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**Nanomechanical Optical Fibers Go Beyond Light Transmission**



Under pressure, a new kind of optical fiber goes beyond simple light transmission to also perform the functions of signal switches, routers and buffers. "Nanomechanical optical fibers do not just transmit light like previous optical fibers," said Wei H. Loh, deputy director of the EPSRC Centre for Innovative Manufacturing in Photonics at the University of Southampton, where the fiber was developed. "Their internal core structure is designed to be dynamic and capable of precise mechanical motion. This mechanical motion, created by applying a tiny bit of pressure, can harness some of the fundamental properties of light to give the fiber new functions and capabilities."

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**Thin-Film Devices - EMI Shielding & Capacitive Touch Coatings**

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**Light Triggers Biochemical Reactions**

Biochemical reactions can now be remotely triggered on demand, thanks to a new technique developed at Rice University that turns light into heat at the point of need on the nanoscale.

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**Oxford Instruments Acquires Asylum Research for Up to \$80M**

The deal, worth as much as \$80 million, to buy the microscopy maker in California will help the UK scientific instrumentation provider strengthen its presence in the nanotechnology market.

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**Delicate Systems Observed with Quantum Physics**

Groups of photons prepared in certain quantum states can noninvasively probe ultrasensitive objects such as individual atoms or living cells, say researchers at the Institute of Photonic Sciences in Spain, overcoming the standard quantum limit for the first time.

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**Photonics West Boasts Largest Program Yet**

SPIE Photonics West will set records again this year, thanks to its largest-ever biomedical technical program and BiOS Expo, which are driving growth for the 2013 event, SPIE said.

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**Products on PhotonicsBuyersGuide.com**

 <b>The Phantom v711</b> Vision Research Inc.	 <b>Singlemode &amp; Polarization Maintaining (PM) Couplers</b> Gould Fiber Optics
 <b>High-Energy Laser Mirrors</b> Precision Photonics Corporation	 <b>Precision Glass and Sapphire Optics</b> Japan Cell Co., Ltd.

**Light Matters**

In this edition of the industry's premier weekly newscast: laser optics provide an inside view of a fly's eye, solar technology is used to kill cancer cells, SPIE Photonics West 2013 promises to be the biggest show yet, and a laser reveals the skin's true age. Hosted by Photonics Media's Melinda Rose and Laura Marshall.

**Precision Photonics, ATFilms Brands Merge**

Advanced Thin Films, a unit of IDEX Optics & Photonics, announced that Precision Photonics and ATFilms will deliver advanced coatings, optical monitoring technology, proprietary optical bonding and polished substrates from a shared Boulder location.

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**Microactuator Flexes Under Laser Light**

A Lawrence Berkeley National Laboratory microscale actuator that flexes like a tiny beckoning finger under a burst of laser light may point toward practical applications in artificial muscles, microfluidics and drug delivery.

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**Lyncean Sells Its First Compact Light Source**

The company sold its first compact light source to the Center for Advanced Laser Applications in Munich for biomedical imaging research. The miniature synchrotron x-ray source employs laser- and electron-beam technology and is expected to meet the growing demands of life science users who rely on synchrotrons for structural biology research.

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**Laser Optics Enable View Inside a Fly's Eye**

New laser optics technology developed at the Technical University of Vienna supports high-resolution 3-D microscopy and is providing a view into the interior of flies, mice and tissue samples.

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**Industry Events**

**Automate 2013 - January 21 - 24, 2013 - Chicago, IL**  
Visit us at booth 127



Automate – formerly the International Robots, Vision & Motion Control Show – is the largest solutions-based showcase of automation technologies in North America. The biennial event demonstrates the latest robotics, vision, motion control and automation technologies and solutions for a broad array of industries. The 2013 event features four full days of classes taught by experienced industry professionals, Certified Vision Professional (CVP) basic and advanced certification opportunities, and keynote presentations on the impact of robotics on economic growth and navigating the new political climate for business growth and success.

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**Photonics West 2013 - February 2 - 7, 2013 - San Francisco, CA**  
Visit us at BiOS Booth 8600 and Photonics West Booths 600 & 601



Photonics West 2013, to be held at the Moscone Center, will feature more than 4450 technical presentations, 18 plenary talks, 40 technical events and 70 continuing education accreditation short courses. The technical conferences - up about 5 percent over last year - are organized around four symposia: BiOS (Biomedical Optics), LASE (Lasers and Applications in Science and Engineering), OPTO (Integrated Optoelectronic Devices) and MOEMS-MEMS (Micro- and Nanofabrication). A virtual symposium on Green Photonics also will be held. The trade show and conference kicks off with BiOS, where the latest optical and photonic technologies used in diagnostics, therapeutics, and imaging are presented and discussed.

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