



Monthly Newsletter

Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue. [Photonics.com/subscribe](https://www.photonics.com/subscribe).

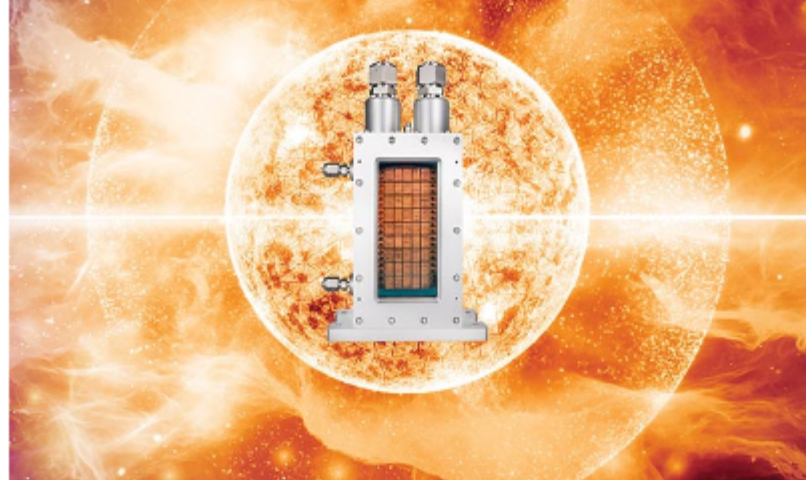


Underwater Lidar Gives Maritime and Subsea Applications the Green Light

Unlike traditional underwater lidar systems, QCI's prototype detects individual photons rather than relying on the aggregate of many. This single-photon approach has a direct effect on enhanced depth performance. The method enables the quantum lidar mechanism to detect faint signals from only a handful of photons bouncing back from an underwater

object, according to QCI CEO William McGann. Further, because quantum lidar solutions such as these precisely record the arrival time of individual photons, the method delivers more accurate distance measurements than alternative techniques. It also enables more effective 3D imaging, and the single-photon mechanics of quantum lidar improve the filtering of background noise. The result is a finer distinguishment between true signal and unwanted interference.

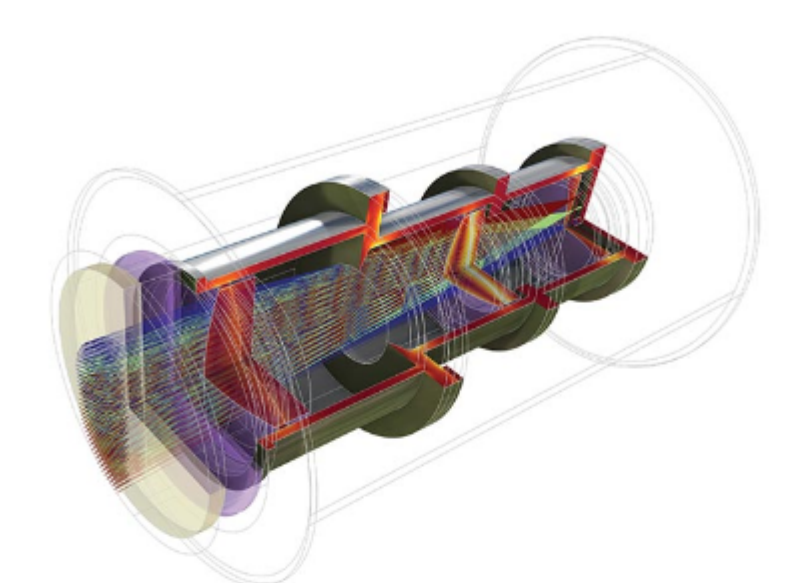
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Five Drivers Will Shape the Future of High-Power Laser Diode Technologies

High-power laser diode (HPLD) technologies are driving innovation across a range of applications, from industrial — in materials processing and aerospace and defense — to those in the domains of medical, sensing and detecting, and communications. HPLD technologies are also critical enablers of fundamental scientific research, such as particle accelerator systems and laser fusion-based energy production. In most of these application scenarios, the laser diode is typically a variation of the broad-area, edge-emitting HPLD and functions as the initial photon source for the given system. These

devices are used to pump an external gain material, such as an optical fiber or a solid-state gain material. [Read Article](#)



Surrogate Models and Simulation Apps Revamp the Optical Design Toolkit

Simulation enables engineers working across a broad range of disciplines to properly characterize, predict, and improve the behavior of systems. Numerous industries, including telecommunications, health care, and manufacturing, have embraced simulation as a fundamental aspect of the design process. Fiber optics, imaging technology, and lasers for cutting and welding are among the high-performance, high-precision applications in optics and photonics that benefit

from increasingly sophisticated simulation capabilities. [Read Article](#)



Featured Products & Services



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In Case You Missed It

Hawthorn Photonics Integrates Radiantis

Radiantis, a laser equipment supplier, has been integrated into the optical technologies company Hawthorn Photonics Group. Through integration with Hawthorn Photonics Group, Radiantis joins sister companies Covesion and AdvR. AdvR merged with Covesion earlier this month to expand the group's capabilities in nonlinear optical materials. [Read Article](#)

Radiant Opto-Electronics Acquires Inkron Oy

Radiant Opto-Electronics Corporation, a Taiwanese manufacturer of display technologies, has signed a share purchase agreement with Inkron Oy, a Finnish manufacturer of advanced optical materials. Through the deal, Radiant will acquire 100% of Inkron's shares from Nagase Group for ¥1.035 billion (\$7.2 million). According to Radiant, the acquisition marks a step forward in the company's roadmap to build a next-generation optical manufacturing platform. [Read Article](#)

PhotonDelta Teams with Luminate NY for Transatlantic Growth

Netherlands-based photonic chip accelerator PhotonDelta has collaborated with Luminate NY, an accelerator for startups with optics, photonics, and imaging enabled technologies, to support the growth of early-stage photonics companies across North America and the Netherlands. Through this collaboration, startups that are part of the PhotonDelta or Luminate can get access to the benefits from each other's accelerator programs. This will enable photonics startups to leverage these ecosystems and relationships to accelerate innovation and scaling into the global market. [Read Article](#)

Latest Webinars



Quantum Sensing with Atomic Systems and Reconfigurable Instrumentation

Wed, Jul 23, 2025 1:00 PM - 2:00 PM EDT

Quantum sensing leverages the fundamental quantum behavior of atoms and light to measure weak signals with precision beyond that of classical methods. These measurements make use of trapped ions and cold atoms, and include applications such as magnetic field sensing, optical atomic clocks, and quantum gravimetry. Critical to these techniques are ultra-cold temperatures, coherent quantum control, and sensitive optical readout, which pose significant hardware challenges with regard to laser stabilization, timing, and noise suppression. During this presentation, find out how to generate and detect synchronized RF pulse trains, such as a Ramsey sequence, using a software-defined waveform generator and lock-in amplifier. Plus, see new

ways to stabilize your systems with a laser lock box and measure clock stability with a phasemeter, using a reconfigurable suite of instruments in a single device. Finally, in a live demonstration, learn how to deploy these instruments simultaneously for maximum flexibility, and how to use Python to interface with each. Presented by Liquid Instruments.

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Next Issue:

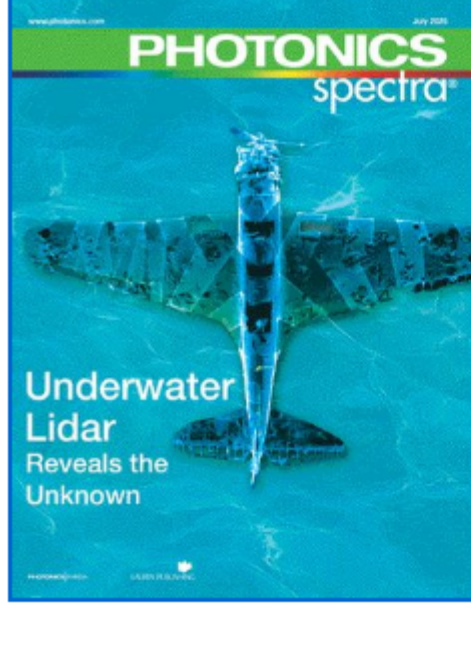
Features

Semiconductor Workforce, Quantum Sensing, CO₂ Laser Materials Processing

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine

Photonics Spectra. Please submit an informal 100-word abstract to Jake Saltzman, Senior Editor, at Jake.Saltzman@Photonics.com, or use our online submission form www.photonics.com/submitfeature.aspx.

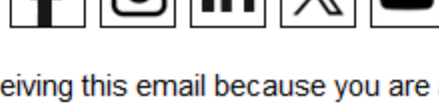
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