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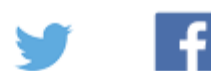
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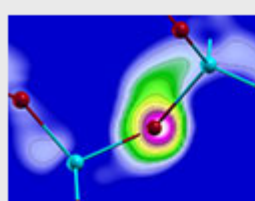
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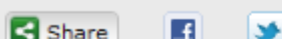
Thursday, September 4, 2014

Laser Pulses (Briefly) Turn Glass into Metal



When subjected to ultrafast laser pulses, quartz glass can take on metallic properties, turning briefly from electrical insulator to conductor. A team at the Vienna University of Technology had previously demonstrated this effect, and is now studying this further using large-scale computer simulations.

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FEATURED VIDEO



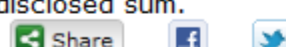
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Fibercore Acquires Fibertronix

Fibercore has acquired Fibertronix of Hudiksvall, Sweden, for an undisclosed sum.

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Colorless Solar Window has 1% Efficiency

A team at Michigan State University has developed an untinted solar window that absorbs and generates electricity from the near-infrared wavelengths of sunlight.

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Optical Thin Film Products

Keihin Komaku Thin Film Vacuum deposition technology requires advanced adjustment techniques. Everything from the selection of materials to the final product is examined and measured at various times throughout the process using the latest equipment.

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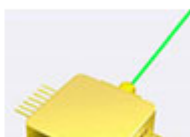
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Bandpass Polarizer

Meadowlark Optics Meadowlark Optics' new bandpass polarizer is manufactured by depositing the filter coating on fused silica. This works well in situations when the user only wants a small wavelength range to pass through with a specific polarization.

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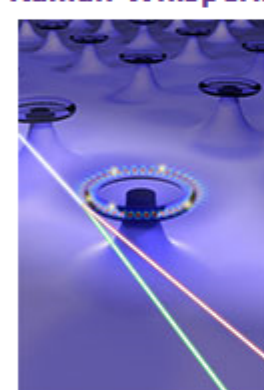
High Power Laser Diode

Frankfurt Laser Company Frankfurt Laser has introduced the FBLD-980-10-FC-HHL fiber-coupled, high-power laser diode for medical applications. The 976-nm diode with a green aiming beam delivers 10W output power from 200 µm fiber.

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Raman Whispering Gallery Detects Nanoparticles



A Raman microlaser sensor can detect and count individual particles — including viruses — as small as 10 nm.

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Quantum Imaging Method Doesn't Need Light to Touch Object

A new quantum imaging technique can acquire an image of an object without ever detecting the light used to illuminate it.

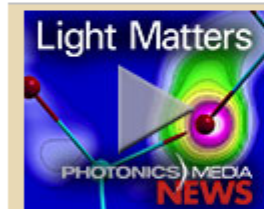
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North American Machine Vision Sales Grow

Machine vision sales in North America increased 11 percent to \$1.04 billion in the first half of 2014, according to the trade group AIA.

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In this edition of the industry's premier weekly newscast: Laser pulses turn glass into metal, fluorescence lifetime measurement could enhance recycling, a quantum cascade laser tests blood sugar, and spectroscopy measures a nanoscale material strain.

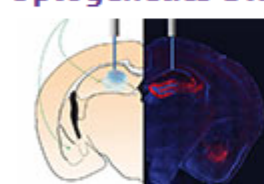
'Butterfly Molecule' System Could Bring New Sensors, More

A molecular system could convert photon energy directly to mechanical motions, emit white light and even take your temperature.

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Optogenetics Swaps Memory Emotions



It may be possible to change negative memories into positive ones, and vice versa, using optogenetics techniques.

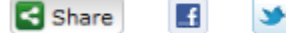
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'Cannon' Launches Single Photons

A new photonic "cannon" could provide the necessary light control for quantum encryption and computing.

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WHITE PAPER

Design of Long Working Distance Graded-index Fiber Lens With a Low NA for Fiber-Optic Probe in OCT Application

OFS

A fiber-optic probe for optical coherence tomography (OCT) applications typically includes a short section of graded index (GRIN) fiber fused onto a single-mode (SM) fiber. The GRIN fiber acts as a lens to focus the output of the SM fiber and to collect the reflected light from the sample. In this paper we will use the beam propagation method (BPM) to analyze the output beam characteristics such as beam radius and working distance, and then compare these with the measured results. With this tool we can design a GRIN fiber lens to achieve a long working distance without degrading the system performance.

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