BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES

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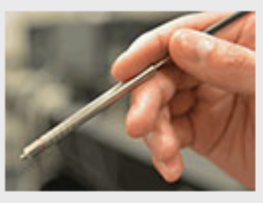
THE PULSE OF THE INDUSTRY

Wednesday, June 24, 2015

Spectroscopy Aids Disease Detection, Faces Obstacles



Spectroscopy advances are steadily reducing disease-detection time frames. These new methods also hone the accuracy of disease identification and provide for more timely treatment protocols. As with anything groundbreaking, though, roadblocks inevitably arise. As with the diseases themselves, time is precious when resolving these hurdles. Sometimes, though, there's just no time to spare.

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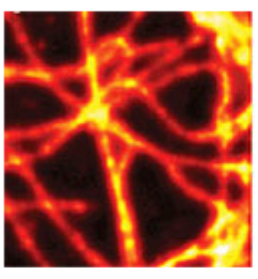
Single-Molecule Localization Microscopy with sCMOS Cameras



EMCCD-based cameras with high quantum efficiencies and low readout noise characteristics traditionally have been the preferred technology for SMLM superresolution imaging. However, with tailored localization algorithms, sCMOS cameras have become a notable alternative for superresolution microscopy.

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Photothermal Nanoparticles Extend Range of Optogenetics

Targeted gold nanoparticles allow light to activate neurons, a finding that could enable the use of optogenetic techniques without genetic manipulation. Optogenetics, the use of light to control neural activity, is a powerful technique that has seen widespread use in neuroscience research.

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Featured Products

X-Cite 120LEDmini

Lumen Dynamics (Excelitas Technologies)

Excelitas Technologies introduces the new X-Cite® 120LEDmini - our most compact, simple-to-use yet powerful broadband illumination system for end user and OEM fluorescence applications.

More info >>

SPECTRA X Light Engine

Lumencor, Inc.

The SPECTRA X light engine from Lumencor is the ultimate integrated solid-state excitation source for fluorescence microscopy.

More info >>

Picosecond Laser Module

PicoQuant GmbH

PicoQuant's new VisIR-765 "STED" is an externally triggerable high power laser at 766 nm with optimized pulse-width for STED depletion.

More info >>

Picomotor Linear Stage

Newport Corporation

The Picolis is a compact linear stage that incorporates our Picomotor actuator technology into one simple precise solution.

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iChrome SLE

TOPTICA Photonics, Inc.

The multi-laser engine, iChrome SLE, provides up to eight different colors from a broad selection covering 405 - 640 nm.

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Dual Inverted SPIM

Applied Scientific Instrumentation, Inc.

Applied Scientific Instruments has developed a new form of light sheet microscopy with our collaborators in the scientific community.

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Fluorescence Spectrometer

Edinburgh Instruments, Ltd.

Edinburgh Instruments has combined its FS5 single-photon-counting spectrofluorometer with a liquid nitrogen cryostat.

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Mini Focus Module

New Scale Technologies, Inc.

This miniature focus module with built-in controller is the smallest, easiest-to-integrate focus system for precision microscopes that are embedded in handheld instruments.

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Ultra-Narrow UV Filters

Alluxa

Alluxa's Ultra Series of high performance filters now includes our Ultra-Narrow UV Filters.

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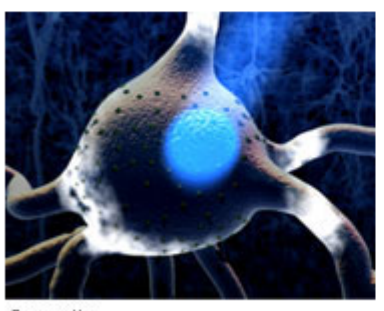
Laser Integration for Optogenetics

Siskiyou Corporation

The IS-OGP is a simple, turnkey solution integrating an external laser beam into an existing microscope in optogenetics experiments to stimulate target neurons.

More info >>

WEBINAR



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Optical Tools for Mapping and Fixing Complex Biological Systems

Wed, Jul 1, 2015 1:00 PM - 2:00 PM EDT

FREE WEBINAR

Ed Boyden

Complex biological systems like the brain present a challenge: their molecular building blocks are organized with nanoscale precision, but support physiological processes and computations that occur over macroscopic length scales. Presenter Ed Boyden and the Synthetic Neurobiology Group are creating tools to enable the mapping and repair of such complex systems.

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