

This Week in PHOTONICS

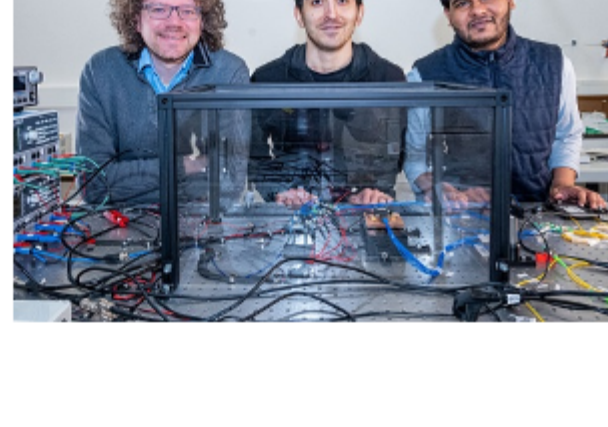


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Top Stories

On-Chip Quantum Light Source Brings Scalability to Quantum Cloud

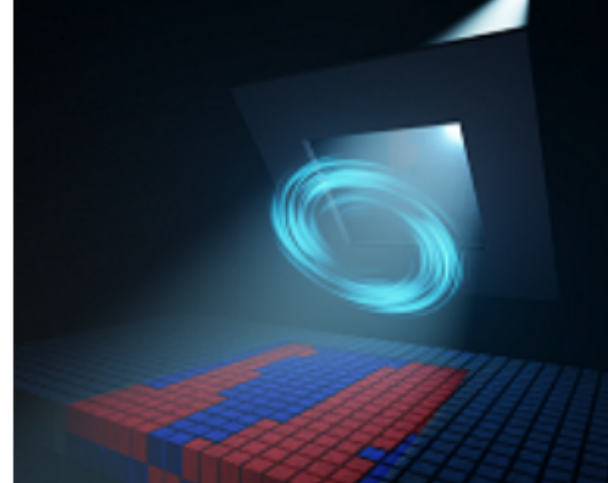
Researchers from Leibniz University Hannover, the University of Twente, and photonic quantum computing company QuiX Quantum have presented an entangled quantum light source fully integrated on a chip. According to team member Michael Kues, who is head of the Institute of Photonics and a board member of the Cluster of Excellence PhoenixD at Leibniz University Hannover, the breakthrough enabled the researchers to shrink the source size by a factor of more than 1000.



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Dichroism Method Adapted for Lab Use Unlocks Materials' Secrets

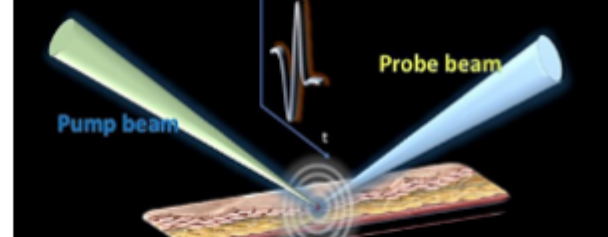
Researchers at the Max Born Institute used x-ray magnetic circular dichroism (XMCD), a technique that can be used to measure the spin and charge dynamics in multi-elemental magnetic materials, in a laser laboratory setting and performed experiments at the absorption L edges of iron at a photon energy of around 700 eV. Until now, use of XMCD in the soft x-ray range has been limited to synchrotron-radiation sources and free-electron lasers. The researchers believe that their approach could be adapted to other transition metal and rare-earth absorption edges.



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Remote Sensing Gives Photoacoustic Microscopy a Beneficial Wrinkle

Researchers at the University of Hong Kong showed that biological tissue can be imaged with greater sensitivity through remote sensing of photoacoustic signals than through conventional photoacoustic imaging techniques. The researchers demonstrated a near-infrared, photoacoustic remote sensing microscopy technique for noncontact imaging of lipids. The technique enabled broad detection bandwidth, deep penetration depth, and a high signal-to-noise ratio for the imaging of biological samples, in addition to enabling noncontact implementation.



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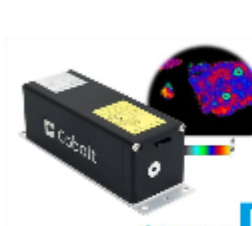
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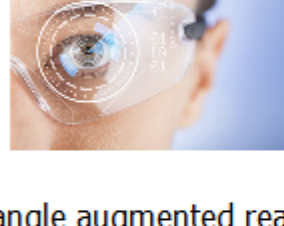
830 nm Laser for Raman Spectroscopy

HÜBNER Photonics GmbH

HÜBNER Photonics introduces the 08-NLD 830 nm as part of the Cobolt 08-01 Series. The 08-NLD 830 nm, with 100 mW output power, complements the Cobolt 08-01 Series of compact high-performance narrow linewidth lasers for high-resolution Raman spectroscopy applications.

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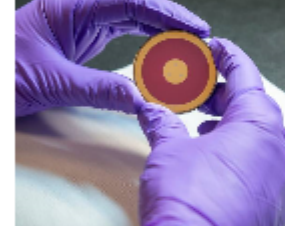
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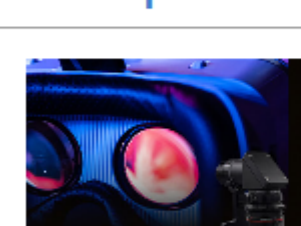
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Upcoming Webinars



Addressing the Measurement Challenges of XR Device Optics: Displays, Lenses, and Waveguides

Thu, May 4, 2023 1:00 PM - 2:00 PM EDT

The pace of innovation in AR/VR/MR, collectively XR, devices continues to yield new technologies, optical approaches, and device configurations. To keep up, designers and manufacturers need to be able to meet an expanding range of quality measurement and inspection demands at both the component and device level. Mike Caputo of Radiant Vision Systems covers the current landscape of XR optical metrology needs and shares flexible and cost-effective approaches to measure XR devices in the lab and in production. Presented by Radiant Vision Systems.

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External Light Sources for Co-Packaged Optics: Applications and Beyond

Tue, May 9, 2023 1:00 PM - 2:00 PM EDT

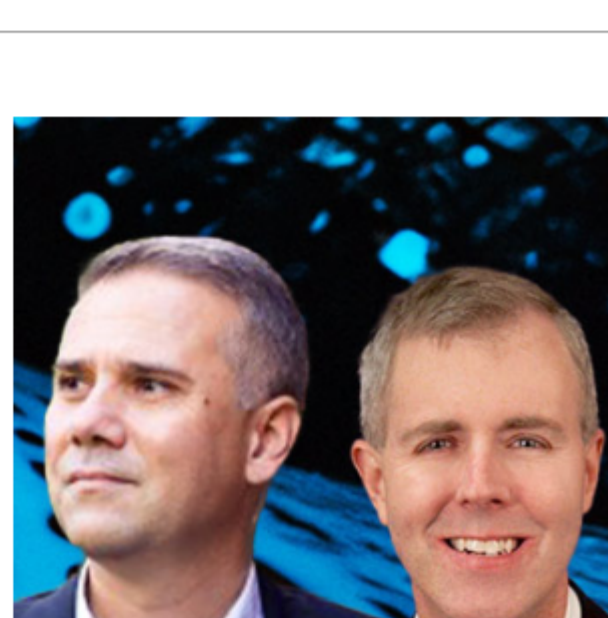
The networking and computing application landscape is evolving to be cost effective, bandwidth dense, and power efficient. These new requirements bring optics and electronic processors closer together in a single package or more commonly, as co-packaged optics (CPOs). The co-packaged optics arrangement works well for all other transceiver parts, except for the lasers. Lasers are better to be placed outside the package inside external source (ELS) enclosures to support these new applications. Erman Timurdogan, Ph.D. of Lumentum discusses various external light source solutions with emphasis on performance and cost reduction.

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All Things Photonics

The brain trust of holographic extended reality startup Swave Photonics discusses the company's scalable holographic chip technology. Company founder and chief product officer **Theodore Marescaux** and CEO **Mike Noonan** explain Swave's diffraction photonics technology and inform on the company's future plans following its first-place finish in the 2023 SPIE Startup Challenge at Photonics West 2023.

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