

sponsor






Our World is Flat
Custom flat optics for precision applications

PHOTONICS MEDIA
THE PULSE OF THE INDUSTRY

photonics.com

LIGHT EXCHANGE

Follow Photonics Media on Facebook and Twitter

Laser Inserts DNA into Cells with a Light Touch

Common techniques to force DNA into cells can be clumsy or even violent, but a team in South Korea developed the most precise method to date by combining two high-tech laboratory techniques. The method allows holes to be poked precisely on the surface of a single cell with a high-powered femtosecond laser, then a piece of DNA is gently tugged through the hole using optical tweezers. "What is magical is that all this happens for one cell," said team member Yong-Gu Lee, an associate professor at the Gwangju Institute of Science and Technology. "Until today, gene transfection has been performed on a large quantity of agglomerate cells and the outcome has been observed as a statistical average and no observations have been made on individual cells."

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

Light Stopped for a Minute

At a speed of 186,000 miles per second, nothing travels faster than light. So getting it to slow down is a formidable challenge, let alone getting it to stop. But physicists in Germany report they used a glass-like crystal to stop light for about one minute, which could have important implications for light-based data processing.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

IR Tomography Goes Full Color

Combining Fourier transform infrared (FTIR) spectroscopy with computed tomography creates a non-destructive, 3-D imaging technique providing full-color, molecular-level chemical information of unprecedented detail on biological and other samples with no need to stain or alter the specimens, says a team from Lawrence Berkeley National Laboratory and the University of Wisconsin-Milwaukee.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

Products on PhotonicsBuyersGuide.com

CCTV Lenses
Universe Kogaku (America) Inc.
Universe Kogaku America adds to its existing line of High Resolution lenses with a series of cctv lenses with locking focus, available in focal lengths from 8mm to 50 mm.
[More info >>](#)

Singlemode & Polarization Maintaining Couplers
Gould Fiber Optics
Gould now offers 2000nm couplers for both singlemode and polarization maintaining (PM) couplers. Gould manufacturers it's couplers using our proven Fused Biconical Taper (FBT) process.
[More info >>](#)

Laser Safety Curtain Systems
Kentek Corporation
KENTEK offers the most complete and versatile enclosure systems for applications requiring an eye-safe operating environment for industrial, medical, and research laser systems.
[More info >>](#)

Custom Advanced Optical Components
Optometrics Corp.
Optometrics has a distinguished 40 year history of manufacturing, and providing custom advanced optical components to OEM instrument manufacturers for a wide range of spectroscopic, laser and wavelength selection applications.
[More info >>](#)

More Articles on Photonics.com

3-D Images Created From a Single Lens

A computational method developed at Harvard called light-field moment imaging creates 3-D images using a single, stationary lens, a discovery that could have implications for medical imaging and even future 3-D displays.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

New Center to Advance Freeform Optics

More than \$4 million in federal, industry and academic funding aims to advance freeform optics through a new center led by the universities of Rochester and North Carolina at Charlotte.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

Light Moves, Molds Gels

Researchers at the University of Pittsburgh used light to reconfigure hydrogels and induce self-sustained motion. This biomimetic behavior in a non-living organism could have significance for a host of medical applications, including microfluidics and optics.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

Light Matters sponsored by **LA CROIX OPTICAL CO.**

On this edition of the industry's **only weekly newscast**: a 3-D image is created through a single lens, hydrogels are controlled and moved with light, a new center aims to advance freeform optics, and the Mars rover Curiosity marks one year on the Red Planet. Hosted by Photonics Media's Melinda Rose and Laura Marshall.

Machine Vision System Measures Swimmer Biomechanics

Athletes competing in the 15th FINA World Swimming Championships in Barcelona were monitored by an advanced image-processing system designed to capture biomechanical data, such as pass times and velocities, turns, stroke frequency and amplitude.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

Sydor Optics Receives ISO Certification

The precision optics manufacturer received ISO 9001:2008 certification quality management standards, affording its US and international customers a globally recognized standard of quality assurance.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

IRSC to Establish Lasers and Fiber Optics Center

Under a \$2.9 million grant from the National Science Foundation, Indian River State College (IRSC) in Florida will establish a regional center to meet a growing need for trained laser and fiber optics technicians.

[Read Article >>](#) [Share](#) [Email](#) [Facebook](#) [Twitter](#)

Measuring Optical Densities Over 10 Abs on the Agilent Cary 7000 Universal Measurement Spectrophotometer (UMS)
Agilent Technologies, Inc., Chemical Analysis

High blocking optical filters deliver critical optical control in a wide variety of consumer and industrial products. Highly attenuating (i.e., high optical density) filters are used in personal protective equipment, such as laser safety eyewear, through to precise, low light level control in optical systems for enhanced sensitivity at preferred wavelengths. This technical overview demonstrates the performance of the Cary 7000 UMS for the measurement of such materials.

[DOWNLOAD WHITE PAPER >>](#)

Industry Events

IEEE Photonics Conference 2013 - September 8 - 12, 2013 - Seattle, WA

The unveiling of breakthroughs in photonics will top the agenda when the world's leading technologists in the field convene in the Seattle area in September for the annual IEEE Photonics Conference (IPC-2013), formerly called the IEEE LEOS Annual Meeting.

Some 600 scientists, engineers and technical managers will gather from September 8-12 at the Hyatt Regency Bellevue Hotel for an IPC-2013 program of invited talks, paper presentations, panel sessions, special symposia, networking opportunities, and a product showcase.
[MORE INFO >>](#)

Unsubscribe: <http://www.photonics.com/Newsletter/EmailUnsubscribe.aspx>

Questions: pr@photonics.com

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


FEATURED VIDEO



Aerotech - Ensemble LAB Motion Controller

Aerotech's Byron Fruit presents the Ensemble LAB stand-alone motion controller for up to four axes of brush, stepper or brushless AC motor control, MPS series miniature linear and rotary and lift positioning stages, and ANT series nanopositioners at CLEO 2013. www.aerotech.com
sales@aerotech.com 101 Zeta Drive Pittsburgh, PA 15238 (412) 963-7470

sponsor



click to eCMOS technical brochure

pco.

Now available as **FREE** mobile apps for subscribers

PS EP Bio

PHOTONICS MEDIA

Available on the App Store | Available on Google play | Available on amazon

PHOTONICS buyers' guide

Looking for **Lasers and Laser Systems** products? Search the Photonics Buyers' Guide or Browse these product categories:

- Birefringent and Polarizing Crystals
- Fiber Lasers
- Laser Diode Modules
- Laser Shutters
- Pulse Selectors
- Ultraviolet Lasers

sponsor

PRISM20 AWARDS14

Call for Entries
PrismAwards.org

APPLY by 20 Sep. 2013

PRESENTED BY SPIE & PHOTONICS MEDIA

sponsor

SMITHERS APEX

LEDs + THE SSL ECOSYSTEM 2013
PHASE 2, THE PATH TO PROFIT

OCTOBER 28-29, 2013 BOSTON MA

sponsor

PHOTONEX
16 & 17 OCTOBER · COVENTRY

REGISTER FOR UPDATES!

Serving all Industries with Light & Imaging Technology

CO-LOCATED **VACUUM EXPO** 2013 Biomedical Sensing

PHOTONICS spectra

Knowledge is king
It's your move. Make it a smart one.



Renew your subscription today

LIGHT EXCHANGE

Follow Photonics Media on Facebook and Twitter

