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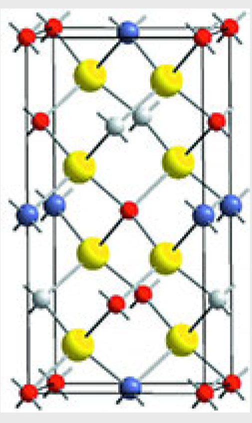
THE PULSE OF THE INDUSTRY

Thursday, April 10, 2014

Tiny Crystals Could Oust Traditional Solar Absorbers



Traditional absorbers in thin film-based solar cells may have some competition in a new technique that incorporates nontoxic and relatively common elements. The new approach, developed by a team from the University of Nantes, uses sulfide materials that contain copper, tin and zinc as solar cell absorbers. This could result in technology that is more sustainable than rare, precious metals.

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Femtosecond Laser May Divert Lightning

A long-range femtosecond laser under development could be used to steer lightning away from buildings.

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Scaling Down Quantum Cryptography for Mobile Phones

A tiny microchip has huge potential for the future of secure quantum communications.

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Products on PhotonicsBuyersGuide.com

Necsel White Matrix

Necsel

The White Matrix comes in 250 lumen and 700 lumen brightness levels and combines red, green, and blue lasers into an extremely small 400 micron core fiber to generate white light.

More info >>

Optics that Span the Spectrum

Spectrum Thin Films

Custom Optics to full production runs using state-of-the-art equipment delivered to meet your exact requirements. Optics from miniature to 1 meter.

More info >>

OptiCentric® 3D IR

TRIOPTICS GmbH

Measuring lens centering error, air spacing and center thickness inside of assembled IR optical systems, this instrument provides an ideal solution for complete optomechanical characterization.

More info >>

Laser Diode Test System

Yelo Limited

The Y1000L is a universal tester capable of burn-in aging and lifetime testing of multiple photonic devices at the same time. The Y1000L tests low power lasers up to 1A of current.

More info >>

More Articles on Photonics.com

Integrated Chips Used as Single-Photon Sources

A solution to finding a high-quality source of single photons could be in the pipeline in the form of an integrated optical chip.

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Gold Material Cuts Glare, Repels Water

Scientists have inadvertently developed a surface capable of eliminating glare on surfaces.

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Flir Systems Hires New CMO

Travis Merrill has joined Flir Systems Inc. as senior vice president and chief marketing officer.

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In this edition of the industry's **premier weekly newscast**: Nanoballoons and lasers help fight cancer, femtosecond lasers may divert lightning, europium complexes emit red light with record efficiency, and we talk with SPIE CEO Dr. Eugene Arthurs.

Nanoballoons and Lasers: A New Cancer Fighter

A team from the University at Buffalo and several other institutions is working to developing a new way to deliver cancer medications.

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DFG to Fund 16 Priority Research Projects

Photonics will be one of a variety of research topics in the spotlight over the next several years thanks to funding from the Deutsche Forschungsgemeinschaft.

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Nanocrystals Bridge Visible, Invisible Spectra

Nanocrystals containing cerium and terbium have been shown to efficiently convert UV and IR to visible light, presenting a possible solution to the bandgap problems in solar panels.

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WHITE PAPER

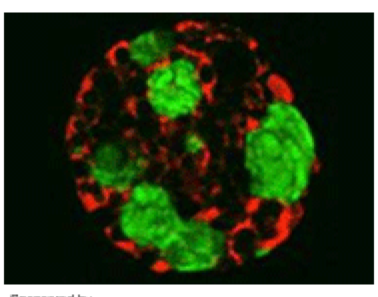
The Benefits of Modern CMOS Sensors in Industrial Line Scan Cameras

Basler AG

As sensor technology has improved in leaps and bounds, the old rule of thumb familiar to many line scan camera users has lost much of its punch. The idea that CCD = high image quality while CMOS = speed is only true anymore under very limited circumstances, since the preconception inaccurately reflects the current performance levels offered by modern CMOS sensors for industrial camera use. This white paper provides an overview of the latest developments in CMOS sensor technology and is intended to highlight the importance of these improvements when considering the use of CMOS sensors in line scan camera applications.

DOWNLOAD WHITE PAPER >>

WEBINAR



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Microscopy Light Sources

Tuesday, April 22, 2014 1:00 PM - 2:00 PM EDT

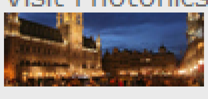
FREE WEBINAR

Aaron Slepkov, PhD will speak on Technical Considerations of Modern Label-Free Stimulated Vibrational Imaging.

Dr. Slepkov is Assistant Professor and Canada Research Chair in the Physics of Biomaterials at Trent University in Ontario, Canada.

Industry Events

SPIE Photonics Europe - April 14-17, 2014 · Brussels, Belgium
Visit Photonics Media at Booth 217 S



SPIE Photonics Europe brings together different disciplines, technologies and perspectives from across Europe and around the world. Participants will learn about new research and the latest funding opportunities, and will have the opportunity to attend a number of conferences.

Session topics to be featured include metamaterials, nanophotonics, photonic crystal materials and devices, micro-structured and specialty optical fibers, silicon photonics and photonic integrated circuits, and photonics for solar energy systems.

More info >>

FEATURED VIDEO

Aerotech – Q-Series Piezo Nanopositioners

Jim Johnston, Automation Systems Group Manager presents Aerotech's new QNP Piezo Nanopositioners and QLAB Piezo Controller. QNP stages offer sub-nanometer resolution and best-in-class stiffness and resonant frequency in a compact package, making them the ideal solution for high-performance, space-constrained applications such as interferometry, microscopy and precision alignment.

PHOTONICS buyers' guide

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