

This Week In PHOTONICS

PHOTONICS MEDIA

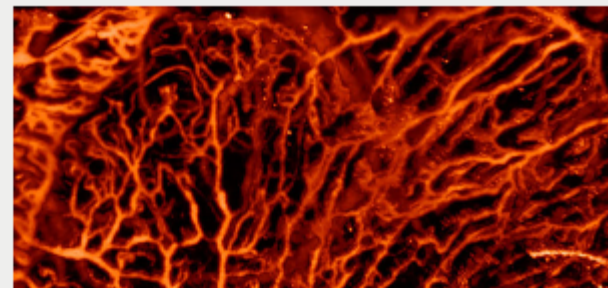


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Top Stories

AI Improves Quality and Usability of Optoacoustic Imaging

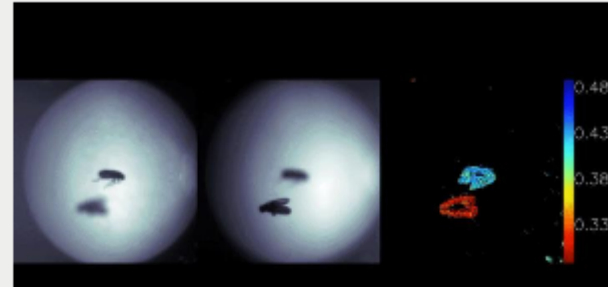
To improve image quality in low-cost optoacoustic devices with only a small number of ultrasonic sensors, researchers at ETH Zurich and the University of Zurich developed a framework for the efficient recovery of image quality from sparse optoacoustic data using a deep convolutional neural network and demonstrated their approach with whole body mouse imaging in vivo.



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Bioinspired Sensor Uses Metalenses for Depth from Defocus

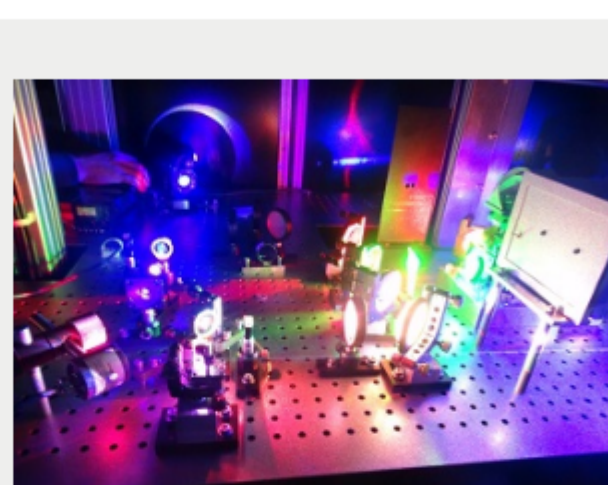
Researchers at the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) have developed a compact sensor that can measure depth in a single shot. The sensor's design was inspired by the specialized optics of the jumping spider.



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Improved Holographic Printing Technology Creates Realistic Colorful Holograms

Researchers have developed a printer that is able to produce digital 3D holograms with an unprecedented level of detail and realistic color. The printer could be used to create high-resolution color re-creations of objects or scenes for museum displays, architectural models, fine art, or advertisements that do not require glasses or special viewing aids.



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Featured Products



Ultima 2Pplus Multiphoton Imaging

Bruker Nano Surfaces
With new advances in field of view, sensitivity, wavelength, and sample accommodation, Bruker's Ultima 2Pplus delivers the best commercially available combination

of flexibility, resolution, imaging depth, and speed, allowing users to perform simultaneous imaging, stimulation, and electrophysiology protocols with greater efficiency and effectivity.

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pco.edge 26 sCMOS Camera

PCO-TECH Inc.
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By Peter J. Kennedy and Rhonda L. Kennedy
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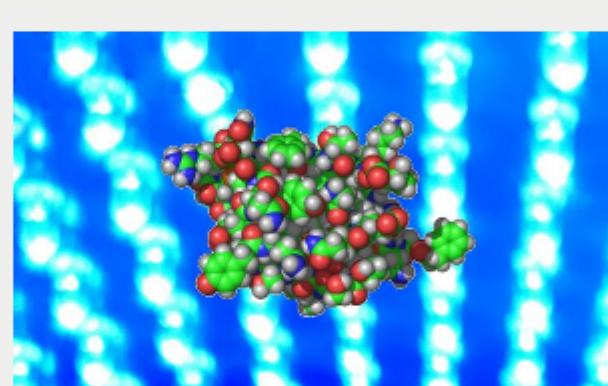
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Researchers Engineer Light-Activated Cells for Treating Diabetes

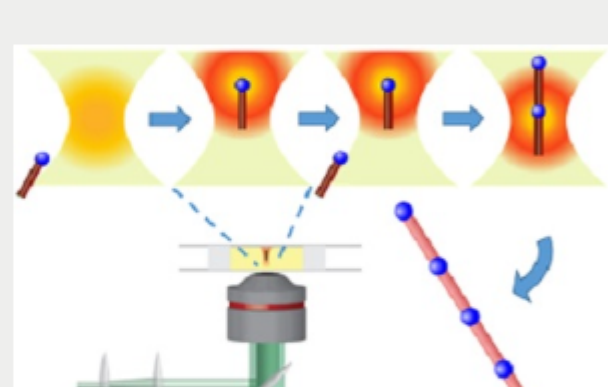
Tufts University researchers have shown that glucose levels can be controlled in a mouse model of diabetes through optogenetics. When exposed to light, engineered pancreatic beta cells transplanted into diabetic mice produced more than two to three times the typical level of insulin.



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Light-Based 'Tractor Beam' for Nanoscale Assembly

Researchers from the University of Washington have developed a method that could make reproducible manufacturing at the nanoscale possible. The team adapted an existing technique pioneered by Arthur Ashkin, optical tweezers, to operate in a water-free liquid environment of carbon-rich organic solvents.



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More Headlines

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Industry Events

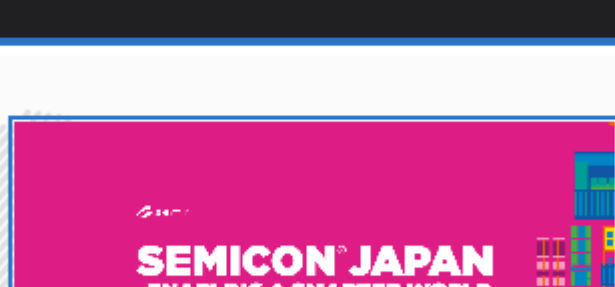
Semicon Japan 2019

December 11-13, 2019 - Tokyo Big Sight, Tokyo, Japan - Tokyo Japan supplies one-third of all semiconductor equipment and more than one-half of all materials to the global semiconductor manufacturing industry. SEMICON Japan takes place in the heart of the semiconductor supply chain with more than 700 exhibiting companies from Japan and other regions, showcasing innovative solutions for your technology challenges and business success.

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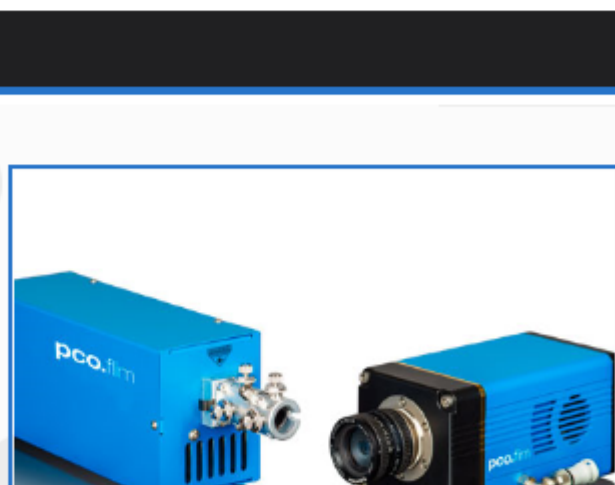
Webinars

Frequency-Domain Fluorescence Lifetime Imaging System Improvements and Applications

Wed, Nov 20, 2019 10:00 AM - 11:00 AM EST

Since its introduction in 2014, the FD-FLIM pco.flim camera system has been applied to many different areas, from FRET to endogenous fluorescence, from oxygen to pH measurement, from large technical applications to light-sheet microscopy. In this webinar presented by PCO, Gerhard Holst will demonstrate and discuss improvements in the use and applicability of the pco.flim camera. New results including investigation of microplastics on lab filters, pH measurements, oxygen measurements in a marine environment, assistance for neurosurgery, and rapid FD-FLIM measurements will be shown to demonstrate the flexibility of the pco.flim camera system.

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3D Microprinting: How Small Can We Go?

Tue, Nov 19, 2019 10:00 AM - 11:00 AM EST

High-resolution and submicron precision are key requirements for producing 3D polymer structures at microscale for use in industrial applications. In this webinar you will learn about two-photon polymerization (2PP), a technology that enables 3D-printing resolution as small as 0.2 μm. The presenter will provide examples of applications in different fields, such as micro-optics, microfluidics, metamaterials, and scaffold for tissue engineering.

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