Wednesday, October 25, 2017

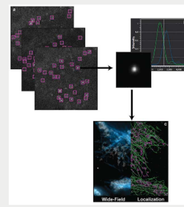
BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES®

PHOTONICS MEDIA

Monthly newsletter focusing on how light-based technologies are being used in the life sciences. Includes news, features and product developments in lasers, imaging, optics, spectroscopy, microscopy, lighting and more. Manage your Photonics Media membership at Photonics.com/subscribe.

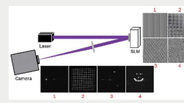
Single-Molecule Localization Blazes New Paths for Microscopy



Fluorescence microscopy has proven itself to be an indispensable method in the modern biological toolkit. The use of visible-wavelength fluorophores allows for relatively noninvasive imaging. While the resolution of conventional optical microscopy cannot rival that of electron, atomic force or near-field scanning optical microscopy methods, the unrivaled specificity of the technique allows for the imaging of nearly any biological target.

Read Article

3D Mapping of Neural Circuits In Vivo Opens the Window on Neurological Disease



Despite extensive research, brain function and neurological diseases are poorly understood. Complexities arise from the quantity of neurons in the brain and from the densely interconnected networks of intermixed cell types. Tools neuroscientists have traditionally relied upon include the patch clamp, which probes electrical activity of a single neuron, and fMRI, which images activity in volumes containing millions of neurons.

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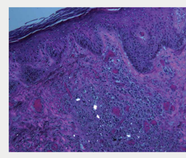
Forensic Microscopy Expands Its Reach



The field of forensic microscopy is more than a century old. Though practitioners say their profession is far less glamorous than its portrayal in popular TV crime and courtroom shows, forensic investigation remains a powerful tool for learning the truth about who may have committed various actions, where they occurred, and what tools or substances may have been used.

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Featured Products

Ideal OEM Illumination Platform for Biophotonics

Lumencor Inc.

Lumencor's AURA light engine® is a flexible platform for the brightest of solid-state light sources, tailored to your instrument design need. As many as five light outputs in the UV, VIS and NIR yield independently addressable color bands and/or white light.

Visit Website | Request Info

Light Sheet Microscopy (oSPIM)

Applied Scientific Instrumentation Inc.

ASI's Oblique Single Illumination Microscope (oSPIM) is an excellent platform for high resolution light sheet microscopy for samples mounted in standard coverslip-bottom culture dishes. The oSPIM is a single-view light sheet system where the illumination light sheet is generated at an oblique angle using an oil immersion objective below the sample dish.

Visit Website | Request Info

In Case You Missed It

NASA Mars 2020 to Use Spectroscopy, Fluorescence Imaging in Biosignature Analysis

NASA's Mars 2020 mission, which will look for signs of past life on Mars, will use smart methods originally developed to find the oldest life on Earth.

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Device Allows Standard Cameras to Produce Hyperspectral Images

A miniaturized hyperspectral device has been developed as an add-on for a standard camera and could be used to repurpose a camera for generating hyperspectral images and videos for a range of applications.

Read Article

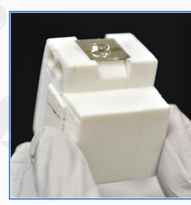
Columbia Scientists Develop 3D Microscope for Live Cell Imaging

A team of scientists has successfully developed the Swept Confocally Aligned Planar Excitation (SCAPE) 3D microscope, which eliminates the need to mount samples or other special preparation and is capable of imaging freely moving living samples in real-time at speeds 10 to 100 times faster than current laser-scanning microscopes.

Read Article

Webinars

Making Laser-Based Dermatologic Procedures Safer and More Effective



Thu, Nov 2, 2017 1:00 PM - 2:00 PM EDT

This webinar will introduce sonoillumination, a technique that uses ultrasound in conjunction with a clinical laser for dermatologic procedures such as the removal of birthmarks and tattoos. Sonoillumination transmits laser light only through direct contact with the skin, maintaining a safe environment for physician and patient throughout treatment. The ultrasound is applied throughout the procedure to further improve effectiveness by increasing the transmission of light through the epidermis by as much as 174 percent. The presenters will review current approaches to laser-based dermatological treatments, then will discuss sonoillumination, the experimental methods used to test the device, and results.

Register Now

Coming in November...

Features

3D Medical Imaging; IIR Medical Imaging; Tunable Lasers; Cameras for Microscopy

Issue Bonus

Annual Imaging Sourcebook: Research, Market Report, Directory

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *BioPhotonics*. Please submit an informal 100-word abstract to Associate Managing Editor Marcia Stamell at marcia.stamell@photonics.com or use our online submission form www.photonics.com/submitfeature.aspx.

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