

## DocDay VT 2022 Program

Monday 4<sup>th</sup> July 2022

Time	Activity	Location
7:30 - 7:50	<b>Registration</b>	<b>Lobby</b>
7:50 - 8:00	<i>Welcome/Opening Session</i> <b>Moderation: Prof. Ulrich Hirn</b>	<b>HS i9</b>
	<i>Research Proposals – Session A (20 min/Person): Bioproducts</i> <b>Chair: Prof. Ulrich Hirn</b>	<b>HS i8</b>
8:00 – 8:20	<i>Lignin-modification by oxidation</i> <i>Alexander Kaufmann</i>	
8:20 – 8:40	<i>The dissolvability of sack kraft paper bags in water respectively of cement bags in a concrete mixer</i> <i>Andrea Christine Pfennich</i>	
8:40 – 9:00	<i>Spray Application of Biopolymers as Functional Barrier Coatings on Paper and Paperboard</i> <i>Anna Mayrhofer</i>	
9:00 – 9:20	<i>Redox Active Materials from Nature</i> <i>Janine Maier</i>	
9:20 – 9:40	<i>High performance membranes for flow batteries</i> <i>Lukas Pachernegg</i>	
	<i>Research Proposals – Session B (20 min/Person): Pharmaceutical Engineering &amp; Simulation</i> <b>Chair: Prof. Stefan Radl</b>	<b>HS i9</b>
8:00 – 8:20	<i>Insights into regulatory feasibility and use of Optical Coherence Tomography (OCT) as analytical technique to be used in enteric coating testing</i> <i>Jesus Alberto Afonso Urich</i>	
8:20 – 8:40	<i>3D-Printing of Advanced Translational and Personalized Medicines</i> <i>Moaaz Abdelhamid</i>	
8:40 – 9:00	<i>Design criteria for injection molding machines in clean rooms</i> <i>Stephan Puntigam</i>	
9:00 – 9:20	<i>Interfacial Behavior and Droplet Interaction in Liquid-Liquid Systems</i> <i>Matthias Singer</i>	

<b>Time</b>	<b>Activity</b>	<b>Location</b>
9:20 – 9:40	<i>Thermodynamic consistent modeling of solvent absorption in polymer networks</i> Stefan Wagner	
9:40 – 10:30	<b>Poster Session - Coffee Break</b>	<b>HS i9</b>
	<b>Research Proposals – Session C (20 min/Person): Sustainability</b> <b>Chair: Prof. Marlene Kienberger</b>	<b>HS i8</b>
10:30 – 10:50	<i>Multiphase Reactions - Continuous Recycling of Lithium-ion Batteries in the Taylor-Couette-Disc-Contactor</i> Rafaela Greil	
10:50 – 11:10	<i>CO<sub>2</sub> utilization by catalytic hydrogenation</i> Kamonrat Suksumrit	
11:10 – 11:30	<i>Continuous hydrolysis in oscillatory flow rheology as process intensification strategy for biorefineries</i> Judith Buchmaier	
11:30 – 11:50	<i>Model representation of performance deterioration of Diesel catalysts</i> Michael Pfragner	
	<b>Research Proposals – Session D (20 min/Person): Hydrogen &amp; Fuel Cell Technology</b> <b>Chair: Prof. Viktor Hacker</b>	<b>HS i9</b>
10:30 – 10:50	<i>Process Intensification of Decentralized Chemical Looping Hydrogen Production and Storage</i> Magdalena Pauritsch	
10:50 – 11:10	<i>Mixed ionic-electronic conductors for green hydrogen production with chemical looping technology</i> Fabio Blaschke	
11:10 – 11:30	<i>Lifetime Investigation of PEM Water Electrolysis Cells</i> Eveline Kuhnert	
11:30 – 11:50	<i>Fuel Cell Production &amp; Characterisation</i> Mario Kircher	
11:50 - 13:00	<b>Lunch Break</b>	
12:30 - 13:00	<b>Q&amp;A Administrative Aspects of the Doctoral Studies (Option)</b> <b>Moderation: Prof. Stefan Radl</b>	<b>HS i8</b>

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13:00 – 13:45	<i>Keynote Presentation</i> <b>Keynote speaker: Christian Witz</b> <b>Moderation: Prof. Susanne Lux</b>	<b>HS i9</b>
13:45 - 14:00	<i>Coffee Break</i>	<b>HS i9</b>
14:00 – 14:20	<i>Session 1 – (20 min/Person): Simulation &amp; Material engineering</i> <b>Chair: Prof. Gernot Krammer</b> <i>The computational performance of district heating network simulation</i> <i>Başak Falay</i>	<b>HS i9</b>
14:20 – 14:40	<i>Predicting liquid penetration from paper and liquid surface energies</i> <i>Carina Waldner</i>	
14:40 – 15:00	<i>Patterning a cellulose based dual-tone photoresist via deep X-ray lithography</i> <i>Miltscho Andreev</i>	
15:00 - 15:10	<i>Coffee Break</i>	
15:10 – 15:30	<i>Session 2 – (20 min/Person): Thermal Process Engineering</i> <b>Chair: Prof. Thomas Wallek</b> <i>A true multi-talent: Solid-liquid operations in the Taylor-Couette-Disc-Contactor – separation and purification of salt-glycerol mixtures</i> <i>Maximilian Neubauer</i>	<b>HS i9</b>
15:30 – 15:50	<i>Holistic technology concept for CO<sub>2</sub> emission-lean iron production</i> <i>Sascha Kleiber</i>	
16:00 - 16:30	<b>Farewell/ Closing Session</b> <b>Moderation: Prof. Wolfgang Bauer, Prof. Viktor Hacker,</b> <b>Prof. Johannes Khinast</b>	<b>HS i9</b>
	Best Presentation Award Best Poster Award	
16:30 - 21:00	<b>Social Event - Barbeque</b>	

## Poster Session

1. Sigrid Wolf: Influence of Co-Catalysts on the Performance of Pd-based Materials for Alkaline Direct Ethanol Fuel Cells
2. Alexander Maaß: Dynamic measurement of the out-of-plane deformation of copy paper due to one-sided wetting
3. Gottfried Segner: Describing mixtures of structural isomers of molecules with functional groups with chemical association
4. Kurt Mayer: Total Harmonic Distortions in Polymer Electrolyte Fuel Cells: An Online Detection Technique for Lifetime Estimation and Enhancement
5. Mathias Heidinger: A novel method for equivalent circuit fitting in python using differential evolution
6. Michael Johannes Hempfer: Investigation of Pulp Fractionation and its Influence on the Production of Dissolving Grade Pulp
7. Michaela Roschger: Design of an alkaline direct ethanol fuel cell test rig
8. Philipp Rosenauer: Investigation of Ion Transport in Polymers with Molecular Dynamics Simulations