

BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES®

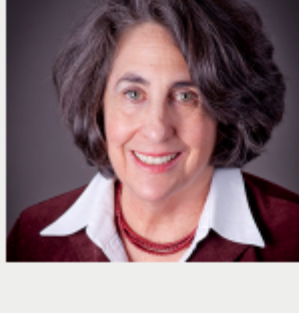


Monthly newsletter focusing on how light-based technologies are being used in the life sciences. Includes news, features and product developments in lasers, imaging, optics, spectroscopy, microscopy, lighting and more.

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From the Editor's Desk



Windows of Opportunity
MARCIA STAMELL, ASSOCIATE MANAGING EDITOR

Our cover story considers the progress and prospects of optical coherence tomography. There are promising new uses of OCT, a panel of three industry experts tells us. One is OCT angiography. OCT-A is just attracting the clinical interest that is the necessary precursor to wider adoption. But there are serious obstacles to this and other OCT techniques moving beyond the domain of research hospitals and academia.

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Heat Management Improves Performance

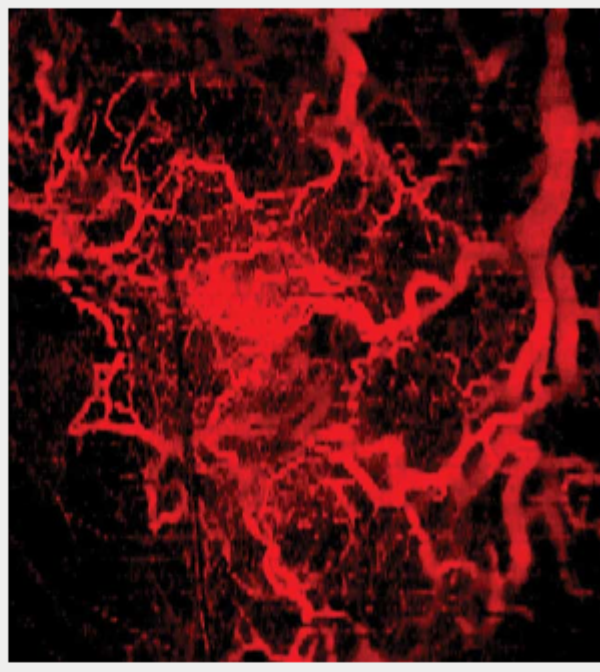
Selecting the proper technology improves performance and enables designers to achieve smaller package size, extend component life and meet touch temperature standards in biomedical devices.



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Where Does OCT Go From Here?

OCT-A — optical coherence tomography angioplasty — which allows imaging without dye, is a promising breakthrough in the detection of early-stage glaucoma. And swept-source OCT has opened new possibilities for diagnosing diabetic retinopathy and early macular degeneration.



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In Case You Missed It

Hyperspectral iPhone Camera to Monitor Health and Environment

By turning an iPhone camera into a new kind of optical sensor, researchers at VTT Technical Research Center of Finland have created a low-cost hyperspectral mobile device. This will allow consumers to monitor their health, test food quality and verify product authenticity, all from their smartphone.



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Virtual Reality Diagnoses Balance Disorders

Disorders of balance and vestibular function (balance and eye movement) can be diagnosed using a new portable, and inexpensive virtual reality device.

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Optical Fibers Illuminate Brain Activity

A 3D-printed brain model equipped with optical fibers aims to help clinicians and patients visualize brain function activity, overcoming the shortcomings of four-dimensional neuroimaging techniques.

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Webinars

Integrating Camera Technology Into a Successful Machine Vision Solution

Fri, Mar 10, 2017 1:00 PM - 2:00 PM EST
In this webinar, Rex Lee, Ph.D., CEO and president of Pyramid Imaging, Inc. and a machine vision professional with more than four decades of experience in business and academe, will discuss the components of a comprehensive machine vision system, including cameras, lighting, lenses, sensors and detectors; and how to design a system that has the components required for optimal performance. Areas he will address include: requirements definition, system design, implementation, turnkey systems; and how to determine if a turnkey machine vision system is right for you.

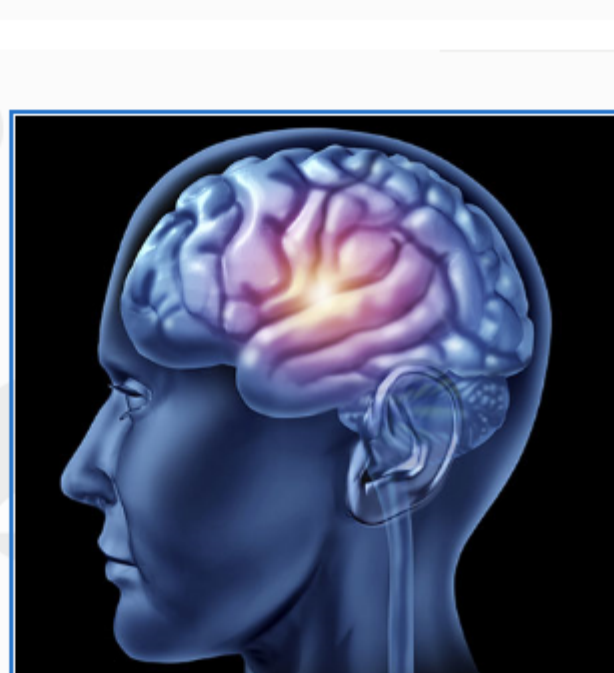
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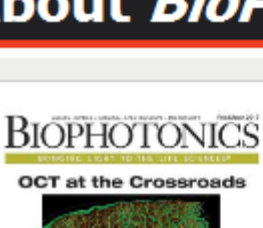
Large-Scale, Deep-Tissue Neuronal Imaging

Thu, Apr 20, 2017 1:00 PM - 2:00 PM EDT
Lingjie Kong, Ph.D., will speak on advances in large-scale deep tissue imaging of biological dynamics, focusing on applications in neuroscience. Kong received his Ph.D. in Optical Engineering from Tsinghua University in 2012. For postdoctoral training, he worked at X. Sunney Xie's group at Harvard University and Meng Cui's group at Howard Hughes Medical Institute's Janelia Research Campus and Purdue University. He is currently engaged in research work at Purdue University and is planning to join the faculty at Tsinghua University.

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