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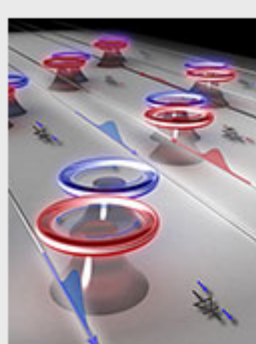
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PHOTONICS.com

Thursday, April 17, 2014

Whispering-Gallery Device Could Improve Computing



A new whispering-gallery microcavity could lead to new and more powerful computers that run faster and at cooler temperatures. The optical diode was created at Washington University in St. Louis, where researchers coupled two microresonators using parity-time symmetry onto a silicon chip. These resonators were positioned to allow light to flow from one to the other.

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Solar Power, Biofuel Production Could Complement Each Other

Photovoltaic installations may be able to give a boost to biofuels production — and vice versa — particularly in sunny and dry regions of the US.

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Light-Activated Neurons May Restore Function to Paralyzed Muscles

A new technique could potentially restore the function of muscles afflicted by motor neuron disease or spinal cord injury.

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ZC&R Coatings for Optics, an Abrisa Technologies Company provides high-efficiency coatings.

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Flir Systems Hires New Chief Marketing Officer

Flir Systems Inc. has named Travis Merrill its new senior vice president and chief marketing officer.

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Semiconductor Manipulates IR Light

A nanostructure-embedded semiconductor that manipulates light in the IR/terahertz range could benefit applications from imaging to energy efficiency, telecommunications and more.

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Adaptive Optics Enhance Subcellular Microscopy

Adaptive optics techniques forged for astronomers and ophthalmologists have been brought to bear for biologists seeking sharper microscope images.

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In this edition of the industry's **premier weekly newscast**: Light-activated neurons restore paralyzed muscles, a semiconductor manipulates infrared light, and scientists propose growing biofuel crops on photovoltaic farms.

Optical Combs Speed Up Communication, Data

Miniaturized optical frequency combs may hold the key to faster computing centers and accelerated communications networks.

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Second Light Source Primes Semiconductors to See IR

A new technology uses standard, patterned semiconductors to detect light over a broader range of wavelengths.

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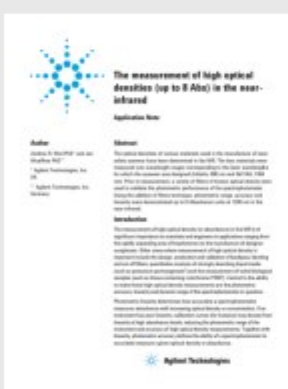
New Switch Could Scale Up Quantum Computing

A new technique to connect particles could assist in development of quantum computing systems.

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WHITE PAPER



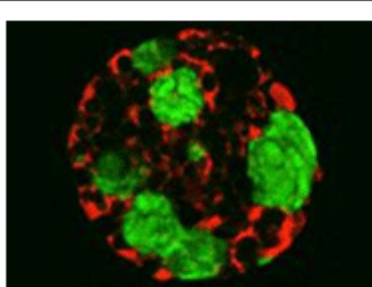
The Measurement of High Optical Densities (up to 8 Abs) in the Near-Infrared

Agilent Technologies, Inc.

The optical densities of various materials used in the manufacture of laser safety eyewear have been determined in the NIR. The lens materials were measured over wavelength ranges corresponding to the laser wavelengths for which the eyewear was designed (InGaAs, 980 nm and Nd:YAG, 1064 nm). Prior to measurement, a variety of filters of known optical density were used to validate the photometric performance of the spectrophotometer. Using the addition of filters technique, photometric range, accuracy and linearity were demonstrated up to 8 Absorbance units at 1200 nm in the near-infrared.

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WEBINAR



Microscopy Light Sources

Tuesday, April 22, 2014 1:00 PM - 2:00 PM EDT

FREE WEBINAR



Dr. Aaron Slepkov

In this webinar, Aaron Slepkov, PhD, will describe the key features of coherent anti-Stokes Raman scattering (CARS) microscopy, and will outline the light sources used in its various experimental implementations.

Dr. Slepkov is faculty in the department of Physics & Astronomy at Trent University, where he holds a Canada Research Chair in the Physics of Biomaterials. His research interests include nonlinear optics and photonics, broadband laser microscopy, and materials biophysics.



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The DFB QCL 783 is a single-mode, high-power quantum cascade laser at 7.83 μm for high-sensitivity detection of critical greenhouse gases. The laser is capable of 280-mW continuous output power at room temperature in a single mode and with an excellent beam quality, at a wavelength previously unattainable with a semiconductor device. It allows parts-per-billion-level detection of methane and nitrous oxide for applications such as pollution monitoring and emissions control, among others.

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