Press release

Securing the technological lead with laser innovations

Together with small and medium-sized companies, research institutes from Berlin and Jena are developing the world's first pulsed Joule-class laser light source for the mid-infrared spectral range. Register now for the HECMIR workshop!

Berlin, August 27, 2018
Two German regions are pooling their expertise in the field of laser technology in the recently launched BMBF HECMIR project (Mittlerer-Infrarot-Laser für die Hochenergie-Klasse –High Energy Class Mid-Infrared Lasers). The partners from Berlin and Jena are jointly developing a novel high-energy laser source for the mid-infrared (MIR) spectral range. In the joint project, a diode-pumped solid-state laser with 1.9 µm wavelength that provides high laser energy in the Joule range is to be developed and demonstrated for the first time. This laser source offers a high innovation potential for applications in the medical sector, in material processing and in basic research. Due to several fundamental challenges, such a powerful pulsed laser source is not yet commercially available in this wavelength range.

The small and medium-sized enterprises (SMEs) and research institutions involved want to change this, making such MIR lasers available by pooling their know-how along the entire value chain: including manufacturers of laser materials, laser diodes and laser stacks as well as renowned research institutes. Just by itself, research and development to establish manufacturing of these high-energy class MIR lasers represents a technical innovation in the field of laser production technology in Germany. The initiative thus makes a substantial contribution to maintaining German laser technology at the forefront of international competition. "This will result in innovative processes, products and services that open up new market potential, especially for the SMEs involved," explains Frank Lerch, coordinator of HECMIR and managing director of the OpTecBB competence network.

Registration for the HECMIR Workshop

The HECMIR workshop "High-energy class mid-infrared lasers" will take place on October 17, 2018 as part of Photonik-Tage Berlin Brandenburg. The workshop deals with state of the art and technological approaches for developing such high-power laser sources. Paul Crump from Ferdinand-Braun-Institut and Joachim Hein from Schiller University Jena are the chairs of the full-day workshop.

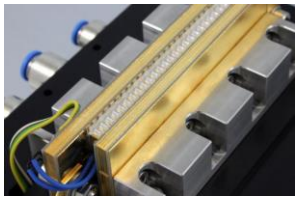
Information about the workshop

Register for the workshop

The HECMIR project partners

Since April, the BMBF joint project HECMIR is funded with almost 1.5 million euros for a period of three years under the KMU-NetC programme. The project is coordinated by OpTecBB, the Berlin-Brandenburg Competence Network for Optical Technologies. In addition to the Friedrich Schiller University Jena, Institute of Optics and Quantum Electronics (IOQ), and the Ferdinand-Braun-Institut (FBH) in Berlin, the two SMEs Lastronics GmbH from Jena and Crystal GmbH from Berlin are involved. Associated partners are the Leibniz Institute for Crystal Growth (IKZ), Brilliance Fab Berlin GmbH and JENOPTIK Diode Lab GmbH.

The **corresponding press photo** is available for download. Please observe the copyright.



Contact

Ferdinand-Braun-Institut
Leibniz-Institut fuer Hoechstfrequenztechnik
Petra Immerz/Dr. Paul Crump

Phone +49.30.6392-2626 / -3291
Email petra.immerz@fbh-berlin.de
paul.crump@fbh-berlin.de
Web www.fbh-berlin.com

Optec-Berlin-Brandenburg
(OpTecBB) e.V.
Dr. Frank Lerch

Phone +49.30.6392-1720
Email lerch@optecbb.de
Web www.optecbb.de

About OpTecBB

The Competence Network for Optical Technologies and Microsystems Technology in Berlin and Brandenburg Optec-Berlin-Brandenburg (OpTecBB) e.V. currently has 115 institutional members. The initiative is supported by companies and scientific institutions in the region that want to jointly develop and use these technologies. Together with its partners WFBB and BerlinPartner, OpTecBB is responsible for cluster management in the Photonics Cluster in Berlin and Brandenburg.

www.optecbb.de

About the Ferdinand-Braun-Institut

The Ferdinand-Braun-Institut, Leibniz-Institut fuer Hoechstfrequenztechnik (FBH) researches electronic and optical components, modules and systems based on compound semiconductors. These devices are key enablers that address the needs of today's society in fields like communications, energy, health, and mobility. Specifically, FBH develops light sources from the visible to the ultra-violet spectral range: high-power diode lasers with excellent beam quality, UV light sources and hybrid laser systems. Applications range from medical technology, high-precision metrology, and sensors to optical communications in space. In the field of microwaves, FBH develops high-efficiency multi-functional power amplifiers, and millimeter wave frontends targeting energy-efficient mobile communications as well as car safety systems. The FBH has a strong international reputation and ensures rapid transfer of technology by working closely with partners in industry and research. The institute has a staff of 290 employees and a budget of 33 million euros. It is part of the Forschungsverbund Berlin e.V., a member of the Leibniz Association and plays an active role in various networks.

www.fbh-berlin.com