

Laser Trapping Faux Atoms Creates 'Super MRI' Method
 A new technique, similar to MRI but with a much higher resolution and sensitivity, uses artificial atoms (diamond nanoparticles) to scan individual cells, findings that could revolutionize medical imaging. The Institute of Photonic Sciences, in collaboration with the Spanish National Research Council and Macquarie University in Australia, created the "super MRI" method to probe very weak magnetic fields such as those generated by some biological molecules. "Our approach opens the door for the performance of magnetic resonances on isolated cells, which will offer new sources of information and allow us to better understand the intracellular processes, enabling noninvasive diagnosis," said ICFO's Michael Geiselmann, who conducted the experiment.

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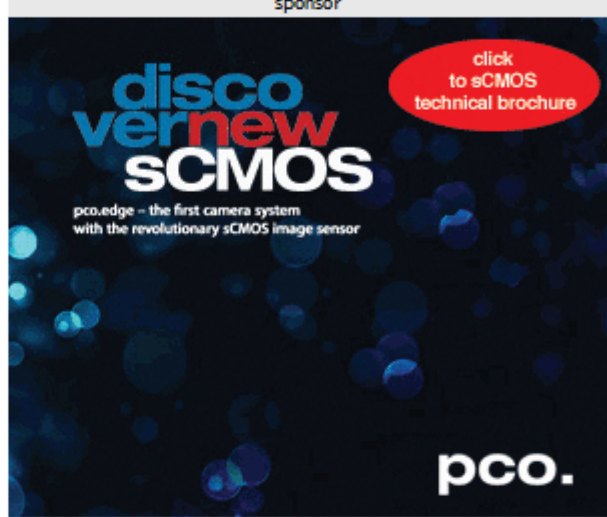
OptiPro Systems LLC - Behind the Scenes
 Take a "behind the scenes" tour of OptiPro Systems, LLC. Discover how OptiPro has grown and evolved over its 30 year history and how OptiPro originally became a designer and builder of CNC machines for precision optics fabrication. Learn about OptiPro's engineers and technicians as well as the capabilities and solutions that can optimize your optical manufacturing processes.

Laser Device Images and Tracks Cells, Dye-free
 A new device can image and track living cells' reactions to various stimuli and create 3-D images of biological tissue at the nanoscale in just minutes-- without the need for contrast dyes or fluorophores.

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Vision 2013 Canceled, Show Goes Biennial in 2014
 After an analysis of international market developments conducted with the VDMA Machine Vision Association and key machine vision industry players, and a vote taken by exhibitors, Vision 2013 has been canceled and the show will move to a biennial schedule in November 2014, event organizer Messe Stuttgart announced this week.

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Prism Awards Honor Innovations in Photonics Technology
 An early-stage diagnostic tool for skin cancers, a portable device to test for toxins in water and food, and a versatile laser capable of meeting multiple industrial needs were among 10 winners of the 2013 Prism Awards for Photonics Innovation announced last week at SPIE Photonics West in San Francisco.

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Solar Cells Made Cheap with 'Spray Paint'
 The universities of Sheffield and Cambridge collaborated to devise a method of spray-coating a photovoltaic active layer using an air-based process similar to spraying regular paint from a can. The cheaper technique can be used for mass production and perhaps one day could be used on glass in buildings or car roofs.

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Hybrid Light and Sound Imaging System Wins NSF Grant
 University of Texas at Arlington bioengineer Baohong Yuan received \$407,163 to use light and sound to produce an accurate image of a patient's deep tissue.

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PHOTONICS buyers' guide

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On this special edition of Photonics Media's **weekly newscast**, co-hosts Laura Marshall and Melinda Rose report live from the BiOs Show at SPIE Photonics West 2013. They talk with show exhibitors Optofluidics, PD-LD, JenLab and Vytran about their fascinating products for applications in the biophotonics market.

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SWS Licenses Spectrometer Tech to Hamamatsu Photonics
 Si-Ware Systems (SWS) licensed its microelectromechanical systems Fourier transform infrared spectrometer technology to the Japan-based photonics company for use in a new device announced last month.

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Using Fiber Lasers for Particle Acceleration Technologies
 Scientists from the Optoelectronics Research Centre at the University of Southampton have teamed with three laboratories – Ecole Polytechnique de Paris, the Fraunhofer Institute for Applied Optics and Precision Engineering, and CERN – to investigate the use of fiber lasers in groundbreaking particle accelerator technologies, such as the Large Hadron Collider.

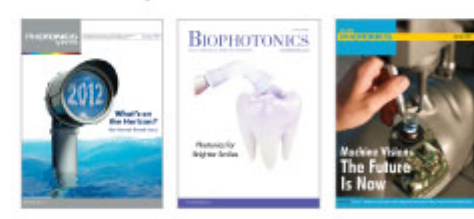
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IBM, Dow Corning Team to Develop Board-Level Photonics Materials
 By fabricating thin sheets into flexible optical waveguides that show no curling and can bend to a 1-mm radius, the companies developed a new type of polymer material capable of transmitting light instead of electrical signals at high speed for supercomputers and other data systems.

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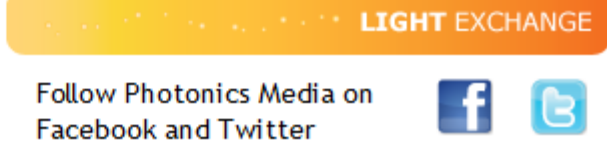
OFC/NFOEC 2013 - March 17 - 21, 2013 - Anaheim, CA
 The Optical Fiber Communication Conference and Exposition and the National Fiber Optic Engineers Conference (OFC/NFOEC) is the premier international event for both the science and business of optical communications and networking. It features more than 110 short courses, over 550 exhibitors and 750 technical papers covering technologies and applications in cloud and data center networking, space division multiplexing, 1 TB and beyond optical networking, flexible grid networks, convergence of optical and wireless networks, 100 G/400 G network design and optimization, and more.

PITTCON 2013 - March 17 - 21, 2013 - Philadelphia, PA
 Pittcon is the world's largest annual conference and exposition for laboratory science. It features the latest technology and instrumentation from over 900 exhibitors and more than 2000 technical presentations that cover topics such as life sciences, drug discovery, nanotechnology, biomedical, environmental, homeland security, food science, forensics, agriculture and biomass. The event will also include a keynote lecture by R. Michael Barnett of Lawrence Berkeley National Laboratory, short courses in over 50 topics, poster and networking sessions, and the Waters Symposium, which will recognize the commercialization of chemical imaging. Nobel Laureate Sir Harold Kroto will be the Wallace H. Coulter Plenary Lecture speaker for Pittcon 2013.

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