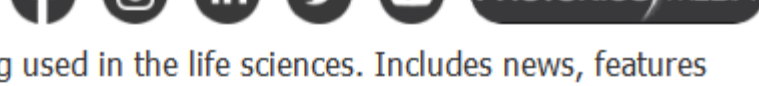


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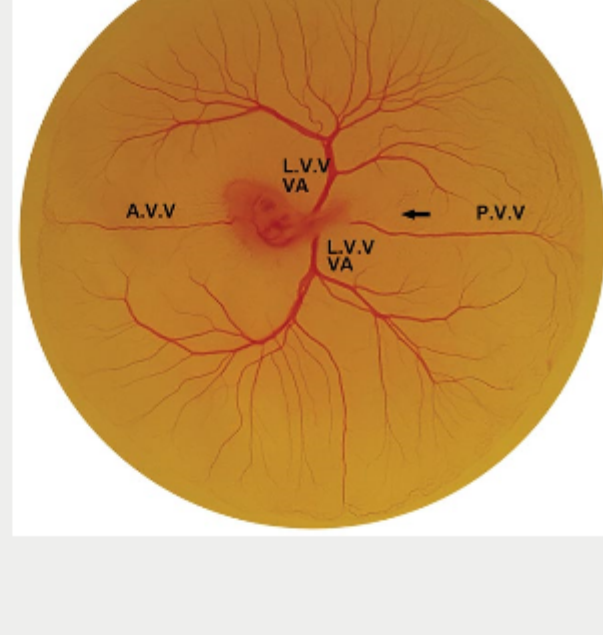
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Photomediated Ultrasound Therapy Offers Precision Targeting of Microvessels

Neovascularization and vascularization play a critical role in the pathogenesis of numerous pathological conditions, including cancer, inflammation and retinal vascular diseases. Retinal diseases such as macular degeneration and diabetic retinopathy are leading causes of blindness. Therefore, significant research efforts have focused on the development of antivascular therapies, which include anti-angiogenic and vascular targeting therapies.



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Smartphone App Objectively Assesses Brain Injuries in The Field

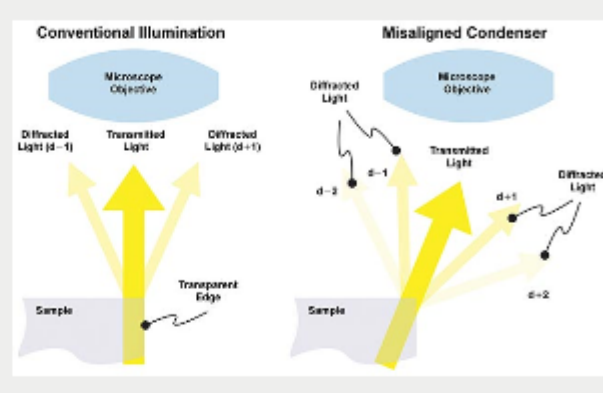
A smartphone app that detects concussion and other traumatic brain injuries (TBIs) could be used to determine whether someone — whether a football player, a soldier in battle, or an elderly person who has fallen — should be further assessed for concussion or other brain injury. The app, called PupilScreen, uses a smartphone's video camera and deep learning tools to identify changes in the pupil's response to light.



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DGC Helps Illuminate Mechanisms of Alcohol Dependency

Imaging transparent, colorless specimens has always presented a challenge in optical microscopy. In many applications, it is not desirable or even possible to use fluorescent dyes, stains or transgenic probes to render target objects more visible.



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Featured Products

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.

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A-TEEM and Molecular Fingerprinting

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A-TEEM (Absorbance and Transmission Excitation Emission Matrix) simultaneously measures absorbance and fluorescence transmission. A-TEEM fingerprints molecules with high specificity and ultrahigh-sensitivity enabling researchers to identify, quantify and understand dynamics of fluorescing and absorbing molecular states and mixtures.

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Compact, Low Cost <30pm Resolution in the VIS and NIR

LightMachinery Inc.

The Hornet Spectrometer achieves the resolution of large grating spectrometers at a fraction of their cost and size while covering a larger wavelength range. Simple PC based software allows the user to review spectra in real time and save or export for more analysis.

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Powerful Femtosecond Fiber Lasers

TOPTICA Photonics Inc.

The FemtoFiber ultra series shares the advantages of TOPTICA's previous ultrafast fiber laser generations. The systems are compact lasers that work reliable just after a push-button start. No water-cooling is required since a simple air-cooling is sufficient for a stable operation.

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Eight Bright Solid-State Light Sources

Lumencor Inc.

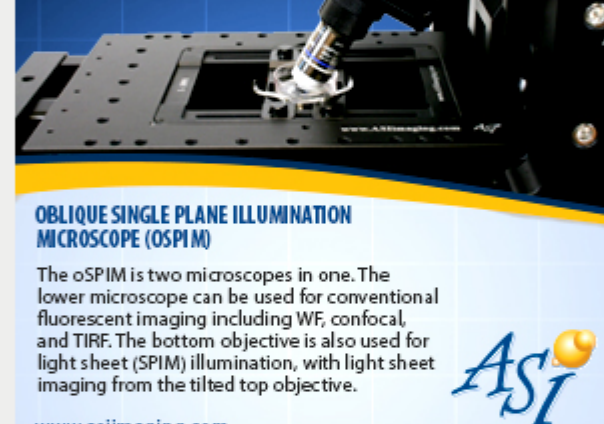
Lumencor's new SPECTRA III Light Engine® is here, with

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In Case You Missed It

Broader Palette of Fluorescent Dyes Could Advance Biological Imaging

To better illuminate the inner workings of cells, researchers have developed a way to adjust the properties of fluorescent dyes deliberately, resulting in an expanded palette of dyes that are bolder, brighter and more cell-permeable.



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Indiana University Awarded \$4M NSF Grant to Advance Medical Nanotechnology

One year after establishing the intelligent systems engineering program at the Indiana University (IU) School of Informatics, Computing and Engineering, the university has been awarded a five-year, \$4 million grant from the National Science Foundation to advance nanoscale devices to improve human health and fight cancer.

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Holographic Technique Uses Deep Learning to Increase Accuracy, Improve Microscopy

Deep learning, one of the key technologies behind advances in real-time speech recognition and automated image and video labeling, is being used to reconstruct holograms to form microscopic images of samples. Researchers are using a convolutional neural network-based method that is trained through deep learning to rapidly perform phase recovery and holographic image reconstruction.

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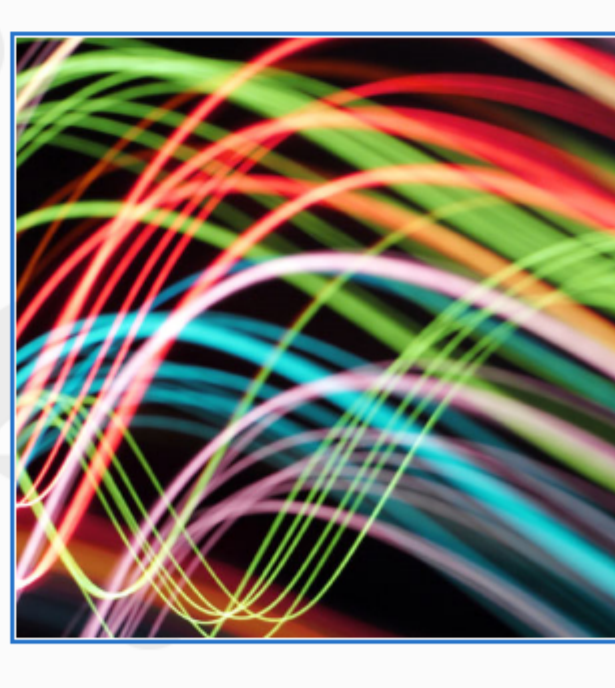
Webinars

PBM 101: Photobiomodulation Basics

Tue, Jan 9, 2018 1:00 PM - 2:00 PM EST

This webinar will provide a brief history of the use of light and color to this diagnostic and treat disease. It will review the science behind photobiomodulation (PBM) and present examples of 'real world' applications for this emerging technology. Presenter Robert S. Dotson, M.D., FAAO (board-certified, Ophthalmology) has been actively involved in researching and developing PBM technology for applications within ophthalmology for over 15 years. He is the founder of two companies focused on developing PBM applications, Photospectra and LumiThera.

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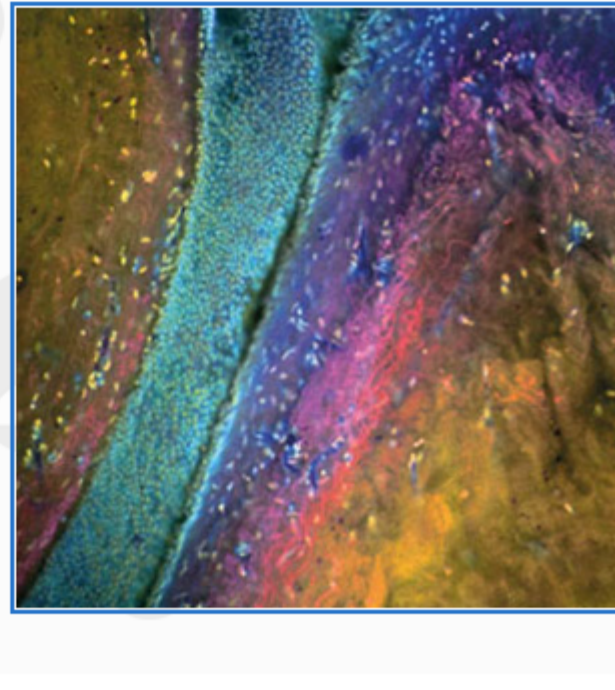


The MUSE Microscope for Advancing Light Microscopy

Tue, Jan 16, 2018 1:00 PM - 2:00 PM EST

This webinar will introduce microscopy with UV surface excitation (MUSE), a fluorescence-based, slide-free optical imaging system that provides high-resolution diagnostic images in minutes without causing damage to fragile tissue samples. Presenter Richard Levenson, M.D., FCAP, will discuss the development of the MUSE microscope and demonstrate its use. Researchers, scientists and clinicians who are interested in learning about novel forms of microscopy and recent advances in the field will benefit from attending and/or viewing this free webinar.

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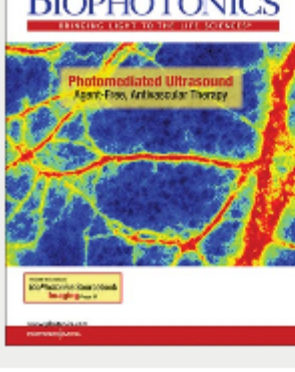


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