

Hi-Tech Forum and 2nd Hi-Acts Network Meeting present: Industry Meets Accelerator-Based Technologies

Monday, November 4, 2024 - Tuesday, November 5, 2024

HZDR

Scientific Program

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)

Moderation: Philipp Büttner

12:00 p.m. Welcome – Prof. Dr. Sebastian M. Schmidt, Scientific Director of HZDR, and Dr. 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”

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

01:00 p.m. Science & Industry Pitches

“Ion Implantation Challenges in SiC Device Processing”

Dr.-Ing. Volker Häublein Group Leader Process Development Si(C) Processes, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Erlangen)

tba

Gabriel Laota, Amplitude Lasers

“Advanced Coating Technologies – Optics from IR to EUV and X-rays”

Michael Schneider, Industry Manager Optics, VON ARDENNE (Dresden)

“Laser technology for plasma accelerators and nuclear fusion”

Dr. Christoph Heyl, Group leader Ultrafast Photonics Research and Innovation Group, DESY (Hamburg) & Helmholtz Institute Jena

“Laser plasma accelerators - innovative potential in medical engineering”

Kristjan Poder, Team Lead of Plasma Accelerator Application development, DESY (Hamburg)

“Suppression of 1SSF expansion in 4H-SiC using Energy Filtered Ion Implantation”
M. Sc. Hitesh Jayaprakash, Development Engineer, mi2-factory GmbH (Jena)

“Doping semiconductors by ion implantation”
Dr. Shengqiang Zhou, Head Semiconductor Materials, HZDR (Dresden)

02:00 p.m. Coffee and Chat

03:00 p.m. Session II: MATERIALanalytics
Keynote: “Ion Beam analysis Portfolio”
Dr. 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”
Dr. Elmar Kataev, Department of Interface Design, HZB (Berlin)

“Radiation hardness testing with high energy heavy ions at GSI”
Dr. Tim Wagner, PostDoc, GSI Helmholtzzentrum für Schwerionenforschung (Darmstadt)

“Towards compact XFEL for material research”
Dr. Arie Irman, Research Group Leader Laser-Electron Acceleration, HZDR (Dresden)

“Tomographic 3D analysis from battery to organoid”
Dr. 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”
Dr. Marc Thiry, Industrial Relations Officer at ReMade@ARI, Helmholtz-Zentrum Hereon (Hamburg)

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Kenjiro Uesugi, 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

Starting 5:30 p.m. Transfer to EVENING EVENT at Renaissanceschloss Schönfeld

A bus for transfer is organized (and also transfers from the castle back to Campus Rossendorf and

to Dresden City).

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

8:00 p.m. Fireside chat: Best practices for the exchange of professionals between research and industry

9:15 p.m. Atmospheric highlight and life act at Salon Hofzinsler

11:00 p.m. Official End

AGENDA 05. November 2024, Tuesday

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

9:00 a.m. Hi-Acts Breakfast Session

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"

Dr. 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 Research Instruments (Bergisch Gladbach)

"Radionuclides by neutrons - The concept of High-Current Accelerator based Neutron Sources (HiCANS)"

Dr. Thomas Gutberlet, Senior Scientist High Brilliance Neutron Source Project Forschungszentrum Jülich

"Production of isotope-pure raw materials"

tba, GSI Helmholtzzentrum für Schwerionenforschung (Darmstadt)

"Ecosystem Pitch NUKLID Network + CUP"

Dr. Dirk-Freitag Stechl, Managing Director, CUP Laboratories (Radeberg)

tba

tba, Isotope Technologies Dresden GmbH

“Large scale production of theranostic radionuclides using electron accelerators - problems and solutions”

Andy Türlér, RPO Nucleogenesis (Ghent/Belgium)

12:00 p.m. Lunch

01:00 – 03:00 p.m. Technology Tours

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03:00 p.m. Official End