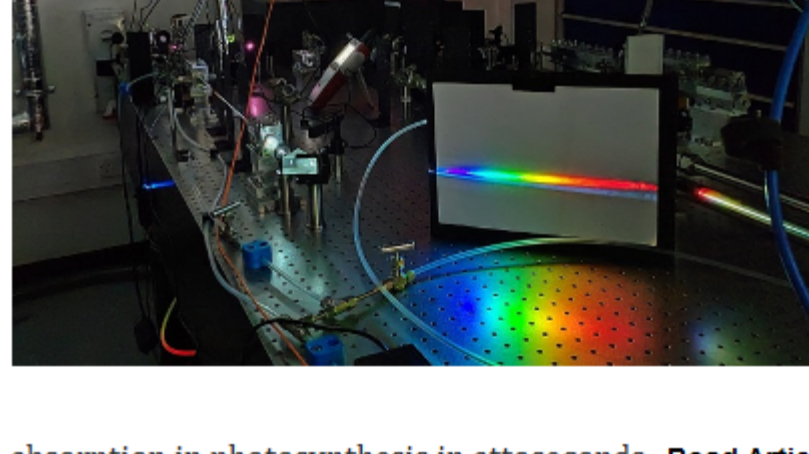




Weekly News



**Very Fast Light Source Will Capture Natural Events as They Happen**

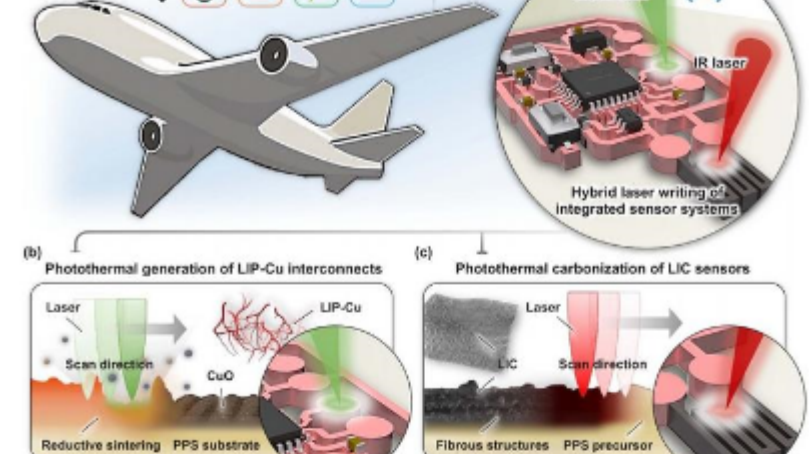
A team at Heriot-Watt University, led by professor Christian Brahms, is developing a light source for extremely fast laser pulses that will enable scientists to observe some of the fastest processes in the natural world as they occur. The new laser light source will capture natural processes like light

absorption in photosynthesis in attoseconds. [Read Article](#)



**Microsoft Partners Post Quantum Milestones**

In collaboration with Microsoft, quantum computing developer Quantinuum has demonstrated 12 logical qubits on the newly updated 56-qubit System Model H2 quantum computer, representing a 3x advance over the four logical qubits the companies announced in April. [Read Article](#)



**Laser Writing Integrates Sensors on Material to Manage Equipment Safety**

A hybrid laser direct writing technique, developed by researchers at Zhejiang University, integrates sensor systems directly into engineering thermoplastics by incorporating functional copper interconnects, carbon-based temperature sensors, and signal processing components all within one system. The integrated sensor system allows for real-time temperature monitoring over extended periods to ensure optimal performance and reliability of critical equipment.

[Read Article](#)



Featured Products & Services



**uEye XC Autofocus Camera**

[Camera](#)

IDS Imaging Development Systems GmbH

Perfectly focused images become a challenge when the distance between the camera and the object is constantly changing. Autofocus cameras eliminate the need for manual refocusing and ensure that objects or labels are always perfectly visible. This benefits applications such as robot systems, hand scanners, or passport photo terminals. IDS Imaging Development Systems offers customers a webcam-like camera in industrial quality as well as a tiny autofocus camera that weighs just 12 grams.

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**How to Measure MTF Most Accurately**

[TRIOPPTICS GmbH](#)

MTF measurement usually comprises the optics under

test and additional measurement or relay optics.

The whitepaper from TRIOPPTICS shows that the theoretical measurement error can increase

significantly when using low-quality measuring optics which are not correctly optimized for MTF

measurement.

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Featured Video



**Two Men Accused of Plotting to Smuggle Laser Welding Systems into Russian Nuclear Plant**

A Massachusetts man is among two people indicted on charges of smuggling and conspiracy, and Mobileye is shutting down its lidar development programs. All this and more in this episode of Photonics Spectra Now.

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More News

[Intel Shuffles Integrated Photonics Solutions Business into Data Center AI Division](#)

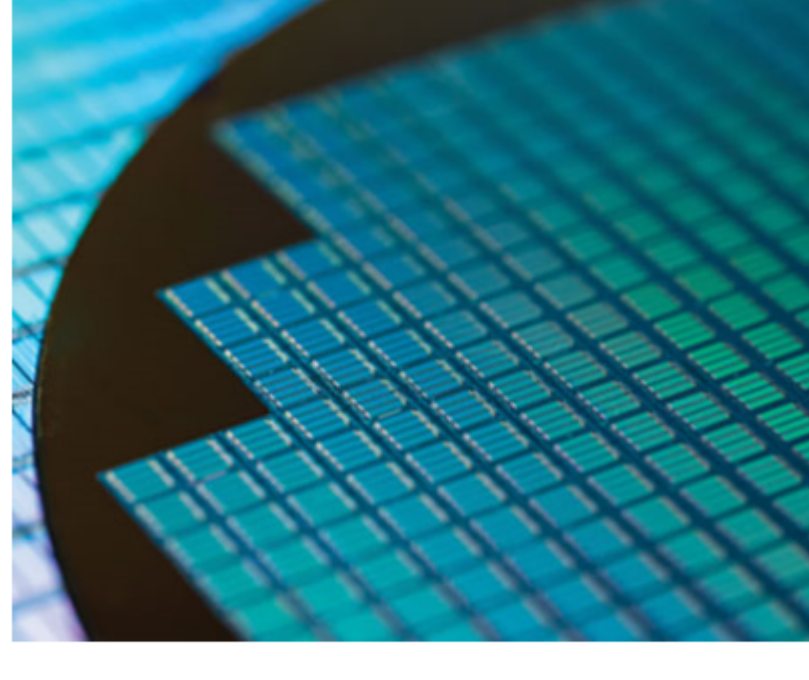
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[SiLC Receives Honda Investment for AI Vision Development](#)

[Food Dye Curbs Light Scattering to Enable Optical Imaging of Living Tissue](#)



Latest Webinars



**A Narrow Linewidth Distributed Feedback Laser Diode with Unique Frequency Modulation Response**

Tue, Sep 24, 2024 11:00 AM - 12:00 PM EDT  
Distributed feedback (DFB) laser diodes are single-frequency laser sources that can be produced in volume at a low cost. They represent compact and reliable laser technology and are widely used in telecom and sensing applications. They can be modulated in frequency by tiny modulation of their bias current, which is an attractive feature for any photonic system taking advantage of frequency modulation or frequency locking. In this webinar, Patrice Dionne introduces a new narrow linewidth DFB laser diode with a unique frequency modulation response. He discusses the classical limitations of DFB laser diodes and explores the improvements and benefits associated with this innovative new laser through different use cases such as phase and frequency locking loops, linearization of high amplitude frequency chirp, and sudden frequency shifts. He also presents examples of laser integration.

[Register Now](#)



**Retinal Imaging with Adaptive Optics Optical Coherence Tomography**

Wed, Sep 25, 2024 10:00 AM - 11:00 AM EDT  
When imaging the living human eye, even if a person has perfect vision, blur caused by ocular aberrations due to the eye limits resolution. This blur rapidly fluctuates due to a number of factors, such as the impact of the heartbeat. Consequently, it is not possible using conventional methods, such as customized contact lenses, to correct for this blur. This blur can be corrected by using adaptive optics, which is a technique used in astronomy to remove the blurring effect of the atmosphere when acquiring images with ground-based telescopes. When combining adaptive optics with OCT, it is possible to image the structure and function of the retina at the single-cell level. This technology is revolutionizing the early detection of retinal disease. Given that the retina is a window to the brain, this ability opens the possibility of using retinal imaging for presymptomatic detection of neurodegenerative and psychiatric diseases.

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