Thursday, December 14, 2017

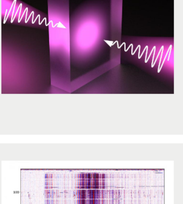
This Week In PHOTONICS

PHOTONICS MEDIA

Top Stories

Microscope Uses UV Light to Provide High-Res Images in Minutes, Without Damaging Tissue

A fluorescence-based, slide-free optical imaging system, known as microscopy with UV surface excitation (MUSE), uses UV light at wavelengths below the 300-nm range to penetrate the surface of tissue samples by only a few microns — about the same thickness of tissue slices on traditional microscope slides.



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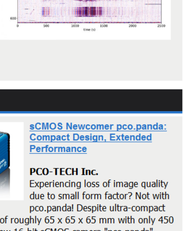
Researchers Make Transparent Materials Absorb Light

Researchers have demonstrated an optical paradox — they have made a completely transparent material appear perfectly light-absorbing. The results of their research contradict the idea that materials that look transparent, such as glass, appear that way because they have no light-absorbing qualities.



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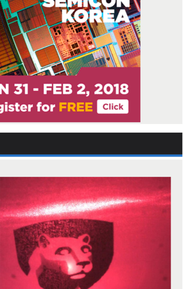
That Was Then, This Is Now: Fiber Optic Cables Find New Use as Seismic Sensors

The decade that gave us the Sony PlayStation also gave us dark fiber — an excess of optical fiber cables installed underground, mostly in the 1990s, before advances in data transmission reduced the need for all those cables. Now, research teams on the earthquake-prone West Coast of the U.S. are putting dark fiber optic cables to use as sensor arrays for seismic monitoring.



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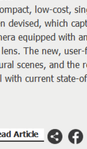

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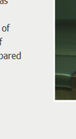

sCMOS Newcomer pco.panda: Compact Design, Extended Performance

PCO-TECH Inc.

Experiencing loss of image quality due to small form factor? Not with pco.panda! Despite ultra-compact measurements of roughly 65 x 65 x 65 mm with only 450 g weight, the new 16-bit sCMOS camera "pco.panda" provides high quantum efficiency up to 80 % and more than 40 fps at a full resolution of 2048 x 2048 pixels.

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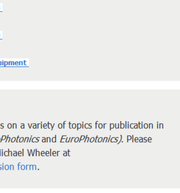
More News

Hybrid Perovskite Material Could Be Key to Making Organic Diode Lasers

Researchers are closer to creating a tunable semiconductor diode laser from hybrid organic-inorganic perovskites. Using a material composed of an inorganic perovskite sublattice with relatively big organic molecules confined in the middle, a Penn State research team demonstrated that optically pumped continuous-wave lasing could be sustained for over an hour.



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Single-Shot Approach to HSI Uses Camera Equipped With Prism

A compact, low-cost, single-shot hyperspectral imaging method has been devised, which captures images using a conventional DSLR camera equipped with an ordinary refractive prism placed in front of the lens. The new, user-friendly method was tested on a variety of natural scenes, and the results, according to the researchers, compared well with current state-of-the-art hyperspectral imaging systems.

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Industry Events

IS&T's International Symposium on Electronic Imaging 2018

January 28 - February 1, 2018 - Hyatt Regency San Francisco Airport - Burlingame United States

The International Symposium for Electronic Imaging 2018 will host leading researchers, developers and entrepreneurs from around the world to discuss, learn about and share the latest imaging developments from industry and academia. The 2018 event will feature 18 technical conferences and a focus session covering all aspects of electronic imaging, including: Augmented and virtual reality displays and processing; autonomous machine imaging algorithms; computational and digital photography; human vision, color, perception, and cognition; mobile imaging; imaging sensors; image quality, and more.

More Info

IS&T International Symposium on Electronic Imaging SCIENCE AND TECHNOLOGY

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