Thursday, June 12, 2025

PHOTONICS spectra

Weekly News

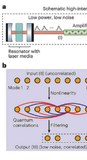
Billion-Dollar Acquisitions Position Qualcomm and IonQ for Continued Growth

Qualcomm acquires Alphawave Semi for $2.4 billion to boost data center ambitions. IonQ is in the process of acquiring trapped-ion quantum computing technology company Oxford Ionics for $1.08 billion. LaCroix Precision Optics is expanding its manufacturing operations in the U.S. Laser Photonics has until next week to submit a plan of compliance to NASDAQ or else it could lose its listing status. Fraunhofer IPMS is debuting a spatial light modulator evaluation kit. And researchers in Japan say they've developed the world's first practical, electrically driven, vertical cavity surface emitting laser for optical fiber communications, using quantum dots as the optical gain material.

Watch Now

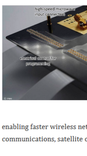
Alternative Methods to Laser Crystal Growth Aim to Curb Reliance on Rare-Earth Materials

Researchers at Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB are researching alternatives in crystal growing and processing, as well as glass fiber development due to the scarcity of rare-earth materials that are required for producing lasers. The elements are needed for laser crystals and active laser fibers as an amplification medium to generate laser radiation, among other applications in laser production. Read Article



Researchers Convert Fluctuating Lasers into Stable Beams

Researchers at Cornell and MIT have demonstrated how noisy, amplified lasers can be transformed into ultra-stable beams. According to the researchers, the method will expand photonic technologies that rely on both high power and high precision. Read Article



Fully-Integrated Single-Chip System Processes Optical and Microwave Signals

Researchers have demonstrated a fully-integrated single-chip microwave photonics system, combining optical and microwave signal processing on a single silicon chip. The technology can replace bulky and power-hungry components, according to the researchers, from imec and Ghent University, enabling faster wireless networks, low-cost microwave sensing, and scalable deployment in applications such as 5G/6G communications, satellite communications, and radar systems. Read Article

Featured Products & Services

TopWave XP 405 – Highly Efficient 2 W at 405 nm

Toptica Photonics AG

With 2 W at 405 nm, the new TopWave XP now delivers twice the power, meeting the demands of advanced lithography and holography applications. This boost in output enables higher throughput and shorter exposure times — driving down operational costs while enhancing production quality.

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ECOGLASS Lenses Reached the Moon!

ECOGLASS a.s.

When the Odysseus probe landed on the Moon, it was a historic event. One of the key components of the probe's lighting equipment was glass lenses manufactured by our company, which withstood even the extreme conditions in outer space.

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IR Filters for Thermal Imaging

Spectrogon US Inc.

Spectrogon manufactures infrared filters and windows with high transmission, high rejection outside the passband, while maintaining excellent coating uniformity for thermal imaging and gas detection applications such as cryogenically cooled IR detectors and uncooled microbolometers. Our filters and windows range in dimension from Ø6.0 to Ø200.0 mm, with dicing capabilities down to as small as 1.0 × 1.0 mm.

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ImSym – Imaging System Simulator

Synopsys Inc., Optical Solutions Group

ImSym – Imaging System Simulator is an industry-first virtual prototyping platform for imaging systems, lenses, sensors, and image signal processors. With proven accuracy powered by CODE V and LightTools software, ImSym reduces the need for physical prototypes and enhances team collaboration.

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More News

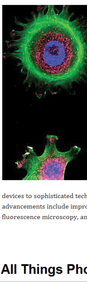
Qualcomm Purchases Alphawave Semi to Accelerate Data Center Expansion

IonQ Continues Acquisitive Stretch with Plans to Buy Oxford Ionics

LaCroix Precision Optics to Expand Manufacturing Operations

AdvR to Merge with Covesion

Latest Webinars



The Evolution of Microscopy – Current Landscape and Considerations

Wed, Jun 18, 2025 11:00 AM - 12:00 PM EDT

David Bliss of Optikos walks through a brief history and primer on microscopy, which was largely unchanged until the last 70 years. With that backdrop, this presentation delves into common types of modern microscopy: confocal microscopy, fluorescence microscopy, multiphoton microscopy, and superresolution microscopy. He explores a comparison of similarities and differences between these modalities and considerations for selection. Attendees will learn that the optical principles of lens design for microscope objectives have not changed significantly over time, i.e., the importance of contrast and resolution. However, new microscopy modalities have improved the core principles to address specific market applications. Specifically, microscopy has evolved significantly from early single-lens devices to sophisticated techniques capable of observing individual molecules and complex biological processes. Key advancements include improvements in lens technology, the development of various light sources, the introduction of fluorescence microscopy, and the rise of super resolution microscopy techniques. Presented by Optikos.

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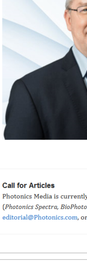
All Things Photonics



Pushing the Bounds of Industrial Laser Performance — With Aldas Juronis

Aldas Juronis, CEO of EKSPLA, discusses key parameters in the design and manufacture of industrial laser systems in this final episode before the start of Laser World of Photonics 2025. EKSPLA's direct refrigerant cooling system highlights the company's capabilities in delivering highly repeatable systems while pushing the bounds of performance and innovation. Additional talking points include emerging applications, application drivers, designing for OEMs, and Lithuania's dynamic laser ecosystem.

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