

This Week in PHOTONICS



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:: Top Stories

Lidar Companies Velodyne, Ouster Agree to Merge

Digital lidar company Ouster and lidar sensors and solutions developer Velodyne Lidar have entered into a definitive agreement to merge in an all-stock transaction. The combination reportedly brings together roughly \$400 million in market value. Both companies will continue to operate their businesses independently until the close of the merger transactions, which are expected to be completed in the first half of 2023.



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Single-Laser and Optical-Chip Pair Sets Data Transmission Record

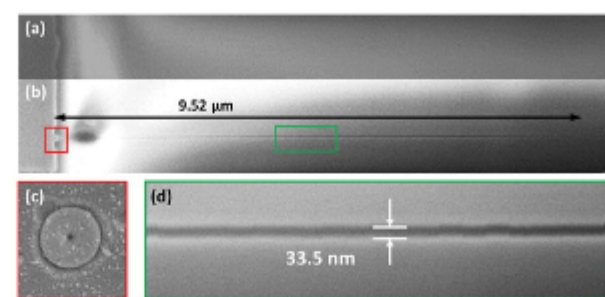
An international team has reportedly set a data transmission record using just a single laser and optical chip to transmit more than 1 Pbit/s. The researchers, from the Technical University of Denmark (DTU) and Chalmers University of Technology in Sweden, transmitted data at 1.8 Pbit/s, corresponding to double the total global internet traffic.



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Laser-Matter Interaction Improves Nanostructure Fabrication Process

Using femtosecond laser direct writing, researchers at Xi'an Jiaotong University created silica nanochannels with a diameter of 30 nm, smaller than reported in any previous study, and with an aspect ratio of over 20. The technique uses extremely short and energetic laser pulses with high precision to create desired nanostructures, which include nanoholes, nanopores, and nanoslits.



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:: Featured Products & Services



[Like a Webcam, but for Industry](#)

IDS Imaging Development Systems

GmbH

With uEye XC, IDS Imaging Development Systems recently launched an industrial camera with autofocus that is just as easy to operate as a webcam. It closes the market gap between industrial camera and webcam and combines the advantages of both.

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[Pulsed Laser Spectrum Analyzer](#)

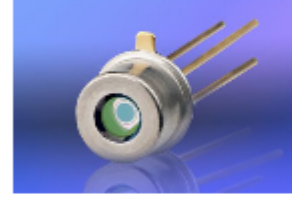
Bristol Instruments Inc.

The 772B-MIR Laser

Spectrum Analyzer is for pulsed lasers operating from 1 to 12 μm . It measures wavelength to an accuracy of ± 10 parts per million, and bandwidth and longitudinal mode structure to a resolution of 4 GHz, providing the ideal solution for scientists and engineers who need to know the spectral properties of their pulsed mid-IR lasers.

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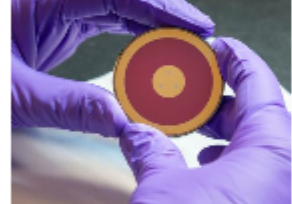
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[IR Filters](#)

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- High responsivity
- TO-46 or LCC

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:: Upcoming Webinars

Ray Optics Simulations
Wed, Nov 16, 2022 2:00 PM - 3:00 PM EST
Ping Chu, Ph.D., shares about optical ray tracing using the COMSOL Multiphysics® software and presents a live demo of the software. This demo shows how to create a fully parameterized geometry of a typical lens system, trace rays through the system, and postprocess the results. She also discusses more specialized, trace rays features, such as the analysis of ray intensity and polarization. Finally, she explains how the Ray Optics Module, an add-on product to COMSOL Multiphysics®, can be combined with structural and thermal simulation for highly accurate structural-thermal-optical performance (STOP) analysis. Presented by COMSOL.

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Introduction to Display Metrology: Evaluating the Quality of Displays Using Scientific Systems and Methods
Thu, Nov 17, 2022 1:00 PM - 2:00 PM EST
Using scientific methods and equipment, display metrology solutions capture and assess the quantitative values of a display's output to evaluate its visual quality and performance. Jessy Hosken of Radiant Vision Systems shares the science behind display testing, including measurement equipment and techniques used by manufacturers throughout labs and production lines to ensure high-quality display products from microLED to AR/VR devices. Presented by Radiant Vision Systems.

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