Leibniz
Ferdinand-Braun-Institut

Press Release

Transfer Prize goes to the Ferdinand-Braun-Institut

A team from the Ferdinand-Braun-Institut has been awarded for sustainable transfer of specifically powerful diode lasers for materials processing. In this field, the FBH closely cooperates with Jenoptik and thus ensures rapid transfer of state-of-the-art developments into an industrial environment.

Berlin, March 20th, 2012
In the course of the opening evening of Laser Optics Berlin trade fair on March 19th, 2012, a team from the Ferdinand-Braun-Institut (FBH) has been awarded with the Transfer Prize WissensWerte 2012. This prize is endowed with 50,000 Euro and assigned by the friends of the Technology Foundation Berlin (TSB). Six scientists from the Berlin institute have been honored for the sustainable transfer of extraordinarily powerful diode lasers to be applied in materials processing. In this field, the FBH closely cooperates with Jenoptik Diode Lab GmbH, which has been spun off from the institute and is a subsidiary company of the Jenoptik Group. “We are very proud of this award – it manifests and acknowledges the long-term and extraordinarily fruitful collaboration with industrial partners like Jenoptik”, says awardee Dr. Götz Erbert. “This cooperation is the basis for various developments in this application field helping us to ensure international technology leadership within the market for such laser systems”. The FBH, by the way, receives the Transfer Prize already for the second time: In 2004, the institute had been awarded for the development of DFB high-power laser diodes; at that time, transfer had been accomplished with another FBH spin-off, eagleyard Photonics.

More powerful diode lasers for improved materials processing systems

The team, led by Götz Erbert, is developing a novel generation of diode lasers for powerful laser systems used for materials processing. These systems consist of single diode lasers delivering each a typical output power of around 10 Watt. In order to enhance their performance, to simply increase the output power is insufficient. Thus, the most important tasks are to further increase efficiency, hence improving the effectiveness of transforming electrical into optical power, and to optimize the beam quality of the single diode lasers forming such systems. Based on novel designs, the team has now developed diode lasers already achieving an efficiency of 63 percent at an output power of 12 Watt. 15 to 20 Watt shall be achieved while maintaining their excellent efficiency and beam quality. Thus, such diode lasers set the stage for purely diode-laser-based laser systems for materials processing in the future.

Industrial cooperations ensure rapid transfer of technology

In order to quickly transfer research results into an industrial environment, the FBH closely works with partners from the industry. A long-term and intensive cooperation connects the institute with the Jenoptik Group, particularly in the field of diode lasers for materials processing. The most obvious result of this collaboration is the FBH spin-off Jenoptik Diode Lab GmbH, which has been founded in 2002. The company runs a semiconductor fabrication in Berlin at the Adlershof campus and continues to use research results from the FBH for its diode lasers. The ongoing cooperation thus enables continuous improvements in performance and is thus the basis for a great variety of new developments. Due to high customer demands, the company currently expands its production capacities in close vicinity of the FBH; the number of jobs will hence be more than doubled.

Please contact us if you need any **press pictures** or visit our website for further images: http://www.fbh-berlin.com/press/download-center.

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Backgroundinformation – the FBH

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. In addition, compact atmospheric microwave plasma sources that operate with economic low-voltage drivers are fabricated for use in a variety of applications, such as the treatment of skin diseases.

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 240 employees and a budget of 20 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.
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