

This Week in PHOTONICS



Thermal Infrared Imaging for Fire Research Analysis



Free Webinar
2023, Oct. 18
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:: Top Stories

Bawendi, Brus, and Ekimov Earn Nobel Prize in Chemistry for Work with Quantum Dots

Moungi Bawendi, Louis Brus, and Alexei Ekimov have been awarded the 2023 Nobel Prize in chemistry for the discovery and development of quantum dots, which are nanoparticles small enough that their size determines their properties. These discoveries have led to advancements in nanotechnology that are now used in products such as televisions, LED lamps, QLED screens, and technology that allows biochemists and doctors to map biological tissue.



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Agostini, Krausz, L'Huillier Earn Nobel Prize in Physics for Work on Attosecond Pulses

Pierre Agostini, Ferenc Krausz, and Anne L'Huillier have been awarded the 2023 Nobel Prize in physics for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter. The work of the laureates has developed and enabled new tools to explore the movement of electrons inside atoms and molecules, movement that occurs at extremely short timescales.



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Photonic-Electronic NIC Serves Live Machine Learning Inference Requests

A burgeoning growth in machine learning applications is occurring alongside shrinking computing resources. As computers approach the limits of their power according to Moore's law, the need to design platforms that support the computational demands of machine learning applications intensifies. Lightning, a hybrid computing platform developed by an MIT research team, is the first photonic computing system to serve machine learning inference requests in real time.



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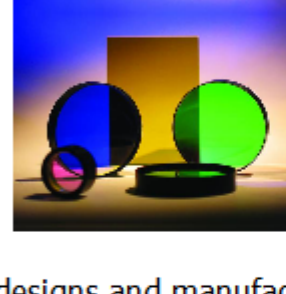


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:: Upcoming Webinars

NXT Stop, Malibu: Fast and Easy AI Machine Vision

Tue, Oct 10, 2023 11:00 AM - 12:00 PM EDT

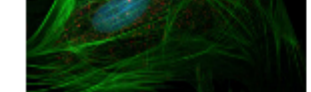


As the understanding of what applications AI in machine vision can help solve broadens, manufacturers must adjust their offerings to provide solutions for these new potential sectors. IDS is aware of the increasing interconnectivity of not only manufacturing, but of other industries and commercial spaces. These fields tend to require less precise synchronization of interconnected systems, but devices still need to be able to communicate a result fast to keep the system operating. With the newest platform under the family of NXT devices, the Malibu, IDS Imaging has this keenly in mind. Live streams of real-time images and results will improve applications such as cashier-less stores, loss prevention, and real-time footfall analysis. The new platform will also fit in industrial applications such as analyzing equipment wear, monitoring chemical reactions, and AI-assisted visual inspection to ensure a high degree of safety and quality. This webinar demonstrates the new NXT Malibu's capabilities and how it can help solve applications that need fast results from a secure edge-device. Presented by IDS Imaging Development Systems, Inc.

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Advancing and Extending the Spectral Range for Imaging in Fluorescence Microscopy

Wed, Oct 18, 2023 10:00 AM - 11:00 AM EDT



This presentation discusses the advances in fluorescence illumination and detection in biological microscopy, expanding research capabilities from visible to SWIR spectral ranges. New versatile light sources and an innovative InGaAs camera system enable precise excitation and imaging of fluorophores in biomedical applications, including in vivo and intra-vital microscopy. The incorporation of NIR and SWIR wavelengths allows visualization of previously unseen features with deeper imaging capabilities. The X-Cite® light sources deliver high excitation power across UV, VIS, and NIR, while the PCO® InGaAs camera ensures seamless imaging, making them essential tools for advanced biomedical research. Presented by Excelitas Technologies Corp.

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