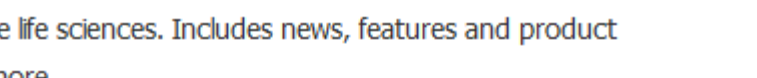


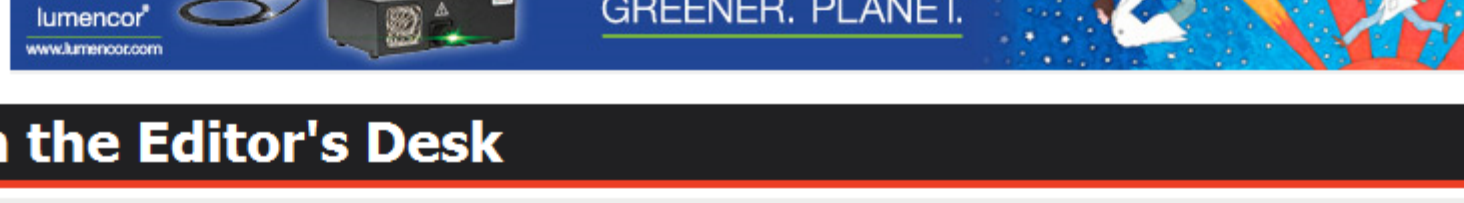
BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES®

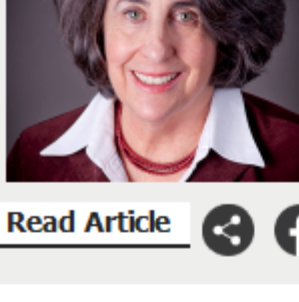


Monthly newsletter focusing on how light-based technologies are being used in the life sciences. Includes news, features and product developments in lasers, imaging, optics, spectroscopy, microscopy, lighting and more.

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From the Editor's Desk



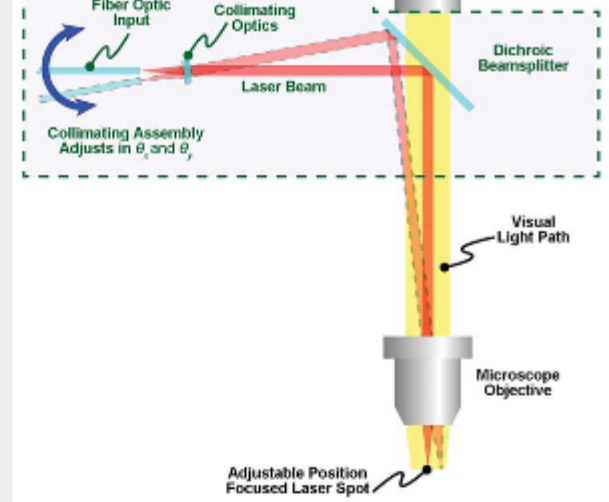
Auspicious Beginnings
MARCIA STAMELL, ASSOCIATE MANAGING EDITOR

The scope of biophotonics never ceases to amaze. But even within this ever-expanding field, the new technologies described in this issue augur a bright start, photonically speaking, to a new year.

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Modular Accessories Expand Fluorescence Microscope Capabilities

From neuroscience to morphogenesis and photosynthesis, optomechanical modules allow researchers to utilize fluorescence microscopy in diverse and increasingly complex studies.



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Smartphones Poised to Shake Up Spectroscopy

Spectrometers in smartphones hold promise for pathogen identification, food testing and blood glucose monitoring. Yet research-grade spectrometers still deliver superior range and resolution.



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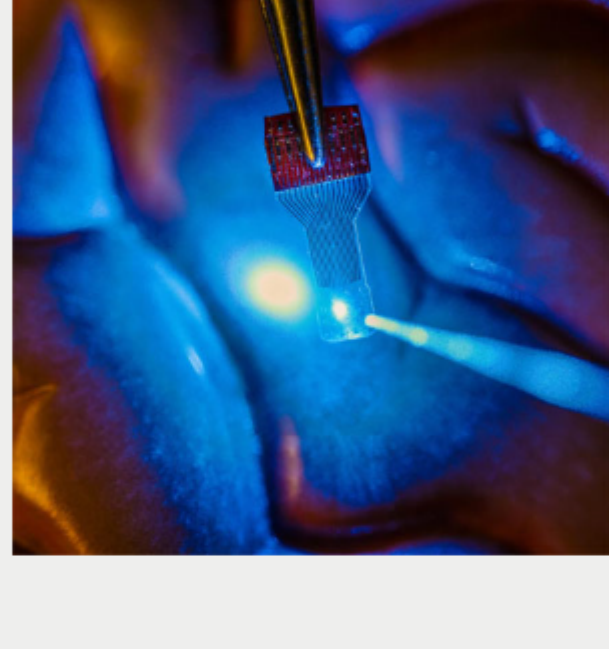
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In Case You Missed It

Protocols Introduced for Graphene-Based Array for Biophotonics Applications

The fabrication and use of transparent graphene-based neural electrode arrays for applications in fluorescent microscopy, OCT and optogenetics have been described in detail by the researchers who developed the array. The arrays could provide opportunities to advance techniques that may not be possible using conventional opaque metal electrode arrays.



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Berlin Hosts First Micro Photonics Conference

Over 1,000 participants from 15 countries attended the first Micro Photonics conference and congress in Berlin, showcasing their products and attending lectures on the development and manufacture of miniature optical components and their applications. The event was organized by Messe Berlin in association with Berlin Partner für Wirtschaft und Technologie GmbH, the K.I.T. Group and other partners.

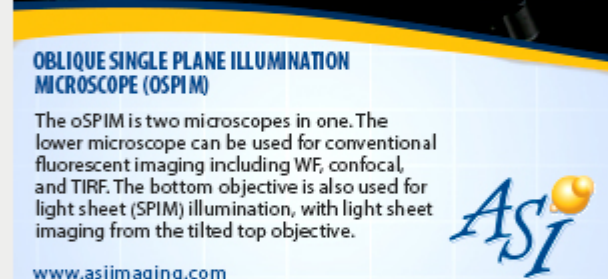
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Light Could Restore Health in Bees Exposed to Pesticide

Near-IR light therapy has been shown to counteract the harmful effects of neonicotinoid pesticides and improve survival rates of poisoned bees.

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Featured Products



Compact and Efficient Multi-Laser Engine-iChrome CLE

TOPTICA Photonics Inc.
TOPTICA's iChrome CLE is a compact laser engine that combines four laser lines in one box. All integrated colors are provided via one polarization-maintaining single-mode fiber.

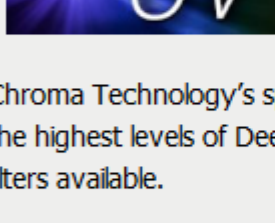
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Lumencor's SOLA SE FISH Light Engine

Lumencor Inc.
Lumencor's SOLA light engines offer access to modern solid state illumination, with all its performance and efficiency benefits, at a price comparable to most metal halide light sources.

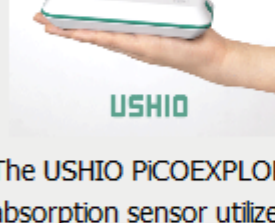
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Sputtered Metal Deep-UV Interference Filters

Chroma Technology Corp.
Chroma Technology's sputtered metal UV interference filters offer the highest levels of Deep UV transmission of any UV metal coated filters available.

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USHIO Introduces New Analytical Tool, PICOEXPLORER™ Photo Absorbance Sensor (PAS)

USHIO America Inc.
The USHIO PICOEXPLORER™ model PAS-110 handheld photo absorbance sensor utilizes patent pending, Silicone Optical Technology™ (SOT), a unique new concept designed to suppress optical scattering and reduce scattering light noise.

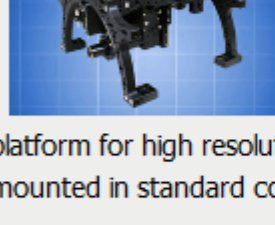
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Laurin Publishing Announces Poster Series

Photonics Media
Laurin Publishing Co., whose titles include Photonics Spectra and BioPhotonics magazines and the Photonics Buyers' Guide, announces the availability of two posters featuring art that takes a lighthearted look at the early days of the photonics industry.

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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.

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Webinars

An Introduction to Back Illuminated sCMOS Cameras

Tue, Feb 14, 2017 1:00 PM - 2:00 PM EST

Scientific CMOS (sCMOS) cameras are increasingly becoming detectors of choice for a range of quantitative imaging and spectroscopy applications. This webinar, presented by Princeton Instruments, will give you an overview of sCMOS camera technology and how it compares to CCD, EMCCD and ICCD low light imaging and spectroscopy detectors. It will cover the key improvements of "back illuminated" sCMOS technology over previous generations, the performance criteria of low light detectors, and how to select the optimum detector technology based on your application requirements. The webinar is aimed at both beginners and advanced users of various optical diagnostic techniques.

[Register Now](#)

High-Speed Imaging Bi and Beyond the Diffraction Limit

Thu, Feb 16, 2017 1:00 PM - 2:00 PM EST

Hari Shroff, Ph.D., head of the Section on High Resolution Optical Imaging at the National Institute of Biomedical Imaging and Bioengineering (NIBIB), will speak on his lab's latest work to develop high-resolution optical methods for the study of live, dynamic, 3D samples, including efforts to improve structured illumination microscopy (SIM) and light-sheet microscopy. He will also discuss developments in inverted selective plane illumination microscopy (iSPIM) and dual-view iSPIM.

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Coming in February...

Features

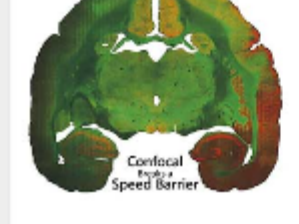
NIR Spectroscopy; Fluorescence Imaging; Ophthalmological Lasers, Adaptive Optics

Issue Bonus

Annual Spectroscopy 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 our online submission form www.photonics.com/submitfeature.aspx.

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