

BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES®



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.

From the Editor's Desk



Power, Price and Portability

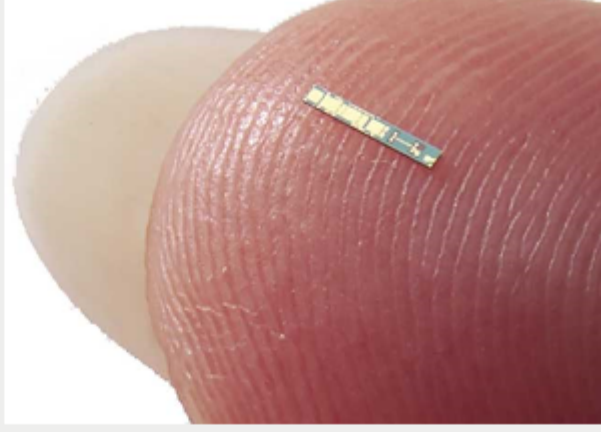
JAMES SCHLETT, EDITOR

Power is not everything. If it costs too much, too few may wield it. And if it restricts freedom, it will only be tolerated for so long. This is especially true in the years-old competition between lasers and LEDs. These photonics technologies have vied to be light sources in many applications, and brain research is emerging to be a major battleground for them.

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Swept Source OCT Takes Optical Medical Imaging to the Next Level

Swept source optical coherence tomography enables much faster imaging for comprehensive wide-field, 4D screening of large organs or dynamic processes.



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LEDs and Lasers Battle for Dominance in Brain Research

Small but generally less powerful, or plenty of power but costly; the fight between LEDs and lasers in optogenetics intensifies. Lighting up the brain to better understand, treat or even cure brain disorders has become an established field known as optogenetics. Today it is one of the most promising tools making contributions to the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative — part of a new federal focus aimed at producing a dynamic picture of the brain.



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In Case You Missed It

Live-Cell Imaging Thrives With Microenvironment Control Systems

As microscopy techniques become more complex and require researchers to keep specimens under objectives for longer periods, microenvironmental control systems play an important role in pushing the limits of live-cell imaging.



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Handheld System Enables Effective Imaging of Children's Retinas

A handheld device capable of capturing images of a retina with cellular resolution allows researchers to gather detailed structural information about the eyes of infants and toddlers for the first time.

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Concordia's Photodynamic Therapy Laser Receives Premarket Approval

Concordia International Corp. said that the U.S. Food and Drug Administration has approved the Company's premarket approval application for its Photofrin 630 PDT (photodynamic therapy) Laser.

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FOR SO MANY REASONS

REASON #9:
LIFE SCIENCES AND FLUORESCENCE FILTER CATALOG

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How Digital Pathology Can Lead to Faster, Better Treatment

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Featured Products



Interchangeable Microscope Modules

Siskiyou Corp.

Siskiyou Corp. has announced a comprehensive set of interchangeable modules and accessories that enable users to customize the functionality of optical microscopes from all major manufacturers or build their own microscope.

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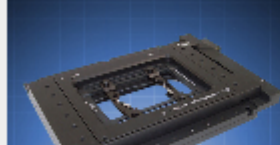


Expanded Alluxa Filter Catalog

Alluxa

Alluxa's online optical filter catalog showcases Alluxa's standard high performance narrowband and life sciences solutions. New ultra-narrow and life sciences filters are being added to the catalog each week.

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Ultra Precise Piezo-Z Axis Stage

Applied Scientific Instrumentation Inc.

Applied Scientific Instrumentation's Ultra Precise Piezo-Z Focusing stage has been specifically designed to provide a high resolution, and highly repeatable, means of controlling the X, Y, and Z position of the microscope stage.

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Piranha XL 16K cameras offer an unprecedented combination of speed, resolution, and responsivity with low noise. True exposure control allows consistent, superior image quality when the production line speed fluctuates.

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Lambda VF-1 EDGE™ Tunable Filter Changer

SUTTER INSTRUMENT

Introducing the Lambda VF-1 Edge™ tunable filter system from Sutter Instrument. To take advantage of the new VersaChrome Edge™ filters from Semrock, the Lambda VF-1 Edge system allows user selection of the band-width as well as the center wavelength.

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Features

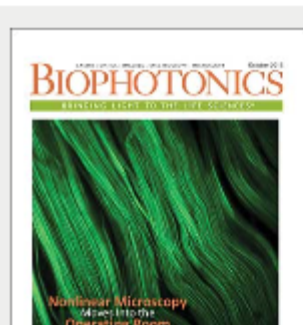
Fluorescence Correlation Spectroscopy; Ablative Facial Resurfacing (Lasers); CCDs in Medical Imaging; Multispectral Microscopy

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