

This Week In PHOTONICS

PHOTONICS MEDIA



sponsor



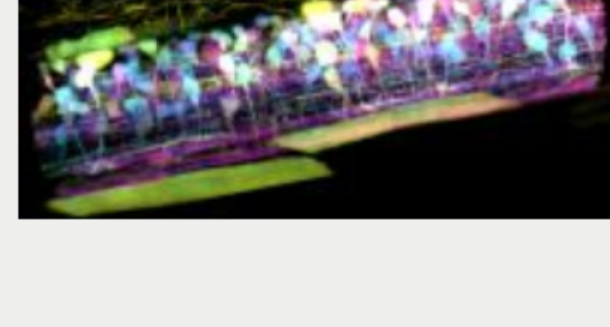
The HyperFine Spectrometer, Brillouin spectroscopy. Ready to go. Out of the box.

www.lightmachinery.com

Top Stories

AO-LLSM Microscope Achieves Aberration-Free Imaging Across Large Volumes

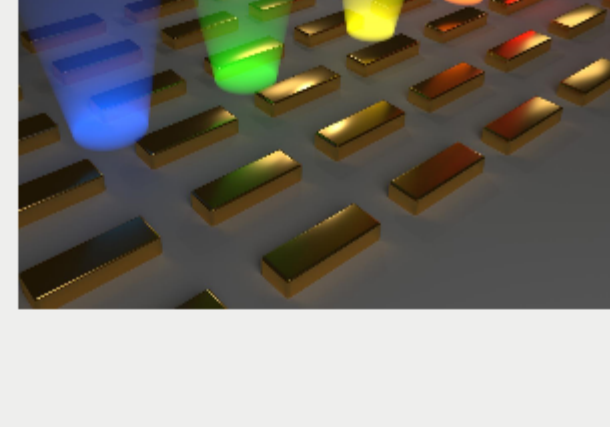
Scientists have combined lattice light-sheet microscopy (LLSM) with adaptive optics (AO) to capture high-resolution 3D movies of cells deep within living systems. The AO-LLSM microscope enables cells to be viewed in their native multicellular environments, under as gentle illumination as possible, with minimal external perturbation.



[Read Article](#) [Facebook](#) [LinkedIn](#) [Twitter](#)

New Bose-Einstein Condensate Couples Light with Metal Electrons

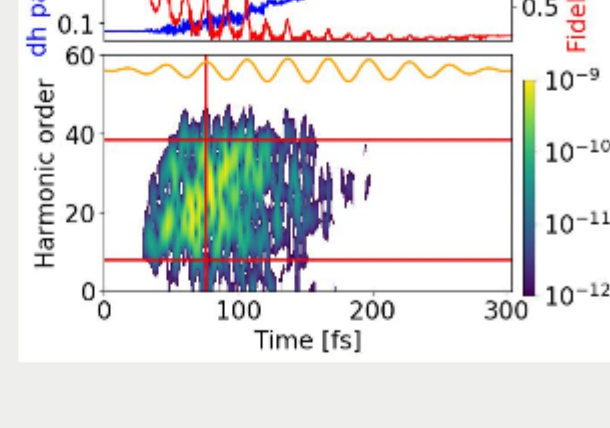
Researchers created a new Bose-Einstein condensate, where the condensed particles were mixtures of light and metal electrons (so-called surface plasmon polaritons), in motion in gold nanorods arranged into a periodic array. Unlike most previous Bose-Einstein condensates created experimentally, the new condensate does not need to be cooled down to temperatures near absolute zero.



[Read Article](#) [Facebook](#) [LinkedIn](#) [Twitter](#)

Short, Strong Laser Pulses Advance Understanding of Strongly Correlated Materials

In its search for materials and technologies that could help push the speed and storage limits of silicon-based computer technology, a team of researchers looked at a category of materials known as "strongly correlated systems," so called because of the strong interactions between the electrons in such materials.



[Read Article](#) [Facebook](#) [LinkedIn](#) [Twitter](#)

Featured Products

The HyperFine Spectrometer

LightMachinery Inc.
Designed for measuring hyperfine spectra and subtle spectral shifts, the HyperFine spectrometer from

LightMachinery is a compact, low cost spectrometer capable of sub-picometer resolution. It is ideal for pulsed laser characterization and for measuring the small spectral shifts from Brillouin scattering.

[Visit Website](#) [Request Info](#)

AR/VR Lens: Measure Displays in Headset

Radiant Vision Systems, Test & Measurement

Displays viewed near to the eye, such as those in AR/VR devices, create immersive virtual experiences. However, as display images are magnified to fill a user's field of view, display defects are also magnified. Issues with uniformity of brightness and color, dead pixels, line defects, cloudiness, and image position become more evident to the user whose eyes are only centimeters away from display screens.

[Visit Website](#) [Request Info](#)

Novel App-based Industrial Cameras

IDS Imaging Development Systems GmbH

Industrial cameras that are as versatile and easy to use as your smartphone? This has become reality. We introduce IDS NXT: the app-based approach of German camera manufacturer IDS transforms cameras and sensors into customized, smart vision sensors. You need your IDS NXT devices to solve a vision task that isn't covered by standard apps.

[Visit Website](#) [Request Info](#)

Pioneering sCMOS Back Illuminated!

PCO-TECH Inc.

To see or not to see: If every single photon counts, PCO's back illuminated sCMOS camera system pco.panda 4.2 bi can lead you to the answer. Enabled by PCO's new back illuminated sensor and based on the latest innovations in sCMOS technology, the pco.panda 4.2 bi reaches a quantum efficiency of up to 95%.

[Visit Website](#) [Request Info](#)

APP YOUR SENSOR!
iDS:nxt
www.ids-nxt.us

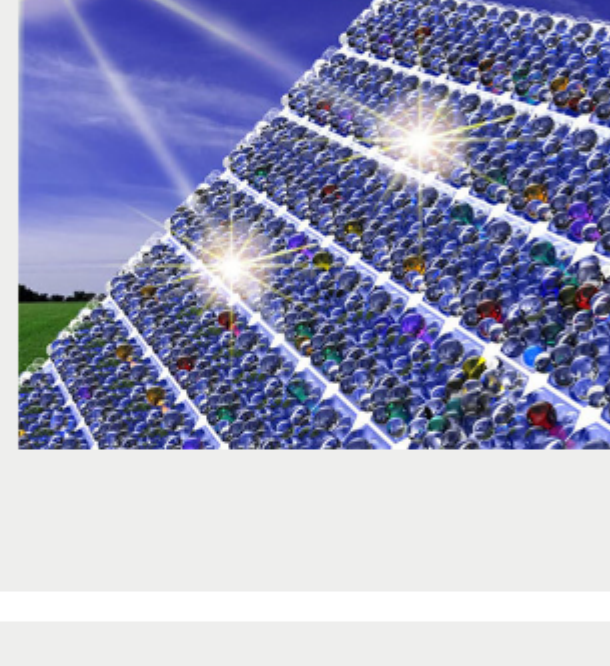
sponsors

up to 95% quantum efficiency
new >>
pco.panda 4.2 bi

More News

Whispering Gallery for Light Boosts Solar Cell Absorption and Photocurrent

Researchers have developed a nanoscale coating for solar cells that enables the cells to absorb about 20 percent more sunlight than uncoated devices. The coating, developed by trapping light using an optical version of a whispering gallery, could open a new path for developing low-cost, high-efficiency solar cells with abundant, renewable and environmentally friendly materials.



[Read Article](#) [Facebook](#) [LinkedIn](#) [Twitter](#)

YouTube Phenom Builds Lasers From Spare Parts

Drake Anthony calls himself a professional mad scientist on YouTube. That's because ... well ... he sort of is. Anthony has built his own lasers since he was 12, when he first took apart a green laser pointer, modified it and made it stronger. Today, viewers of his stropyro YouTube channel can see a number of his laser building exploits.



[Read Article](#) [Facebook](#) [LinkedIn](#) [Twitter](#)

More Headlines

[UV Light Exposure Causes Composite Material to Grow Stronger On Demand](#) [Read Article](#)

[Seaweed Forms Dynamic Opal-Like Photonic Nanostructures](#) [Read Article](#)

[Certara Acquires Analytica Laser](#) [Read Article](#)

[Blackbird, Intech Bolster Partnership in Japan](#) [Read Article](#)

[RTI Spinout SWIR Vision Systems Established in North Carolina](#) [Read Article](#)

sponsors

LASYS International Trade Fair for Laser Material Processing
5 - 7 June 2018
Messe Stuttgart (Germany)

Optical Fabrication
\$69
• Methods
• Materials
• Measurement, Test and Assembly
• Design
• Elements
• Applications and Markets
• Dictionary
More than 40 articles!
PHOTONICS MEDIA PRESS
www.photonics.com/store

Industry Events

AutoSens Detroit 2018

May 14-17, 2018 - The Michigan Science Center - Detroit United States

Built on the vision of senior technical experts at automotive OEMs and Tier 1 suppliers, and delivered by conference experts with a passion for engineering, AutoSens is the world's leading technical summit for ADAS and autonomous vehicle perception technology. Driven by OEM requirements to develop vehicle systems that can sense the external environment and provide accurate and useful information to inform ADAS decision making, the content for this conference is focused around the vehicle perception process chain.



[More Info](#)

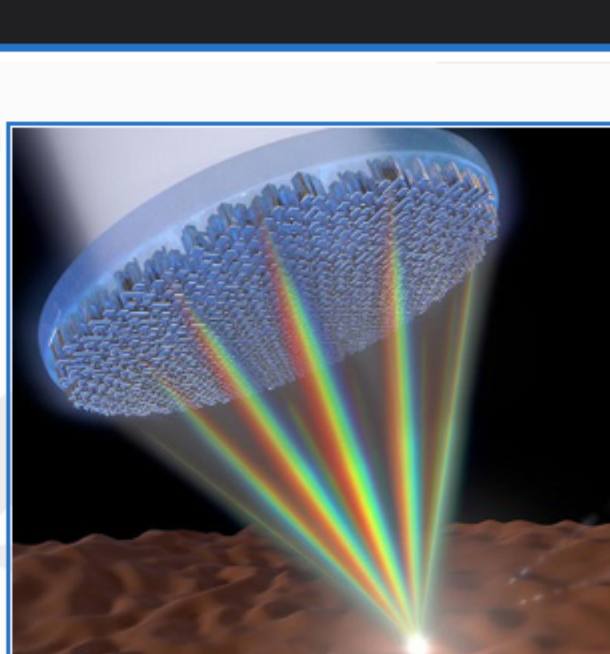
Webinars

How the Metalens Will Transform Lens Technology and Everyday Devices

Wed, May 9, 2018 1:00 PM - 2:00 PM EDT

Presented by Federico Capasso, whose work in quantum design led to the realization of the quantum cascade laser, this webinar will discuss monochromatic and achromatic metalens design, applications, and advantages over conventional lens technology. Capasso will discuss applications that his group is currently working on, including a collaboration with Massachusetts General Hospital.

[Register Now](#)



Hand-held Spectrometers in 2018 and Beyond

Wed, May 16, 2018 1:00 PM - 2:00 PM EDT

This webinar will survey the hand-held and portable spectroscopy field, with an emphasis on optical instruments, their underlying technologies and their applications. X-ray fluorescence, laser-induced breakdown spectroscopy and gas chromatography-mass spectrometry will be covered briefly. Presenter Richard Crocombe, Ph.D., will review some of the devices that are on the market today and conclude with a look at where hand-held spectroscopy could be headed.

[Register Now](#)



PHOTONICS buyers' guide • EXHIBITOR SPOTLIGHT

We are the best source for industrial and commercial optics needs, offering quality products at prices that will always beat those of catalog competitors. Our knowledgeable team of engineers, designers and quality control experts have decades of combined experience, adhering to strict standards of excellence in all aspects of our design, production, and testing. Located near Rochester, NY, a city famous for its optics, we draw on a pool of talent from around the country. Our expertise at locating raw materials and our ability to purchase them at volume discounts result in dramatic savings for our customers.



Westech Optical Corporation

[Learn more about WESTECH OPTICAL CORPORATION](#)

[Visit Website](#)

Looking for Optical Fabrication and Design Services and products? Search PhotonicsBuyersGuide.com, or browse these product categories:

[Lens Design Services](#)

[Metallic Coatings](#)

[Optical Design and Engineering Services](#)

[Design and Engineering Consulting Services](#)

[Optical Prototypes](#)

[Optical Consulting Services](#)



CALL FOR ARTICLES!

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazines (*Photonics Spectra*, *Industrial Photonics*, *BioPhotonics* and *EuroPhotonics*). Please submit an informal 100-word abstract to Managing Editor Michael Wheeler at Michael.Wheeler@Photonics.com, or use our [online submission form](#).

Questions: info@photonics.com

[Unsubscribe](#) | [Subscribe](#) | [Subscriptions](#) | [Privacy Policy](#) | [Terms and Conditions of Use](#)

Photonics Media, 100 West St., PO Box 4949, Pittsfield, MA 01202-4949