Thursday, May 22, 2025

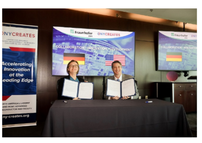
PHOTONICS spectra

Weekly News

CEO Out After Ethics Inquiry, Image of Hands Identifies Autism, PSN Tours New TRUMPF Smart Facility

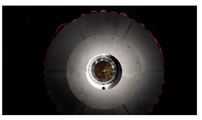
Luminar has a change in leadership after CEO Austin Russle resigns following an ethics inquiry. MKS is announcing big changes including tweaks to its company name. G&H will expand its footprint in the U.S. aerospace and defense industries with its acquisition of Global Photonics. Quantinuum is establishing a joint venture in Qatar including an investment of up to $1B. Thales has created a new smart facility in Farmington, Connecticut. And new research suggests that autism could be diagnosed through an image of one's hands. Sponsored by CeramOptec and Norland Products Inc.

Watch Now



Fraunhofer and NY CREATES Partner on Memory Devices

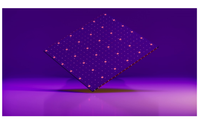
NY CREATES and Fraunhofer Institute for Photonic Microsystems IPMS have established a joint development agreement to drive R&D focused on ferroelectric memory devices at the 300-mm scale. The agreement will combine the strengths of each organization to engineer, develop, and characterize these devices that are critical for advancing the memory development ecosystems of each respective organization. Read Article



DARPA Program Sets Distance Record for Power Beaming

In a series of recent tests, the Persistent Optical Wireless Energy Relay program achieved several records for transmitting power over distance. The team recorded more than 800 W of power delivered during a 30-s transmission from a laster 8.6 km away. Over the course of the test campaign, more than 1 MJ of energy was transmitted.

Read Article



CEA-Leti Team Advances Toward Dual-Function Micro-LED Displays

As consumer devices such as smartphones and laptops become more integral to daily life, the demand for multifunctional displays continues to increase. Addressing this demand, CEA-Leti has reported the heterogeneous co-integration of gallium nitride micro-LED technology and organic photodetectors, which the organization called a major step towards multifunctional displays. Read Article

Featured Products & Services

Photonics Spectra Reference Chart

Photonics Media

Updated in 2024! This full-color, 29.5 × 20.5-inch poster of the photonics spectrum displays the major commercial laser lines, detectors, and optical materials in the ultraviolet to the far-infrared and beyond. The convenient format makes it easy to quickly find the information you need.

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CO_2 Laser Glass-Processing

NYFORS Teknologi AB

CO_2 laser glass-processing is designed to produce high-power and sensitive photonic components and complex structures. It guarantees contamination-free processing for fiber linear, 2D and gapless array splicing, ball lensing, end-capping, and many other challenging processes. NYFORS also manufactures automated high-precision solutions for fiber preparation, such as stripping, cleaving, recoating, and end-face inspection. NYFORS offers custom workcell automation solutions.

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PHOTONICS marketplace

More News

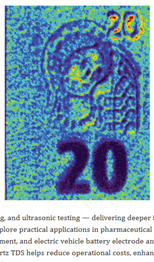
Luminar CEO Austin Russell Resigns Following Ethics Inquiry

MKS Tweaks Company Name, Corporate Leadership

Wi-Charge Secures $20M for IR Charging Tech

Fluorogenic Probes Track Transmission of Infectious Disease and Track Gene Expression

Latest Webinars

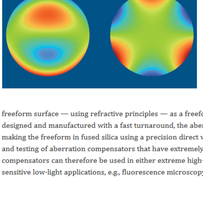


Terahertz TDS: The Pulse Driving Industrial Innovation

Wed, May 28, 2025 10:00 AM - 11:00 AM EDT

Join us for an in-depth exploration of terahertz time-domain spectroscopy (terahertz TDS) and its transformative impact on industrial applications. This webinar will cover the fundamental principles of terahertz TDS while showcasing the latest advancements in Menlo Systems' cutting-edge solutions, now featuring up to four times more terahertz power, 5× faster scanning, and improved detection capabilities with a dynamic range of up to 110 dB and a bandwidth of up to 6.5 THz. Through real-world case studies, it will be demonstrated how these advancements elevate quality control, material characterization, and nondestructive testing (NDT) across industries. Learn how terahertz TDS complements traditional NDT techniques such as near-infrared (NIR) spectroscopy, x-ray imaging, and ultrasonic testing — delivering deeper insights with unmatched precision and efficiency. Prince Bawuah, Ph.D., will explore practical applications in pharmaceutical manufacturing, semiconductor testing, coatings inspection, ceramics assessment, and electric vehicle battery electrode analysis, among others. Attendees will gain actionable insights into how terahertz TDS helps reduce operational costs, enhance product quality, and optimize industrial processes. Presented by Menlo Systems.

Register Now



Practical Aberration Correction Using Freeform Optics — Pushing the Boundaries of Laser System Performance

Thu, Jun 12, 2025 10:00 AM - 11:00 AM EDT

Many laser systems — whether they are for industrial, biomedical, or defense applications — are designed to create a well-defined output spot or beam; this is required for the laser process to be as efficient, productive, and effective as possible. Optical aberrations in the laser system (pointing, defocus, spherical, astigmatic, coma, etc.) come from a variety of sources and affect the extent to which the actual output spot (or beam) deviates from that of the design intent of the system. To compensate for aberrations, it is vital to make appropriate measurements of the aberrations, and then ideally represent them as Zernike coefficients. Then, it is possible to design a freeform surface — using refractive principles — as a freeform aberration compensator. If the freeform surface can be designed and manufactured with a fast turnaround, the aberration compensator can be regarded as an "in-build" solution. By making the freeform in fused silica using a precision direct write laser machining process, it demonstrates the manufacture and testing of aberration compensators that have extremely low scatter and low loss. These fused silica freeform aberration compensators can therefore be used in either extreme high-power applications, e.g., laser inertial fusion, or extremely sensitive low-light applications, e.g., fluorescence microscopy and cytometry. Presented by PowerPhotonic.

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