

This Week In PHOTONICS

PHOTONICS MEDIA

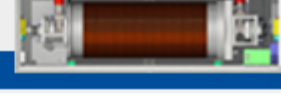


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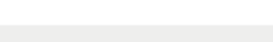
Top Stories

Researchers Develop Tunable and Controllable PL Compounds

A new strategy for producing photoluminescent (PL) compounds has been designed that has increased capabilities. These PL compounds are used in a variety of different products to include glow-in-the-dark children's toys, LED lights and light-emitting sensors.

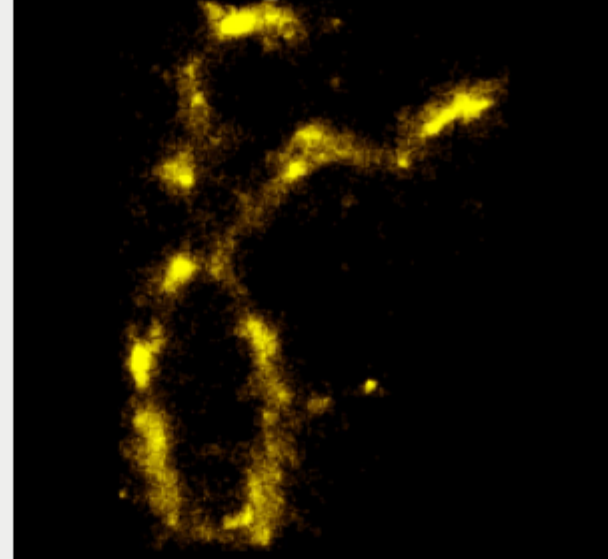


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Novel Technology Images DNA Naturally Fluorescing

A novel imaging tool that is able to capture images of DNA naturally fluorescing could advance the study of individual biomolecules and help uncover global patterns of gene expression. Existing methods for imaging DNA and other genetic material rely on fluorescent labeling of biomolecules. Because it is virtually impossible to label every nucleotide, the resolution of the most widely used nanoscopy technologies is limited to a few tens of nm, which may contain tens of thousands of base pairs.

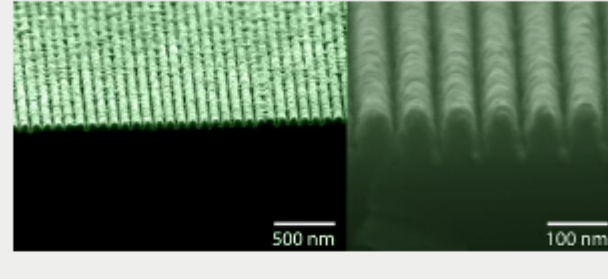


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Material Could Reduce Signal Loss, Boost Efficiency of Light-Based Devices

Photonic devices could see a reduction in optical signal loss as a result of the discovery of a plasmonic metamaterial that compensates for loss of light energy by using a semiconductor to act as a light emitter. Plasmonic metamaterials typically contain metals that absorb energy from light and convert it into heat, wasting a portion of the optical signal and lowering its efficiency.



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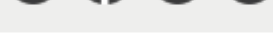


Small, Low-Cost Remote Sensing Satellites Could Orbit Much Closer to Earth

Smaller and less expensive satellites may soon orbit much closer to Earth, improving the quality of images they send back. The University of Manchester is heading up the project to develop remote sensing satellites that can operate at 200-450 kilometers above the Earth's surface. Remote sensing satellites currently operate at about 500-800 kilometers above the Earth, above the residual atmosphere that exists at lower altitudes.

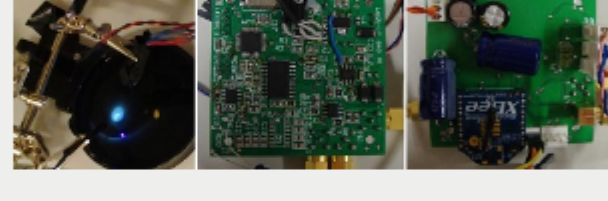


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Low-Cost Monitoring Device Detects Oil's Fluorescence Fingerprint

A simple device composed of photodiode detectors can detect an oil spill in water and then pinpoint the type of oil present on the surface. Researchers from the University of Vigo created the device that is designed to float on water, where it could remotely monitor a small area susceptible to pollution or track the evolution of contamination at a particular location.



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Featured Products

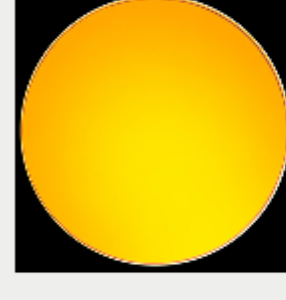


5400 TECSource Temperature Controller

Arroyo Instruments LLC

The new 5400 TECSource pushes temperature control power to new levels, with up to 960 Watts of power available for your most demanding thermal applications.

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Dual-band IR Filters and AR Coatings

Reynard Corporation

Forward looking infrared (FLIR) camera systems continue to grow in both popularity and sophistication. Detectors are improving in performance and resolution, which is pushing the demand for higher performing optical filters.

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Industry Events

OFC 2017

March 19-23, 2017 - Los Angeles Convention Center - Los Angeles United States

The Optical Fiber Communication Conference and Exhibition (OFC) is the largest global conference and exhibition for optical communications and networking professionals. For over 40 years, OFC has drawn attendees from all corners of the globe to teach and learn, make connections and move business forward. OFC attracts the biggest names in the field, offers key networking and partnering opportunities, and provides insights and inspiration on the major trends and technology advances affecting the industry. The technical program covers recent progress in research and technology in areas such as: Advanced devices and fibers for high-speed data center links; enabling 5G and IoT through next-generation optical access; manufacturing and packaging of photonic and electronic subsystems; multiplexing, transmission and switching techniques for Tb/s networks; and more.

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Webinars

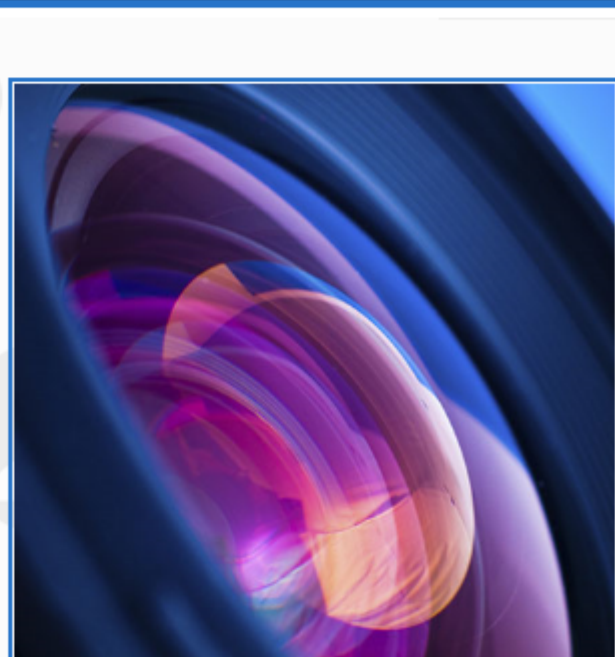
Integrating Camera Technology Into an Outstanding Machine Vision Solution

Fri, Mar 10, 2017 1:00 PM - 2:00 PM EST

Are you planning an update or a new build of a machine vision system? This webinar with Rex Lee, Ph.D., will help ensure that you get it right the first time.

Lee will discuss the components of a successful machine vision system, including cameras, lighting, lenses, software, sensors and detectors; and will provide examples of successful machine vision solutions for every industry. Who should attend: Engineers, designers, business owners, scientists, educators and anyone who is considering using cameras for image analytics.

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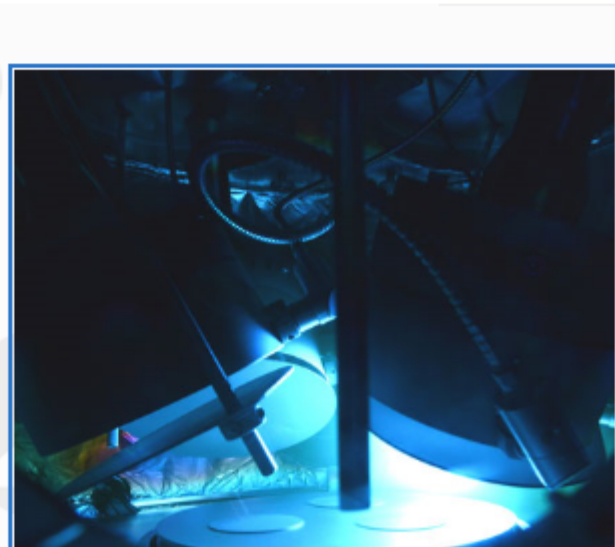


Transition Mode Reactive Sputtering Using PEM

Wed, Mar 15, 2017 1:00 PM - 2:00 PM EDT

This webinar will discuss the architecture and operation of a Plasma Emission Monitoring (PEM) system integrated into a Denton Vacuum (DV) sputtering chamber, with confocal cathode configuration (DV-PEM). It will cover everything you need to know about pulsed DC reactive sputtering with PEM, and will provide you with a thorough understanding of how Denton Vacuum provides fully integrated PEM with its thin film deposition system. Who should attend: process engineers, scientists, CTOs and others involved in product or materials development. Presented by Denton Vacuum.

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