Research Accelerator Programme
“UV nanoimprinting of microfluidics, microoptics and bionic flexible devices in batch or roll-to-roll”

Where: JOANNEUM RESEARCH, Weiz, Austria

When: 16-17 September 2024

Application deadline: 1st August 2024

Summary
UV nanoimprinting is a versatile tool to fabricate components for numerous applications. This RAP will provide a condensed introduction in the to various steps involved in the fabrication of nano-patterned surface, microoptic or microfluidic devices on small- and large-scale productions. The topics relate to various technologies offered by Joanneum Research within the INFRACHIP project. More details on the covered topics are here:

https://infrachip.eu/flexible-microoptics-fab/
https://infrachip.eu/r2r-uv-nanoimprinting/
https://infrachip.eu/flexible-microfluidics-fab/

Costs for travel, accommodation and access to infrastructure are covered by INFRACHIP project for up to 6 applicants. Preference is given to PhD students and junior researchers with a PhD completed in the last 2 years, but others are also welcome to apply.

Programme
For theoretical introduction to microfluidics, microoptics and UV-nanoimprinting we will provide videos covering the theoretical aspects of the programme topics and an online Q/A – session with our experts prior the arrival in Weiz.

On the 16th and 17th of Sept. the participants will get a lab-based training including the following topics:

- Hands-on training material optimization and characterization
  - Polymer resin adjustment in terms of surface tension and viscosity
  - Surface manipulation in terms of surface energies
  - Film fabrication and characterization by AFM and Ellipsometry

- Hands-on training on UV-imprinting
- Fabrication of stamp
- Manual UV-imprinting
- Demonstration of Step-and-Repeat
- Demonstration of Roll-to-Roll upscale production

Calendar

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<thead>
<tr>
<th>When</th>
<th>What</th>
<th>Where</th>
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<tr>
<td>Day #1, Morning</td>
<td>Welcome and lab tour, Polymer and surface manipulation</td>
<td>Seminar room and labs in Weiz II and IV</td>
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<tr>
<td>Day #1, Afternoon</td>
<td>Polymer and surface characterization</td>
<td>Chemistry and characterization labs</td>
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<tr>
<td>Day #2, Morning</td>
<td>Fabrication of stamp and manual imprinting</td>
<td>Chemistry lab</td>
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<tr>
<td>Day #2, Afternoon</td>
<td>Demonstration of up-scale production</td>
<td>Roll-to-Roll Lab</td>
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To apply, please fill the form on the dedicated RAP website page: [https://infrachip.eu/research-accelerator-programme](https://infrachip.eu/research-accelerator-programme)

In case of troubles, please contact us – [contact@infrachip.fr](mailto:contact@infrachip.fr)