

04. + 05. November, 2024

Hi-Tech Forum and 2nd Hi-Acts Network Meeting

INDUSTRY MEETS ACCELERATOR-BASED TECHNOLOGIES

hosted by

HZDR
 HELMHOLTZ ZENTRUM
 DRESDEN ROSENDORF

Hi-Acts | Helmholtz Innovation Platform
 for Accelerator-based
 Technologies and Solutions

AGENDA 04. November 2024, Monday

Lecture Hall - HZDR, Bautzner Landstr. 400, 01328 Dresden - Rossendorf

From 9:30 a.m. **Registration** (Building 106)

10:00 – 11:30 a.m. **Technology Tours**

Our TechTours take you behind the scenes. Discover the ZRT, ELBE or the IBC and get an impression of selected accelerator-based technologies available at the HZDR. Choose either

- [ZRT](#) (Center for Radiopharmaceutical Tumor Research)
- [ELBE](#) (Electron Linac for beams with high Brilliance and low Emittance)
- [IBC](#) (Ion Beam Center)

11:00 a.m. Start **Industry exhibition and Posters** (Building 106)

11:30 a.m. **First contacts and fingerfood** (Building 106)

12:00 p.m. **Start Conference**

Moderation: Philipp Büttner (HZDR / HIF)

Welcome – Sebastian M. Schmidt, Scientific Director of HZDR, and Björn Wolf, Head of Technology Transfer & Innovation at HZDR and Head of HZDR Innovation GmbH

12:30 p.m. **Session I: MATERIALmodification**

Keynote Dialogue: “Laser-based ion acceleration vs traditional ion beam technology”

Karl Zeil, Institute for Radiation Physics and Laser Particle Acceleration Division, HZDR, & Shavkat Akhmadaliev, Ion Beam Center, HZDR

01:00 p.m. **Science & Industry Pitches**

- “High-Energy Lasers for Powering Accelerators and Fusion Research”
Gabriel Loata, Sales And Business Development, Amplitude Lasers (Düsseldorf)
- “Laser technology for plasma accelerators and nuclear fusion”
Christoph Heyl, Group leader Ultrafast Photonics Research and Innovation Group, DESY (Hamburg) & Helmholtz Institute Jena
- “Laser plasma accelerators - innovative potential in medical engineering”
Kristjan Pöder, Team Lead of Plasma Accelerator Application development, DESY (Hamburg)
- “Advanced Coating Technologies – Optics from IR to EUV and X-rays”
Michael Schneider, Industry Manager Optics, VON ARDENNE (Dresden)
- “Ion Implantation Challenges in SiC Device Processing”
Volker Häublein, Group Leader Process Development Si(C) Processes, Fraunhofer-Institut IISB (Erlangen)
- “Suppression of 1SSF expansion in 4H-SiC using Energy Filtered Ion Implantation”
Hitesh Jayaprakash, Development Engineer, mi2-factory GmbH (Jena)
- “Doping semiconductors by ion implantation”
Shengqiang Zhou, Head Semiconductor Materials, HZDR (Dresden)

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02:15 p.m. **Coffee and Chat at the posters**

03:00 p.m. **Session II: MATERIALanalytics**

Keynote: "Ion Beam analysis – Principles and applications portfolio"

René Heller, Head Ion Beam Analysis, HZDR (Dresden)

03:30 p.m. **Science & Industry Pitches**

- "Risk management and intellectual screening driven by synchrotron X-ray spectroscopies"
Elmar Kataev, Department of Interface Design, HZB (Berlin)
- "Radiation hardness testing with high energy heavy ions at GSI"
Tim Wagner, PostDoc, GSI Helmholtzzentrum für Schwerionenforschung (Darmstadt)
- "Towards compact XFEL for material research"
Arie Irman, Research Group Leader Laser-Electron Acceleration, HZDR (Dresden)
- "Tomographic 3D analysis from battery to organoid"
Johannes Hagemann, Group leader Physics-informed AI, DESY (Hamburg)
- "Brilliant light for materials science: examples of industry-related applications of the instruments operated by GEMS at PETRA III"
Marc Thiry, Industrial Relations Officer, Helmholtz-Zentrum Hereon (Hamburg)
- "Overcoming the crystal lattice challenges of GaN-on-Si to enable micro-LEDs for displays and optical interconnect"
Kenjiro Uesugi, Senior epitaxy engineer, ALLOS Semiconductors GmbH (Dresden)

04:30 p.m. **Hi-Acts Networking: Fishbowl-Session**

Accelerator technologies as catalysts for industrial innovation: success factors and challenges

Moderation: Johannes Blum, *Innovation Manager Hi-Acts, DESY (Hamburg)*

Starting 5:30 p.m. transfer to **EVENING EVENT** at *Renaissanceschloss Schönfeld, Am Schloß 2, 01328 Dresden – Schönfeld*
A **bus for transfer** is organized (and also transfers from the castle back to Campus Rossendorf and to Dresden City).

AGENDA EVENING EVENT for NETWORKING, 04. Nov

Renaissanceschloss Schönfeld, Am Schloß 2, 01328 Dresden - Schönfeld

5:30 p.m. **Get together Schloss Schönfeld**

6:50 p.m. **Buffet**

7:15 p.m. optional: Guided tour through the castle

8:00 p.m. **Fireside chat: Best Practices for Skilled Labor Exchange between Research and Industry**

Moderation: *Janine Steidelmüller (SAP)*

Panel: *Katerina Falk (Infineon), Yonder Berencén (HZDR), Andre Günther (Wirtschaftsförderung Sachsen)*

9:15 p.m. **Atmospheric Highlight and Live Act** at Salon Hofzinsler

11:00 p.m. **Official End**

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AGENDA 05. November 2024, Tuesday

Lecture Hall - HZDR, Bautzner Landstr. 400, 01328 Dresden - Rossendorf

9:00 a.m. **Hi-Acts Breakfast Session (Room 114/202)**

Review and News from the Hi-Acts-Network and pitches from partners

10:00 a.m. **Session III: Accelerator-based production of (medical) RADIONUCLIDES**

Keynote: "Overviews and opportunities for cooperation in the field of R&D, production of radionuclides"

Martin Kreller, Head Targetry, Target Chemistry and Radiopharmacy, HZDR (Dresden)

10:30 a.m. **Science & Industry Pitches**

- "If you can think it we can build it"
Christoph Quitmann, Fellow (Science & Technology), RI Research Instruments (Bergisch Gladbach)
- "Radionuclides by neutrons - The concept of High-Current Accelerator based Neutron Sources (HiCANS)"
Thomas Gutberlet, Senior Scientist High Brilliance Neutron Source Project, Forschungszentrum Jülich
- "Radiotracer development from bench to bedside"
René Martin, Head of Radiochemistry and R&D, ABX GmbH (Radeberg)
- "From **Radiopharmaceutical Valley** to nukliD and beyond - The evolution of the radiopharmaceutical landscape in Saxony"
Dirk-Freitag Stechl, Enthusiast and entrepreneur in the field of radiopharmaceuticals, CUP Laboratories (Radeberg)
- "Irradiation Stations with Local Target Shieldings for Large Scale Photonuclear Reactions"
Stefan Thieme, Scientific Leader, Eckert & Ziegler Isotope Technologies Dresden GmbH
- "Large scale production of theranostic radionuclides using electron accelerators - problems and solutions"
Andreas Türler, RPO Nucleogenesis (Ghent/Belgium) and University of Bern

12:00 p.m. **Lunch**01:00 – 03:00 p.m. **Technology Tours**

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03:00 p.m. **Official End**