

This Week In PHOTONICS

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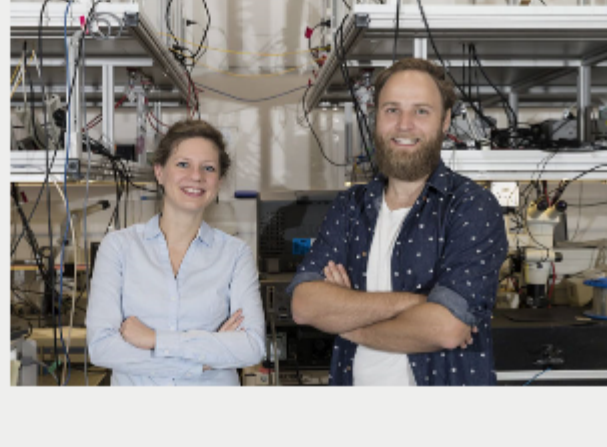
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Top Stories

Converting Light to Sound Waves Leads to Hybrid Chip for Data Transfer

Researchers have demonstrated a way to transfer optical information coherently to an acoustic hypersound wave on a photonic microchip. Optical information is extracted using a reverse process. A coherent buffer can store the photonic information in a sound wave for later retrieval.



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Physicists Identify Optimum Conditions for Laser Plasma Acceleration

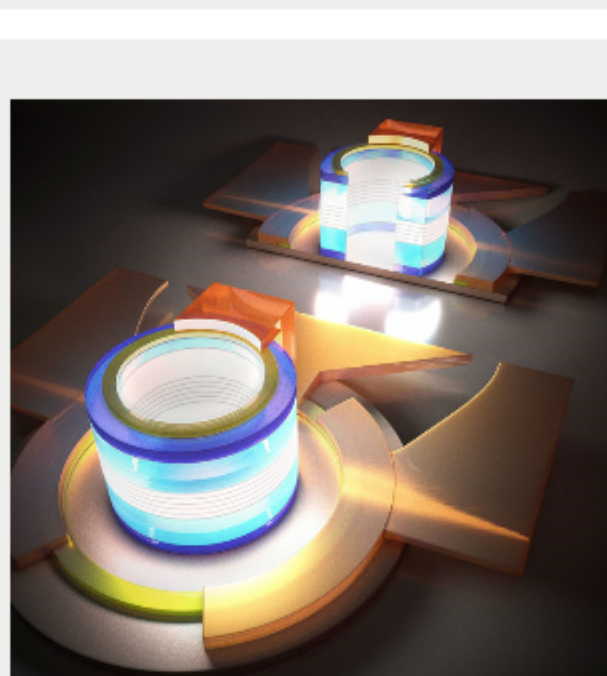
Laser plasma acceleration, which has a smaller footprint and higher peak currents than conventional electron accelerators, could be the basis for the next generation of compact light sources. To make laser plasma acceleration practical for future applications, researchers have developed a method to increase beam stability and quality.



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QD Lasers Could Be Smallest to Date

Record-small electrically pumped microlasers have been epitaxially grown on industry standard (001) silicon substrates. Continuous-wave lasing up to 100 degrees Celsius was demonstrated at 1.3 μm communication wavelength. Researchers achieved a submillamp threshold of 0.6 milliamper for a microlaser with a radius of 5 μm. According to the team, these thresholds and footprints are orders of magnitude smaller than any previously reported lasers epitaxially grown on silicon (Si).



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Featured Products

Lasers in Industry

Photonics Media has gathered articles and other valuable resources into a guide to the current use of lasers in industry, a reference tool and a resource for learning. This book is for anyone working on, implementing or considering the application of lasers for and in industrial settings.

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Si APD Array with Built-in Pre-amplifier



Hamamatsu Corporation
The S13645-01CR photo IC combines a 16-element silicon avalanche photodiode (Si APD) array and a preamplifier into a single, compact package. With its peak sensitivity around 840 nm and high-speed response (200 MHz), this device is suitable for distance measurement.

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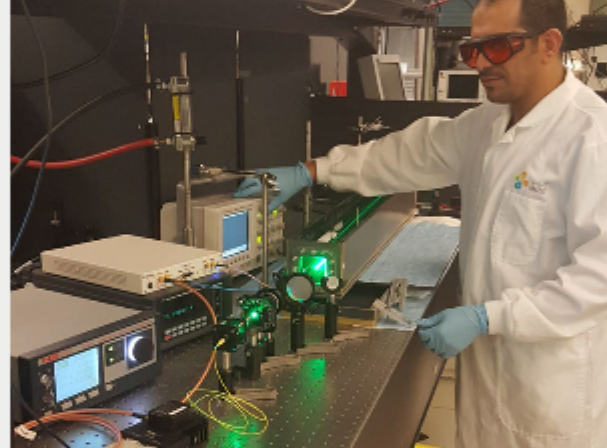
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More News

Underwater Video Achieves Quality by Improving Bandwidth

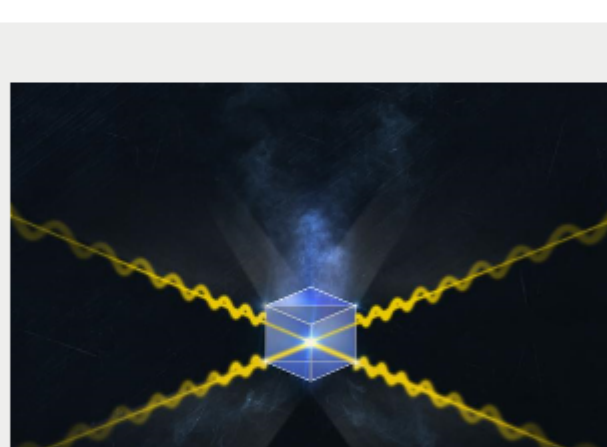
Researchers have demonstrated high-quality real-time video streaming over an underwater wireless optical communication (UWOC) link, up to a five-meter distance, using phase-shift keying modulation and quadrature amplitude modulation to improve the accuracy of the detected signal. UWOC systems could provide flexible and cost-effective means for streaming high-quality underwater video images.



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Quantum Repeater Could Speed, Secure Long-Distance Quantum Communication

Researchers have experimentally demonstrated photon entanglement swapping and teleportation for multiple orbital angular momentum (OAM) states of light. When OAM is used as an information carrier, photon states can decay over long distances — thus a way to amplify the signal is needed. A quantum repeater allows the establishment of entanglement between two distant points without requiring one photon to travel the entire distance, thus reducing the effects of decay and loss.



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14-17 November
Messe München
Munich, Germany

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Photonex EUROPE LIVE!

THE EVENT WHERE LIGHT TECHNOLOGIES COME ALIVE!

11 & 12 OCTOBER 2017 - RICOH ARENA COVENTRY

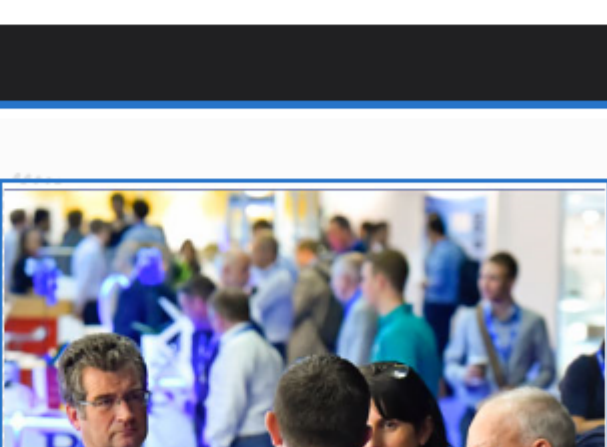
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Multiple Conferences.
One Venue.

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Industry Events

Photonex 2017

October 11-12, 2017 - Ricoh Arena - Coventry United Kingdom
Photonex 2017 will connect the supply chain with the UK's photonics user communities by bringing together all aspects of photonics industry and research. Attendees will have ample opportunity to further their professional development through presentations, conferences, training courses and "how-to" tutorials. Industries represented will include advanced manufacturing, biophotonics and life sciences, defense, environment and others. Laser, optoelectronics, optical sensing, spectroscopy and other photonics technologies will be on display at Photonex 2017.



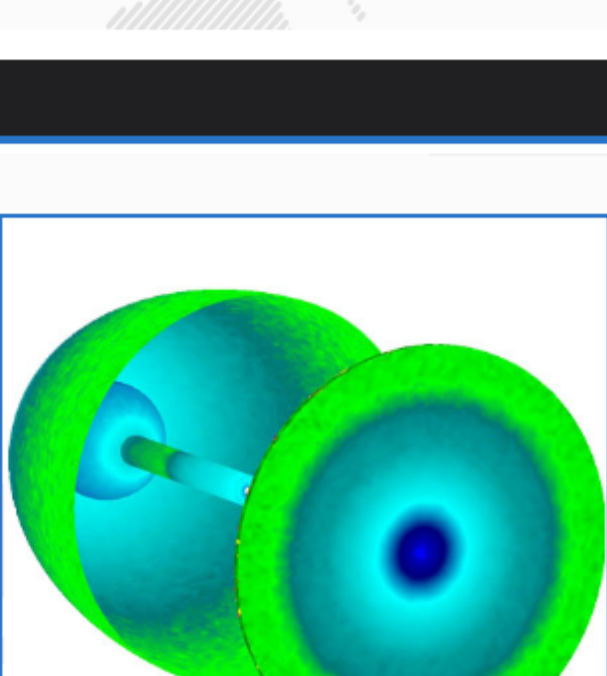
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Webinars

Learn Efficient Luminaire Design Using Virtual Prototyping

Thu, Oct 12, 2017 1:00 PM - 2:00 PM EDT

In this webinar, you will learn how to design more efficient luminaires using Lambda Research's TracePro software, a 3D CAD virtual prototyping with the power and tools to simulate and design luminaires. The webinar will cover how to design luminaires for maximum efficiency and specified angular output, how to use photorealistic rendering to make sure a luminaire works as designed, when to use diffusers to improve design output, how to create reports and check luminaire output for design regulations, and Tips and Tricks for creating better luminaires in less time. This webinar is presented by Lambda Research Corporation, a leading designer and publisher of illumination and optical design software.



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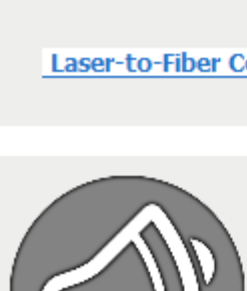
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Questions: info@photonics.com

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