OCAÑA, José L. D5
ODNOBOKOVA, Marina A7; SP609
OFFERMAN, Erik B6
OGATA, Shinya SP610
OGAWA, Hidenori E6
OGOLTSOV, Alexey J5
OGURA, Tomo H6
OH, Gun-Young F7
OH, Nu-Ri A4; SP595
OHARA, Koji J6
OIKAWA, Katsunari E8
OIWA, Kazuhiro E8
OJO, Olanrewaju H6
OKAMOTO, Norihiko B2
<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>OKAMOTO, Yasuhiro</td>
<td>H7</td>
</tr>
<tr>
<td>OKAZAKI, Masakazu</td>
<td>D3</td>
</tr>
<tr>
<td>OKIDO, Masazumi</td>
<td>C9</td>
</tr>
<tr>
<td>OKUDA, Hiroshi</td>
<td>B8</td>
</tr>
<tr>
<td>OKUZUMI, Asuka</td>
<td>P226</td>
</tr>
<tr>
<td>OLLAT, Melanie</td>
<td>A7</td>
</tr>
<tr>
<td>ONO, Sachiko</td>
<td>H2</td>
</tr>
<tr>
<td>ONODERA, Yohei</td>
<td>J6</td>
</tr>
<tr>
<td>ONUKI, Yusuke</td>
<td>K3</td>
</tr>
<tr>
<td>ORLOV, Dmytro</td>
<td>F7</td>
</tr>
<tr>
<td>OU, Xiaoqin</td>
<td>SP614</td>
</tr>
<tr>
<td>PAAR, Armin</td>
<td>J2</td>
</tr>
<tr>
<td>PALMIERE, Eric</td>
<td>B7</td>
</tr>
<tr>
<td>PANCHOLI, Vivek</td>
<td>H5</td>
</tr>
<tr>
<td>PANIN, Yevgeniy</td>
<td>I5</td>
</tr>
<tr>
<td>PANTAZOPOULOS, George</td>
<td>I3</td>
</tr>
<tr>
<td>PANTLEON, Wolfgang</td>
<td>H4</td>
</tr>
<tr>
<td>PARAILLOUS, Maxime</td>
<td>D5; SP687</td>
</tr>
<tr>
<td>PARASIVAMURTHY, Prakash</td>
<td>F8</td>
</tr>
<tr>
<td>PARK, Eun Soo</td>
<td>G2</td>
</tr>
<tr>
<td>PARK, Hyun-Hwa</td>
<td>A4; SP591</td>
</tr>
<tr>
<td>PARK, Kyung-Tae</td>
<td>G6</td>
</tr>
<tr>
<td>PARK, Minsoo</td>
<td>SP616</td>
</tr>
<tr>
<td>PARK, Sewoong</td>
<td>SP575</td>
</tr>
<tr>
<td>PARK, Y.B.</td>
<td>P170</td>
</tr>
<tr>
<td>PATRUCCO, Alessia</td>
<td>C2</td>
</tr>
<tr>
<td>PAUL, Georg</td>
<td>J4</td>
</tr>
<tr>
<td>PAUL, Henryk</td>
<td>K3</td>
</tr>
<tr>
<td>PECQUENARD, Brigitte</td>
<td>E3</td>
</tr>
<tr>
<td>PEETHAMBARAN, K. M.</td>
<td>H7</td>
</tr>
<tr>
<td>PELLIZZARI, Massimo</td>
<td>A3</td>
</tr>
<tr>
<td>PENG, Hailong</td>
<td>F4</td>
</tr>
</tbody>
</table>
QIN, Lin J4
QIN, Rongshan J3
QUITANG, Hao C5
QUADRINI, Fabrizio C2
QUINTANA, Alberto H1; SP619
QUINTERO GIRALDO, David Alberto SP620
RADLWIMMER, Harald B7
RAFFAINI, Giuseppina C3
RAHNAMA, Alireza P179
RAJAN, Sivaraman SP621
RAKSHE, Bhushan B6; SP622
RAMSKOGLER, Claudia SP623
RAT, Vincent D3
RATHMANN, Dominic SP624
RAVI, Ashwath M. SP625
RAVINDRAN, Comondore (Ravi) C6
RAYNER, Addison B2; SP626
RAZUMOVSKIY, Vsevolod F4
REBELO KORNMEIER, Joana P180
REDERMEIER, Alice J3
REGEV, Michael H6
RENK, Oliver I5; SP627
RENTENBERGER, Christian G4
REZAEI-FARKOOSH, Amir I4; P200
RICHARD, Caroline C3
RICHARD-PLOUET, Mireille H2
RICHETTA, Maria P181
RIDOLFI, Maria Rita B2
RIEDEL, Hermann J2
RIEKEHR, Stefan H7
RINGER, Simon A7
RINGINEN, Dmitrii B7; P212
ROBE, Hugo H6; SP685
RODRIGUES, Daniella SP628
RODRIGUEZ-IBABE, Jose B6
ROELOFS, Hans I4
ROGGE, Christian A8
ROMANER, Lorenz J4
ROMANOV, Aleksei B9
ROURE, Sophie D3
RUANO, Oscar A5
RUPERT, Timothy I3
RUPP, Daniel B6
SADAMATSU, Sunao I4
SAIDA, Junji G2
SAIDA, Kazuyoshi H6
SAIKAWA, Seiji C7
SAITO, Hiroki SP629
SAITO, Hiroyuki E1
SAKAI, Akira H2
SAKAMOTO, Tatsuaki D8
SALITO, Armando C3
SALMAN, Salah D3
SALVATORI, Ilaria I8
SAN JUAN, Jose E8
SANCHEZ-VALLE, Carmen G7
SANTINACCI, Lionel E3
SANTO, Loredana E6
SANTOS, Dagoberto A2; P187
SAPANATHAN, Thanesan H7
SARTOWSKA, Bozena D3
SASAKI, Gen F8
SASAKI, Toshihiko J6
<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saternus, Mariola</td>
<td>J3</td>
</tr>
<tr>
<td>Sato, Hiroyuki</td>
<td>I8</td>
</tr>
<tr>
<td>Sato, Hisashi</td>
<td>E6</td>
</tr>
<tr>
<td>Sato, Naoko</td>
<td>E4</td>
</tr>
<tr>
<td>Sato, Tatsuya</td>
<td>SP630</td>
</tr>
<tr>
<td>Sato, Yuichi</td>
<td>F4</td>
</tr>
<tr>
<td>Sawada, Masayoshi</td>
<td>A4</td>
</tr>
<tr>
<td>Schaeben, Helmut</td>
<td>K4</td>
</tr>
<tr>
<td>Scheiber, Daniel</td>
<td>SP631</td>
</tr>
<tr>
<td>Scheu, Christina</td>
<td>E1</td>
</tr>
<tr>
<td>Schille, Christine</td>
<td>P182</td>
</tr>
<tr>
<td>Schledjeski, Ralf</td>
<td>F9</td>
</tr>
<tr>
<td>Schmalzer, Andrew</td>
<td>E4</td>
</tr>
<tr>
<td>Schmidtchen, Matthias</td>
<td>H7</td>
</tr>
<tr>
<td>Schmuck, Felix</td>
<td>SP632</td>
</tr>
<tr>
<td>Schnabelrauch, Matthias</td>
<td>C9</td>
</tr>
<tr>
<td>Schneider, Christian</td>
<td>SP633</td>
</tr>
<tr>
<td>Schneider, Sylvio</td>
<td>A8</td>
</tr>
<tr>
<td>Schnitzer, Ronald</td>
<td>H6</td>
</tr>
<tr>
<td>Scholz, Carmen S.</td>
<td>H6</td>
</tr>
<tr>
<td>Schoувенаарс, Rafael</td>
<td>I5</td>
</tr>
<tr>
<td>Schrodt, Nadine</td>
<td>G6</td>
</tr>
<tr>
<td>Schuh, Benjamin</td>
<td>SP634</td>
</tr>
<tr>
<td>Sekine, Chihiro</td>
<td>G6</td>
</tr>
<tr>
<td>Sekino, Tohru</td>
<td>H4</td>
</tr>
<tr>
<td>Semboshi, Satoshi</td>
<td>F1</td>
</tr>
<tr>
<td>Serizawa, Hisashi</td>
<td>E7</td>
</tr>
<tr>
<td>Setman, Daria</td>
<td>I8</td>
</tr>
<tr>
<td>Setsuhara, Yuichi</td>
<td>H4</td>
</tr>
<tr>
<td>Shabadi, Rajashekhara</td>
<td>H8</td>
</tr>
<tr>
<td>Shakhova, Iaroslava</td>
<td>I7</td>
</tr>
<tr>
<td>Sharifi, Pouya</td>
<td>F6;  SP635</td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------</td>
</tr>
<tr>
<td>SHARMA, Ahalya</td>
<td>C2</td>
</tr>
<tr>
<td>SHARMA, Rahul</td>
<td>H8</td>
</tr>
<tr>
<td>SHARMA, S.C.</td>
<td>H4</td>
</tr>
<tr>
<td>SHAW, Leon</td>
<td>H2</td>
</tr>
<tr>
<td>SHI, Feng</td>
<td>I3</td>
</tr>
<tr>
<td>SHIBATA, Naoya</td>
<td>F4</td>
</tr>
<tr>
<td>SHIBUTANI, Yoji</td>
<td>G4</td>
</tr>
<tr>
<td>SHIM, Jae-Hyeok</td>
<td>B4</td>
</tr>
<tr>
<td>SHIMASAKI, Rina</td>
<td>SP636</td>
</tr>
<tr>
<td>SHIMIZU, Toru</td>
<td>I3</td>
</tr>
<tr>
<td>SHIN, Kwang Seon</td>
<td>F6</td>
</tr>
<tr>
<td>SHIRAKO, Yuichi</td>
<td>G6</td>
</tr>
<tr>
<td>SHIRATANI, Masaharu</td>
<td>H3</td>
</tr>
<tr>
<td>SHIRATSUCHI, Yu</td>
<td>H3</td>
</tr>
<tr>
<td>SHOJI, Ichiro</td>
<td>F8</td>
</tr>
<tr>
<td>SICILIANO, Fulvio</td>
<td>J2</td>
</tr>
<tr>
<td>SIETSMA, Jilt</td>
<td>A4</td>
</tr>
<tr>
<td>SILVAIN, Jean-Francois</td>
<td>F9</td>
</tr>
<tr>
<td>SIMAR, Aude</td>
<td>E5</td>
</tr>
<tr>
<td>SIMONEAU, Charles</td>
<td>SP637</td>
</tr>
<tr>
<td>SIPPOLA, Merja</td>
<td>A7</td>
</tr>
<tr>
<td>SKROTKI, Werner</td>
<td>K4</td>
</tr>
<tr>
<td>SLOOF, Willem G.</td>
<td>D3</td>
</tr>
<tr>
<td>SMAGGHE, Guillaume</td>
<td>SP638</td>
</tr>
<tr>
<td>SMITH, Mathew</td>
<td>SP691</td>
</tr>
<tr>
<td>SMOLEJ, Samo</td>
<td>P231</td>
</tr>
<tr>
<td>SMOLJAN, Božo</td>
<td>J5; I2</td>
</tr>
<tr>
<td>SNYDERS, Rony</td>
<td>D3</td>
</tr>
<tr>
<td>ŠOB, Mojmír</td>
<td>F3; P213</td>
</tr>
<tr>
<td>SOGA, Koheji</td>
<td>C9</td>
</tr>
<tr>
<td>SOHN, Seok Su</td>
<td>A5</td>
</tr>
<tr>
<td>SOLANGE, Vives</td>
<td>E1</td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
</tr>
<tr>
<td>--------------------</td>
<td>------</td>
</tr>
<tr>
<td>SOLAS, Denis</td>
<td>D6</td>
</tr>
<tr>
<td>SOLTANI, Peiman</td>
<td>SP639</td>
</tr>
<tr>
<td>SOMANI, Mahesh</td>
<td>A5</td>
</tr>
<tr>
<td>SOMERS, Marcel</td>
<td>D3</td>
</tr>
<tr>
<td>SOMMITSCH, Christof</td>
<td>B4</td>
</tr>
<tr>
<td>SONDEREGGER, Bernhard</td>
<td>J1</td>
</tr>
<tr>
<td>SONG, Seok Weon</td>
<td>SP640</td>
</tr>
<tr>
<td>SONG, Xiaoyun</td>
<td>P183</td>
</tr>
<tr>
<td>SONG, Zhenlun</td>
<td>C2</td>
</tr>
<tr>
<td>SORNIN, Denis</td>
<td>G7</td>
</tr>
<tr>
<td>SPAHR, Dominik</td>
<td>SP641</td>
</tr>
<tr>
<td>SPEER, John</td>
<td>B7</td>
</tr>
<tr>
<td>SPIEGEL, Michael</td>
<td>B5</td>
</tr>
<tr>
<td>SRINIVASAN, Raghavan</td>
<td>B4</td>
</tr>
<tr>
<td>STADERINI, Enrico M.</td>
<td>A9</td>
</tr>
<tr>
<td>STARINK, Marco J.</td>
<td>J2; P229</td>
</tr>
<tr>
<td>STARK, Andreas</td>
<td>J7</td>
</tr>
<tr>
<td>STARKE, Peter</td>
<td>I3</td>
</tr>
<tr>
<td>STARON, Peter</td>
<td>J7</td>
</tr>
<tr>
<td>STEIN, Frank</td>
<td>B5</td>
</tr>
<tr>
<td>STEINEDER, Katharina</td>
<td>A6; SP642</td>
</tr>
<tr>
<td>STEPANOV, Nikita</td>
<td>I8</td>
</tr>
<tr>
<td>STOICA, Mihai</td>
<td>G3</td>
</tr>
<tr>
<td>STOLLFUß, Carsten</td>
<td>A8</td>
</tr>
<tr>
<td>STONE, Howard</td>
<td>B5</td>
</tr>
<tr>
<td>STRAUMAL, Boris</td>
<td>G5</td>
</tr>
<tr>
<td>STUETZ, Markus</td>
<td>B2; SP643</td>
</tr>
<tr>
<td>STUMMER, Maximilian</td>
<td>SP644</td>
</tr>
<tr>
<td>SU, Jing</td>
<td>F6; SP696</td>
</tr>
<tr>
<td>SU, Yalatu</td>
<td>C9</td>
</tr>
<tr>
<td>SUDA, Yoshiyuki</td>
<td>H3</td>
</tr>
<tr>
<td>SUGIO, Kenjiro</td>
<td>F9</td>
</tr>
</tbody>
</table>
SUGIYAMA, Masakazu
SUH, Jin-Yoo
SUN, Lidong
SUN, Pei-Ling
SUN, Shihai
SUN, Yongqing
SUNADA, Satoshi
SURMENEV, R.
SUZUKI, Mayumi
SVÉDA, Mária
SVOBODA, Jiří
SVYZHIN, Anatoly
TADGELL, Colin
TAENDL, Johannes
TAKAKI, Setsuo
TAKASHI, Taniguchi
TAKASHIMA, Kazuki
TAKASHIMA, Yasuhi
TAKATA, Naoki
TAKAYAMA, Yoshimasa
TAKEZAWA, Makoto
TAKIGAWA, Yorinobu
TAN, Ming-Jen
TANAKA, Katsushi
TANAKA, Masaki
TANAKA, Masaki
TANCRET, Franck
TANE, Masakazu
TANG, Bin
TANURE, Leandro
TAO, Nairong
TATOUlian, M.
<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAVSANOGLU, Tolga</td>
<td>D3</td>
</tr>
<tr>
<td>TEIXEIRA, Julien</td>
<td>D6</td>
</tr>
<tr>
<td>TEMATIO, Charles</td>
<td>A9</td>
</tr>
<tr>
<td>THARAPPEL DEVASIA, John</td>
<td>E4</td>
</tr>
<tr>
<td>THEODOSSIADIS, Georgios</td>
<td>H8</td>
</tr>
<tr>
<td>THIESSEN, Richard</td>
<td>I3</td>
</tr>
<tr>
<td>THIESSEN, Richard</td>
<td>I3</td>
</tr>
<tr>
<td>THOMAS, Marc</td>
<td>E5</td>
</tr>
<tr>
<td>TIAN, Jianjun</td>
<td>D3</td>
</tr>
<tr>
<td>TIAN, Ni</td>
<td>P188</td>
</tr>
<tr>
<td>TIAN, Sugui</td>
<td>B4</td>
</tr>
<tr>
<td>TIAN, Yanzhong</td>
<td>I3</td>
</tr>
<tr>
<td>TIBAR, Hasan</td>
<td>E4; SP648</td>
</tr>
<tr>
<td>TIKHONOVA, Marina</td>
<td>I7</td>
</tr>
<tr>
<td>TIMOKHINA, Ilana</td>
<td>B6</td>
</tr>
<tr>
<td>TINGAUD, David</td>
<td>D6</td>
</tr>
<tr>
<td>TKACHEV, Evgeniy</td>
<td>SP649</td>
</tr>
<tr>
<td>TOCHIGI, Eita</td>
<td>F3</td>
</tr>
<tr>
<td>TODA, Hiroyuki</td>
<td>J8</td>
</tr>
<tr>
<td>TODA-CARABALLO, Isaac</td>
<td>J5</td>
</tr>
<tr>
<td>TODAI, Mitsuharu</td>
<td>C3</td>
</tr>
<tr>
<td>TOFFOLON-MASCLET, Caroline</td>
<td>J3</td>
</tr>
<tr>
<td>TOKARSKI, Tomasz</td>
<td>C5</td>
</tr>
<tr>
<td>TOMAR, Vikas</td>
<td>F3</td>
</tr>
<tr>
<td>TOMISHIGE, Keiichi</td>
<td>H3</td>
</tr>
<tr>
<td>TOMOLYA, Kinga</td>
<td>P189; P190</td>
</tr>
<tr>
<td>TOMURO, Yuka</td>
<td>P208</td>
</tr>
<tr>
<td>TONG, Weiping</td>
<td>D4</td>
</tr>
<tr>
<td>TORIGOE, Taiji</td>
<td>D4</td>
</tr>
<tr>
<td>TORIZUKA, Shiro</td>
<td>I7</td>
</tr>
<tr>
<td>TOSA, Masahiro</td>
<td>B3</td>
</tr>
<tr>
<td>TOTH, Laszlo S.</td>
<td>K3</td>
</tr>
<tr>
<td>TREML, Ruth</td>
<td>I3</td>
</tr>
</tbody>
</table>
TRUSHNIKOVA, Anna  B3
TSAI, Peggy Pei Hua  G4
TSUBOI, Nagomi  SP651
TSUCHIYA, Hiroaki  H3
TSUCHIYA, Koichi  G3
TSUCHIYAMA, Toshihiro  A1
TSUREKAWA, Sadahiro  F4
TSUJI, Nobuhiko  A2
TSURUTA, Kenji  J3
UEDA, Kyosuke  C3
UEDA, Masato  D8
UEKI, Shohei  SP652
UEMATSU, Yoshihiko  K3
UMENO, Yoshitaka  J2
UMEZAWA, Osamu  K3
UNDISZ, Andreas  E7
UNGER, Katrin  C2; SP653
URANAGASE, Masayuki  B8
URBAN, Daniel  B4
VÁCLAVOVÁ, Kristína  SP564
VALENTINI, Renzo  I3
VALIEV, Ruslan  H3
VALOPPI, Beatrice  D7
VAN DIJK, Niels  J7
VAN SWYGENHOVEN-MOENS, Helena  A2
VARONE, Alessandra  P191
VASHISHTA, Priya  H2
VELLINI, Michela  P228
VERONA RINATI, Gianluca  A8
VERSTRAETE, Kévin  SP655
VEVECKA PRIFTAJ, Aferdita  P192
VIALLET, Virginie  E3
WEXLER, David               B3
WHITLEY, Blake              B6; SP662
WHITMAN, Catherine          C7
WIEDNIG, Christopher        SP663
WILHELM, Gerald             H7
WILKENING, Martin           E3
WILLIAMS, Matthew           SP694
WILLIAMS, Stewart           E4
WINKLER, Bjoern             G6
WOJCIK, Tomasz              B7
WONG, Su Leen               J3
WU, Chuan Song              H7
WU, Cuilan                  F3
WU, Fu-Fa                   G3
WU, Menghuai                J3
WU, Shusen                  C5
WU, Yan                     A4
WU, Yongfu                  C7
WUNDERLICH, Wilfried        E3
WÜRSCHEM, Roland            E3
XIE, Pan                    SP659
XIN, Yunchang               F7
XINLEI, Li                   C6
XU, Cheng                   E3
XU, Jian                    G3; P216
XU, Jie                     I7
XU, Pei-quan                E4
XU, Wei                     A4
XU, Ya                      H3
XU, Yun Bo                  A4
YADAV, Surya Deo            B3; SP684
YAGI, Shunsuke              E3
YAMABE-MITARAI, Yoko E7
YAMADA, Ryuichi SP665
YAMAGATA, Misato SP680
YAMAMOTO, Ayako G5
YAMAMOTO, Tokujiro G3
YAMANAKA, Junji F2
YAMASAKI, Shota A2
YAMASAKI, Tohru G3
YAMASHITA, Jun J5
YAMAUCHI, Miho H3
YAMAZAKI, Yasuhiro B5
YAN, Haile SP666
YAN, Hongwei C5
YAN, Ying I3
YANAGIDA, Akira I5
YANG, Guangyu F6
YANG, Guanjun D5
YANG, Hangsheng F3
YANG, Huajie I4
YANG, Jinbo J5
YANG, Ping K3
YANG, Sen F3
YANG, Yang SP667
YANG, Yiqiao SP657
YANG, Zhiqing B9
YAO, Ke-Fu G3
YAPICI, Guney Guven I5
YASHIRO, Wataru J8
YASUDA, Hidehiro D4
YASUDA, Hiroyuki B3
YE, Feng A4
YI, Sangbong F7
YILMAZER, Hakan
YOO, Shin
YOSHIDA, Haruka
YOSHIDA, Hidehiro
YOSHINO, Masataka
YOSHIOKA, Satoru
YOUSEFI, Afshin
YU, Lina
YUAN, Guangyin
YUGE, Koretaka
YUKAWA, Hiroshi
YUN, Jaeyong
YUZBEKOVA, Diana
ZÁLEŽÁK, Tomáš
ZALOŽNIK, Miha
ZAMBERGER, Sabine
ZEHETBAUER, Michael
ZHÁÑAL, Pavel
ZHANG, C.H.
ZHANG, Congyu
ZHANG, Hongwang
ZHANG, Hui
ZHANG, Ji
ZHANG, Ling
ZHANG, Mingxing
ZHANG, Wei
ZHANG, Xiangguang
ZHANG, Xingxing
ZHANG, Yong
ZHANG, Yu
ZHANG, Yudong
ZHANG, Zaoli
ZHANG, Ze I2
ZHANG, Zhefeng G3; P211
ZHANG, Zhongwu G5
ZHAO, Dongdong SP664
ZHAO, Jiuzhou J3
ZHAO, Yusheng G6
ZHEMCHUZHNKOVA, Daria C7
ZHENG, Chengwu J3
ZHENG, Liang B3
ZHENG, Liu F5
ZHEREBTSOV, Sergey D8
ZIMMER-CHEVRET, Sandra H6
ZHU, Shenglong D4
ZHU, Yinlian F3
ZOLOTOYABKO, Emil J7
ZOU, Ying A2; SP675
Chairpersons Index
<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMEYAMA, Kei</td>
<td>H2</td>
</tr>
<tr>
<td>ANDERSEN, Olaf</td>
<td>E5</td>
</tr>
<tr>
<td>ANDO, Shinji</td>
<td>F5</td>
</tr>
<tr>
<td>ASFAHANI, Riad</td>
<td></td>
</tr>
<tr>
<td>ATZMON, Michael</td>
<td>G3</td>
</tr>
<tr>
<td>BECK, Tilmann</td>
<td>I4</td>
</tr>
<tr>
<td>BLUM, Ludger</td>
<td>E1</td>
</tr>
<tr>
<td>BRAIOVSKI, Vladimir</td>
<td>E6</td>
</tr>
<tr>
<td>CABALLERO, Francisca</td>
<td>A7</td>
</tr>
<tr>
<td>CABIBBO, Marcello</td>
<td>I8</td>
</tr>
<tr>
<td>CARSI, Manuel</td>
<td>F6</td>
</tr>
<tr>
<td>CASCIOLOA, Mario</td>
<td>E3</td>
</tr>
<tr>
<td>CERRI, Emanuela</td>
<td>H5</td>
</tr>
<tr>
<td>CHEN, Jianghua</td>
<td>F2</td>
</tr>
<tr>
<td>CLARK, Blythe</td>
<td>I1</td>
</tr>
<tr>
<td>CONNOLLEY, Thomas</td>
<td>J6</td>
</tr>
<tr>
<td>COURET, Alain</td>
<td>B2</td>
</tr>
<tr>
<td>DANCETTE, Sylvain</td>
<td>J1</td>
</tr>
<tr>
<td>DAS, Suman</td>
<td>E5</td>
</tr>
<tr>
<td>DEHOSSON, Jeff</td>
<td>D2</td>
</tr>
<tr>
<td>DEMURA, Masahiko</td>
<td>K4</td>
</tr>
<tr>
<td>DESCHAMPS, Alexis</td>
<td>C5</td>
</tr>
<tr>
<td>DI VONA, Maria Luisa</td>
<td>E2</td>
</tr>
<tr>
<td>DOBROŃ, Patrik</td>
<td>F5</td>
</tr>
<tr>
<td>DONCHEV, Alexander</td>
<td>D5</td>
</tr>
<tr>
<td>ECKERT, Jürgen</td>
<td>G4</td>
</tr>
<tr>
<td>EDMONDS, David</td>
<td>A4</td>
</tr>
<tr>
<td>ENZINGER, Norbert</td>
<td>H5</td>
</tr>
<tr>
<td>ESTOURNES, Claude</td>
<td>H2</td>
</tr>
<tr>
<td>FIHEY, Jean-Luc</td>
<td>J4</td>
</tr>
<tr>
<td>FOITZIK, Andreas</td>
<td>A8</td>
</tr>
<tr>
<td>FUKUMOTO, Masahiro</td>
<td>H6</td>
</tr>
</tbody>
</table>
FURUHARA, Tadashi   B6
GLORIANT, Thierry    C1
GODET, Stephane      A2
GOULD, Benjamin      E3
HAGIHARA, Koji       B4
HANAWA, Takao        C3
HASCOET, Jean-Yves   E4
HASEGAWA, Masashi    G6
HEBERT, Rainer       H4
HIGASIDA, Kenji      B9
HIRAMATSU, Mineo     H1
HIROSE, Akio         H6
HOLMESTAD, Randi     C6
HORT, Norbert        F7
HOSODA, Hideki       C1
HUANG, Xiaoxu        C7
HUANG, Yi            I6
HUG, Eric            F2
II, Seiichiro        F1
INOUE, Hirofumi      K4
INUI, Haruyuki       B1
ISHIKAWA, Kunio      C8
JANG, Jason Shian-Ching G4
JEANDIN, Michel      D1
JONAS, John          A2
JUUL JENSEN, Dorte   H4
KAIBYSHEV, Rustam    G6
KAINER, Karl         F5
KAWAMURA, Yoshihito  B8
KAWASAKI, Megumi     I8
KIM, Sung-Joon       A3
KIM, Hyoung-Seop     I5
<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIM, Nack-Joon</td>
<td>A3</td>
</tr>
<tr>
<td>KLINKENBERG, Christian</td>
<td>J7</td>
</tr>
<tr>
<td>KNAUTH, Philippe</td>
<td>E1</td>
</tr>
<tr>
<td>KOBAYASHI, Sengo</td>
<td>D7</td>
</tr>
<tr>
<td>KOHARA, Shinji</td>
<td>J6</td>
</tr>
<tr>
<td>KOJIMA, Yoshitsugu</td>
<td>E2</td>
</tr>
<tr>
<td>KOZESCHNIK, Ernst</td>
<td>J1</td>
</tr>
<tr>
<td>KUMAR, Praveen</td>
<td>I6</td>
</tr>
<tr>
<td>KUMAR, Manoj</td>
<td>F9</td>
</tr>
<tr>
<td>LEE, Chong Soo</td>
<td>D6</td>
</tr>
<tr>
<td>LEJČEK, Pavel</td>
<td>F3</td>
</tr>
<tr>
<td>LI, Xiao-Wu</td>
<td>I2</td>
</tr>
<tr>
<td>LISS, Klaus-Dieter</td>
<td>J8</td>
</tr>
<tr>
<td>LIU, Qing</td>
<td>C6</td>
</tr>
<tr>
<td>LIU, Wei</td>
<td>G7</td>
</tr>
<tr>
<td>LOGÉ, Roland</td>
<td>J4</td>
</tr>
<tr>
<td>LOPEZ, Beatriz</td>
<td>B5</td>
</tr>
<tr>
<td>LU, Zhaoping</td>
<td>G1</td>
</tr>
<tr>
<td>MA, Zong-yi</td>
<td>F9</td>
</tr>
<tr>
<td>MANTOVANI, Diego</td>
<td>C2</td>
</tr>
<tr>
<td>MARTHINSEN, Knut</td>
<td>C4</td>
</tr>
<tr>
<td>MARUYAMA, Kouichi</td>
<td>B2</td>
</tr>
<tr>
<td>MATLOCK, David</td>
<td>B7</td>
</tr>
<tr>
<td>MATSUDA, Kenji</td>
<td>C5</td>
</tr>
<tr>
<td>MEDLIN, Douglas</td>
<td>F3</td>
</tr>
<tr>
<td>MILITZER, Matthias</td>
<td>J5</td>
</tr>
<tr>
<td>MINAMI, Fumiyoshi</td>
<td>I3</td>
</tr>
<tr>
<td>MIURA, Hiromi</td>
<td>I7</td>
</tr>
<tr>
<td>MIURA-FUJIWARA, Eri</td>
<td>D6</td>
</tr>
<tr>
<td>MIYAZAKI, Seiichi</td>
<td>H3</td>
</tr>
<tr>
<td>MIZUUCHI, Kiyoshi</td>
<td>E6</td>
</tr>
<tr>
<td>MOLODOV, Dmitri</td>
<td>F1</td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------</td>
</tr>
<tr>
<td>MONTANARI, Roberto</td>
<td>I1</td>
</tr>
<tr>
<td>MONTHEILLET, Frank</td>
<td>D7</td>
</tr>
<tr>
<td>MURAKAMI, Hideyuki</td>
<td>D1</td>
</tr>
<tr>
<td>NAGAUMI, Hiromi</td>
<td>C4</td>
</tr>
<tr>
<td>NAKANO, Takayoshi</td>
<td>C9</td>
</tr>
<tr>
<td>NARAYAN, Roger</td>
<td>C3</td>
</tr>
<tr>
<td>NEBE, Barbara</td>
<td>C9</td>
</tr>
<tr>
<td>NIE, Jian-Feng</td>
<td>B9</td>
</tr>
<tr>
<td>OCAÑA, José L.</td>
<td>D5</td>
</tr>
<tr>
<td>OKAZAKI, Masakazu</td>
<td>D2</td>
</tr>
<tr>
<td>PALMIERE, Eric</td>
<td>A6</td>
</tr>
<tr>
<td>PANTAZOPOULOS, George</td>
<td>I4</td>
</tr>
<tr>
<td>PARASIVAMURTHY, Prakash</td>
<td>F8</td>
</tr>
<tr>
<td>PARK, Eun Soo</td>
<td>G2</td>
</tr>
<tr>
<td>PENG, Yun</td>
<td>A6</td>
</tr>
<tr>
<td>PERELOMA, Elena</td>
<td>J2</td>
</tr>
<tr>
<td>PIETRZYK, Maciej</td>
<td>J2</td>
</tr>
<tr>
<td>PROSPOSITO, Paolo</td>
<td>A9</td>
</tr>
<tr>
<td>PYCZAK, Florian</td>
<td>B1</td>
</tr>
<tr>
<td>QIN, Rongshan</td>
<td>J5</td>
</tr>
<tr>
<td>RAVINDRAN, Comondore (Ravi)</td>
<td>C7</td>
</tr>
<tr>
<td>RICHARD, Caroline</td>
<td>C2</td>
</tr>
<tr>
<td>RICHETTA, Maria</td>
<td>A9</td>
</tr>
<tr>
<td>RIEKEHR, Stefan</td>
<td>H8</td>
</tr>
<tr>
<td>RODRIGUEZ-IBABE, Jose</td>
<td>A6</td>
</tr>
<tr>
<td>RUANO, Oscar</td>
<td>A4</td>
</tr>
<tr>
<td>SAIDA, Junji</td>
<td>G1</td>
</tr>
<tr>
<td>SAIDA, Kazuyoshi</td>
<td>H8</td>
</tr>
<tr>
<td>SANTO, Loredana</td>
<td>E7</td>
</tr>
<tr>
<td>SANTOS, Dagoberto</td>
<td>A5</td>
</tr>
<tr>
<td>SASAKI, Gen</td>
<td>F8</td>
</tr>
<tr>
<td>SASAKI, Toshihiko</td>
<td>J8</td>
</tr>
</tbody>
</table>
SERIZAWA, Hisashi          E7
SHABADI, Rajashekhara      H7
SHAW, Leon                  H1
SHIBUTANI, Yoji            G3
SIETSMA, Jilt               I2
SIMAR, Aude                 E4
SKROTZKI, Werner            K3
SOMANI, Mahesh              J3
SOMERS, Marcel              D3
SONDEREGGER, Bernhard       E8
SPEER, John                 B6
SRINIVASAN, Raghavan       B4
STADERINI, Enrico M.        A8
STARON, Peter               J7
SUGUI, Tian                 B5
SUN, Lidong                 D3
SUZUKI, Mayumi              F6
TAKAKI, Setsuo              A1
TATOUILIAN, Michel          C8
THOMAS, Marc                B3
TOCHIGI, Eita               F4
TOTH, Laszlo S.             K3
TSUJI, Nobuhiro             I5
TSUREKAWA, Sadahiro         F4
UMENO, Yoshitaka            J3
VAN SWYGENHOVEN-MOENS, Helena A1
VEVECKA PRIFTAJ, Aferdita   H7
VITRY, Véronique            D4
VOGEL, Sven                 G5
VOYLES, Paul                G2
WANJARA, Priti              D8
WATANABE, Yoshimi           E8
WEXLER, David  B3
WINKLER, Bjoern  G6
YASUDA, Hidehiro  D4
YASUDA, Hiroyuki  B3
YUAN, Guangyin  F7
YUGE, Koretaka  B8
ZEHETBAUER, Michael  I7
ZHANG, Yudong  D8
ZHANG, Zhefeng  I3
ZHAO, Yusheng  G5
Program Book Editorial Team
(alphabetical order)

Renee AGOSTINO, Australia
Tara CHANDRA, Australia
Bettina FOSSL, Austria
Mihail IONESCU, Australia
Ernst KOZESCHNIK, Austria
Isabella SCHEIBER, Austria
Christof SOMMITSCH, Austria