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Nanowire Lasers Emit at Useful Wavelengths

Threadlike semiconductors can be made to emit light at useful wavelengths, demonstrating potential as lasers for applications in computing, communications, and environmental and biological sensing. "Nanowire lasers could represent the next step in the development of smaller, faster, more energy-efficient sources of light," said professor Jonathan Finley, director of Technical University Munich's Walter Schottky Institute. "But nanowires are also a bit special in that they are very sensitive to their surroundings, have a large surface-to-volume ratio, and are small enough, for example, to poke into a biological cell."

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Optical Fiber Throughput Boosted Tenfold

A simple, innovative solution reduces the amount of space required between the pulses of light that transport data through an optical fiber, dramatically increasing their capacity.

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Tapping Solar's Full Potential

The realization of solar cells' full potential may be a little closer, thanks to newly created large sheets of nanotextured silicon microcell arrays. The discovery holds the promise of making solar cells lightweight, bendable, more efficient and easily mass-produced.

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Curiosity Surpasses 100,000 Laser Zaps

Designed to fire 1 million shots, the ChemCam instrument on the Mars rover zaps rocks and dust with a high-power laser to determine their composition. It also carries a camera that can survey the Red Planet's landscape. So far, however, no Martians have been observed.

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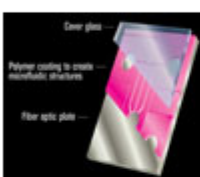
Membrane Optics Telescope Demo'd for DARPA

A lightweight telescope created using polymer membrane optics and developed by Ball Aerospace & Technologies Corp. was demonstrated for DARPA, the company reported.

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New High-Speed USB 3.0 CCD Camera

Lumenera

Now Sampling: Lumenera's compact, high performance LT365R is designed for high-speed video and image capture featuring a USB 3.0 interface and high-speed global shutter.

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Ventana Spectrometers

Ocean Optics, Inc.

Ocean Optics has expanded its Elite Series of high-performance modular spectrometers with the introduction of the Ventana family of high throughput spectrometers.

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Uncooled Thermal Imaging Camera Core

FLIR Systems

The Quark thermal camera core from FLIR represents a quantum leap in the design of compact, uncooled LWIR technology. Quark provides high resolution thermal imaging performance.

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Zero-Index Material Generates Nonlinear Light

A unique optical metamaterial with a refractive index of zero was used to generate light waves that gain strength as they move through the material in all directions. This demonstration of "phase mismatch-free nonlinear light" holds promise for quantum computing and networking, and for future light sources based on nonlinear optics.

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Nanophotonics Expert Joins Aston's Photonics Institute

Professor Misha Sumetsky, creator and pioneer of surface nanoscale axial photonics technology, has joined the Aston Institute of Photonic Technologies to further develop the system.

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SPIE DSS in Baltimore Broadening Appeal

Expanding the scope of its 2014 Defense + Security Conference with the addition of several conferences and meetings is expected to appeal to the broader sensing community, the international society for optics and photonics announced.

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One Photon Per Pixel Produces 3-D Lidar Image

With the detection of a single photon from each pixel location, a new lidarlike system can gauge depth and produce 3-D images. The technique is expected to be broadly applicable to microscopy and remote sensing.

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Real-time Profiling for Focusing, M2, Divergence & Alignment

DataRay Inc.

Beam intensity profiling is an essential tool in many aspects of photonics. The precise intensity distribution in a focused laser beam is critical in many applications: flow cytometry, laser printing, medical lasers, and cutting lasers are just a few examples. Intensity profile measurements can characterize and improve a product or process, leading to substantial cost and time savings that can pay for the measurement instrument many times over. This white paper describes how the unique, patented, real-time multiple z-plane XYZTF capabilities of the BeamMap2 slit-scan profiler can speed and simplify laser assembly alignment.

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Industry Events

ASCB 53rd Annual Meeting 2013 - December 14 - 18, 2013 - New Orleans, LA

Visit Photonics Media at Booth 221



As the premier international meeting in the field of cell biology, the ASCB (American Society for Cell Biology) Annual Meeting is intended for scientists and students in academia, industry, government, and higher education. Over 100 scientific sessions and 2500 poster presentations cover a variety of scientific areas within the discipline. With opportunities to learn about the latest research and network with peers, the ASCB Annual Meeting appeals to the diverse interests of the international cell biology community.

The ASCB Annual Meeting is the place to: Hear and communicate cutting-edge science; meet the leaders in the fields of cell biology, biophysics, stem cells, and genomics, among others; participate in intimate science discussion tables; attend sessions of special interest to students, minorities, and women; and learn where and how to apply, and advocate for, research funding.

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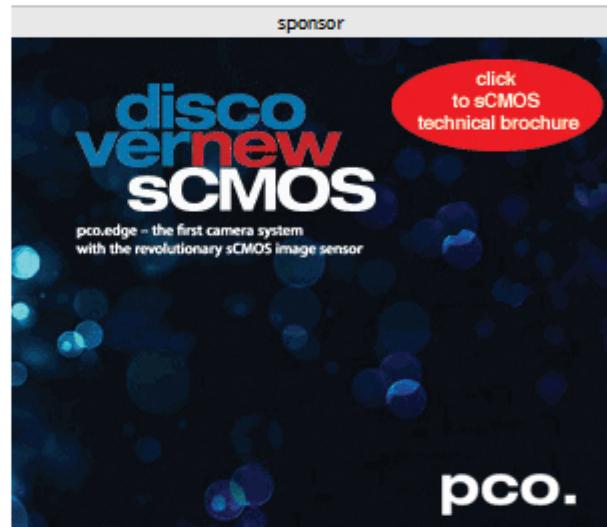


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