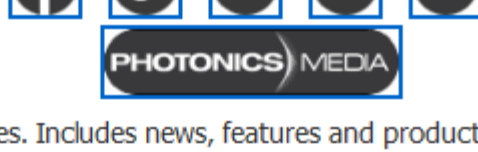


BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES®

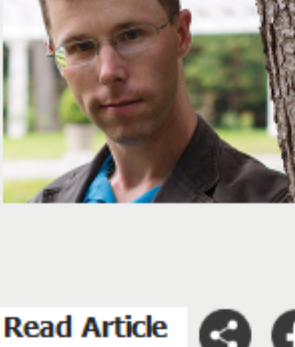


Monthly newsletter focusing on how light-based technologies are being used in the life sciences. Includes news, features and product developments in lasers, imaging, optics, spectroscopy, microscopy, lighting and more.

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From the Editor's Desk

Please Don't Squeeze the Peaches - article and slideshow
 JAMES SCHLETT, EDITOR




Despite all of mankind's technological advances, consumer methods for testing fruit ripeness — visually scanning, squeezing and smelling — remain fairly primitive. In many ways, the difference between how our hunter-gatherer ancestors identified ripe fruit in the forest or on the savannah and how we do it in the grocery store is probably more a matter of art than technique.

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Low-Level Light Therapy Is Still Looking for — and Finding — Clinical Inroads


The field of low-level light therapy (LLLT) emerged soon after the invention of the ruby and helium-neon lasers in the early 1960s. Since then, the technique has progressed, proving effective for a number of therapeutic areas, including reducing inflammation, promoting wound healing, reducing pain and for improving skin conditions and local circulation. However, despite decades of supporting research and a large body of evidence, the scientific community is still reluctant to implement LLLTs for clinical use.



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Next-Generation Stereo Endoscopes are Opening Surgeons' Eyes


Technological advances are paving the way for single-channel stereo endoscopes that are ideal for minimally invasive neurosurgery. New stereo endoscopes also promise to deliver IR fluorescence resolution and 4K resolution.



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Contribute to the Photonics Media 2016 Reader Poll

Photonics Media has opened its annual reader poll to garner input from our global audience for inclusion in the August 2016 issue of Photonics Spectra. Follow the link to answer three quick, fun questions, and your answers could be published this summer.



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In Case You Missed It

Optical Prism Designs Expands Vision Field for the Sight-Impaired

A series of novel optical designs may address the limitations of current peripheral prism eyeglasses and help further expand the field of vision for patients with hemianopia, a condition in which the visual fields of both eyes are cut in half.



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Fiber Optic Biosensor-Integrated Microfluidic Chip Detects Glucose Levels

The lab-on-a-chip approach is being applied to the development of glucose meters for the early diagnosis and prevention of diabetes. An optofluidic device has enabled detection of glucose in solution, requiring only a tiny droplet of sweat.

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Microscopy Method Observes Spinal Cells in Freely Behaving Mice

A microscope about the size of a penny has been used to observe everyday activity of cells within the spinal cords of mice, revealing that astrocytes — cells in the nervous system that do not conduct electrical signals and were traditionally viewed as merely supportive — unexpectedly react to intense sensation.

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Call for Nominations! Beacons of the Photonics Industry

Beacons are the photonics industry's luminaries, guiding scientific, business and consumer communities to embrace optics and photonics technologies. In the upcoming August issue of Photonics Spectra, traditionally referred to as the "reader" issue, we are taking the opportunity to crowdsource deserving professionals who are enabling the success of the industry through their work in five categories.


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<p>Lumencor's LIDA Light Engine</p> <p>Lumencor Inc. Lumencor's LIDA light engine® works hand-in-hand with the latest monochrome cameras to generate RGB color transmitted light images with unprecedented sensitivity, spatial resolution, speed and color fidelity.</p> <p style="text-align: right;">Visit Website Request Info</p>	<p>Advanced Energy® UltraVolt® HVA Series—Precision High Voltage Amplifier</p> <p>Advanced Energy Industries Inc. The HVA series of DC-to-DC high voltage power supplies operates a precision filter/divider and linear HV switch to produce a high voltage amplifier (HVA).</p> <p style="text-align: right;">Visit Website Request Info</p>
<p>Dual Inverted SPIM from ASI</p> <p>Applied Scientific Instrumentation Inc. Applied Scientific Instrumentation has developed a new form of light sheet microscopy with our collaborators in the scientific community. The diSPIM system from ASI is an extremely cell friendly system for imaging live specimens.</p> <p style="text-align: right;">Visit Website Request Info</p>	<p>Compact 532 nm and 561 nm Lasers With Direct Modulation</p> <p>Cobolt AB Cobolt AB introduces modulation capability on the diode pumped lasers (DPL) in the green-yellow region of the Cobolt 06-01 Series of plug and play CW lasers.</p> <p style="text-align: right;">Visit Website Request Info</p>
<p>Laurin Publishing Announces Poster Series</p> <p>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. The unique and original drawings of Diane M. Laurin appeared...</p> <p style="text-align: right;">Visit Website Request Info</p>	<p>Laser Innovations by PicoQuant</p> <p>PicoQuant GmbH PicoQuant offers a selection of turnkey, versatile picosecond pulsed laser solutions for all kinds of spectroscopic and microscopic applications.</p> <p style="text-align: right;">Visit Website Request Info</p>

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Webinars

New Optics Drawings Standards
 Thu, Jun 30, 2016 1:00 PM - 2:00 PM EDT

Dave Aikens, the leader of the project to adopt ISO 10110 as an American National Standard, will provide an introduction of OP1.0110, the American National Standard for optics drawings. He will discuss the format of the drawings, as well as an overview of the tolerance notations for things like glass parameters, surface wave front, imperfections and texture. He will also explain how OP1.0110 differs from ISO 10110 and provide insight into how both standards will change in the coming decade.

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 Microscopy Sourcebook: Focused features, news, products and directory

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