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THz QCL Hits Light Output Milestone

Using special symmetrical laser structures, a group in Vienna says it has created a terahertz quantum cascade laser (QCL) with four times higher light output than other such existing devices, crossing a major hurdle to the widespread use of such lasers. "We achieved 470-mW peak output power in pulsed mode from a single facet at a heat sink temperature of 5 K and a maximum operation temperature of 122 K. Furthermore, the devices show a broadband emission spectrum over a range of 420 GHz, centered around 3.9 THz," the group said in a paper on the work.

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FEATURED VIDEO



Energetiq - Laser-Driven Light Source

Energetiq CEO Paul Blackborow discusses the company's EQ-99 LDLS laser-driven light source, winner of the 2010 Prism Award for photonics innovation in the Other Light Sources category. The EQ-99 LDLS covers a broader spectral range with lifetime at least an order of magnitude longer than traditional xenon and deuterium lamps, enabling high spectroscopic or image resolution.

Newport Divesting Micro Robotics Systems Unit

The lasers and optical components maker is selling its Micro Robotics Systems (MRSI) advanced packaging business for \$6 million to a private investment group led by the local management team.


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NASA Sets Laser Communications Record

The space agency's Lunar Laser Communication Demonstration transmitted data between the moon and the Earth via a pulsed laser beam at a record download rate of 622 megabits per second.

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LED-Luxmeter for SSL

Gigahertz-Optik, Inc.

Gigahertz-Optik's new BTS256-E LED-Luxmeter provides all necessary illuminance, color and spectral data to fully qualify solid state lighting, CFL and any other type light source.

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WEBINAR



Rare-Earth Doped Fibers for Use in Fiber Lasers and Amplifiers

Monday, November 4, 2013 1:00 p.m. EST

FREE WEBINAR

The advances in performance of fiber lasers have been dramatic in the past 10 years, making fiber lasers a commercial business worth more than \$500 Million per year. All of this is made possible by the unique performance attributes of rare-earth doped silica fibers, which are at the heart of each of these laser systems. In this webinar, we will describe the key parameters of these fibers, including the use of large-mode-area (LMA) fibers for the key-power CW lasers as well as pulsed fiber lasers, along with the key other fiber-based components needed to make a fiber laser. The common rare-earth dopants for silica fibers, namely Ytterbium, Erbium, Thulium and Holmium, will also be described, along with some of the commercially relevant devices that are enabled by these fibers.

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Dr. Bryce Samson
VP Business Development

Dr. George Ouloussin
Fiber Product Line Manager

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Disk Laser Research Garners EU Support

Two projects starting next month concerned with developing ultrashort-pulse titanium:sapphire disk lasers for industrial materials processing applications are receiving €9.14 million (about \$12.5 million) in funding from the European Union's 7th European Subsidy Programme.

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Replacing Mammography with Light and Ultrasound

A new device called a photoacoustic mammoscope combines infrared light and ultrasound to create 3-D maps of the breast. Its creators in The Netherlands hope that it could someday replace the x-rays used in traditional mammography for routine breast cancer screenings.

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Nanoscale Engineering Advances QD-LEDs

New research aims to improve quantum dot LEDs by using a new generation of the nanosized, engineered semiconductor particles specifically tailored to have reduced wasteful charge-carrier interactions that compete with the production of light.

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Light Matters

On this edition of the industry's **only weekly newscast**: light and ultrasound aim to replace mammography, Laura shares insights from her trip to Photonex, and NASA's laser communications project sets a transmission record. Hosted by Photonics Media's Laura Marshall and Melinda Rose.

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Aston, NSU Partner on Photonics Research Center

Aston University in England and Novosibirsk State University (NSU) in Russia are partnering to establish a joint research center, the Aston-NSU International Centre for Photonics in Novosibirsk.

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Light-Activated Implants Signal Specific Deep Tissue

New light-activated implants have been developed that its creators say can deliver light signals to specific tissues deep within the body for the first time.

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Zygo CEO Koliopoulos Steps Down

No reason was given for his resignation, other than that it was a mutual decision between Koliopoulos and Zygo's board. Zygo veteran and former CEO Gary K. Willis has been named interim CEO.

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Neuroscience 2013, the Society for Neuroscience's 43rd annual meeting, is the premier venue for neuroscientists to join more than 30,000 colleagues from 80-plus countries at the marketplace of ideas and tools for global neuroscience. Attendees will discover the latest science and cutting-edge research, forge collaborations with peers, have access to resources for funding and career development, and explore new tools and technologies. The science and networking opportunities are unmatched, with nearly 16,000 scientific presentations, 600 exhibiting companies, and dozens of career development opportunities.

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