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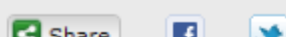
Thursday, July 3, 2014

Noninvasive Brain Control Possible with New Light-Sensitive Protein



A new molecule, along with optogenetics, has put brain control in the hands of scientists. Researchers from MIT developed the new protein opsin, which is sensitive to red light and enables neurons to be manipulated noninvasively, as the controlling light source is outside the body.

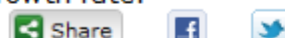
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Report: Silicon Photonics Communications Market Poised for Growth

The silicon photonics device market is set to grow from \$25 million in 2013 to more than \$700 million in 2024, representing a 38 percent composite annual growth rate.

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Metamaterial Shows Promise as THz Imager

An imaging approach involving metamaterials could make the terahertz regime more accessible.

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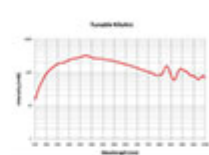
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New Shaped Tip Fibers

Fiberguide Industries
New shaped tip fibers and fiber assemblies from Fiberguide Industries provide optimum control over laser light during medical procedures. Customized designs are also available.

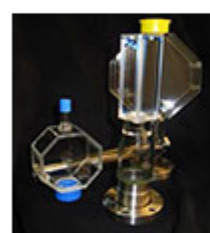
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High-Intensity Tunable Illuminator

Optical Building Blocks (OBB) announces the introduction of the Tunable KiloArc™ High Intensity Illuminator. The Tunable KiloArc™ delivers over 100 mW of tunable optical power from 300 nm to 1,100 nm.

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Cold Atom Cells

Triad Technology
The field of cold atom physics deals with cooling collections of atoms to sub-milikelvin temperatures using laser cooling techniques. The study of cold and ultracold atoms offers insight into the laws of physics.

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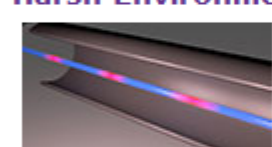
N-FK58 XLD Optical Glass

SCHOTT North America, Advanced Optics
With its optical glass called N-FK58 XLD, the international technology group SCHOTT has now launched a high-quality type of glass that offers extremely low dispersion and excellent processing characteristics.

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Harsh Environments No Match for New Fiber Sensor



A team from the University of Pittsburgh has developed a high-temperature fiber sensor for gas flow measurements.

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A new approach to building quantum dots has shown considerable gains in generating photocurrent, which could potentially create a new generation of solar cells.

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A system using femtosecond lasers in conjunction with nanotechnology enables targeted and controlled drug delivery.

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Resolve Optics has supplied non-browsing zoom lenses to NASA for the study of future low-maintenance space-based optics.

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Magnetic Fields Control Liquid Crystals' Optical Properties



A new technique that forms and controls magnetically responsive liquid crystals could be applied to many types of displays.

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Optogenetics Allows Control of Spinal Circuits

MIT researchers are using optogenetics to explore the function of inhibitory interneurons in mice.

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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.

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THE PULSE OF THE INDUSTRY



FEATURED VIDEO



Rein Hübner

HÜBNER
President, Hubner GmbH & Co. KG
Member, Category of Scientific Lasers
COGNITION, Category of Defense and Security

Hubner GmbH – C-Wave & T-Cognition

Rein Hübner, President of Hubner GmbH & Co. KG introduced Karsten Buse of Fraunhofer IPM who developed in collaboration the T-COGNITION, a stand-alone terahertz spectrometer that automatically detects and identifies hazardous substances in mail. Karsten described the product and its advantages. Hübner won the Prism Award for the Defense & Security Category and also won for the Scientific Lasers Category for the C-WAVE, the first coherent continuous-wave source able to be tuned across the visible range without change of materials, developed in collaboration with Fraunhofer IPM.

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