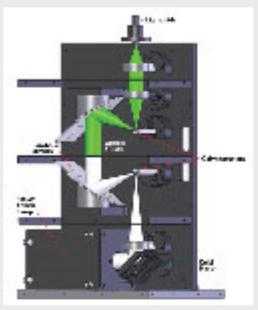
BIOPHOTONICS
BRINGING LIGHT TO THE LIFE SCIENCES

PHOTONICS MEDIA
THE PULSE OF THE INDUSTRY

Wednesday, June 25, 2014

Microscopy Light Sources Illuminate Research Biology



Research biology is changing, moving toward more complex experiments that combine imaging and traditional fluorescence with photostimulation and electrophysiology. As these new directions evolve, they require light sources that adapt on the fly, rapidly providing multiple wavelengths in a format that is programmable and tunable.

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QCLs for Medicine: The Promise and the Payoff

Although hurdles remain, the promise of quantum cascade lasers in medicine moves closer to realization with the commercial introduction of a microscopy platform, demonstration of a prototype device for breath analysis, and continued research and development.

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Laser Treatment Shows Promise for Skin Cancer

The treatment of basal-cell carcinoma with a new combination of lasers – pulsed dye and Nd:YAG – has yielded some good results, offering the potential for nonsurgical treatment.

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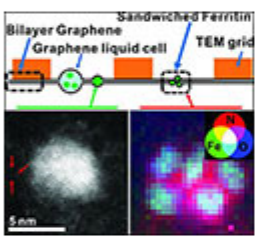
Graphene Sandwich Improves Biomolecule Imaging



Atomic-level images of a biological molecule in its natural environment can now be obtained by sandwiching the wet sample between sheets of graphene. Graphene has an extraordinarily high thermal and electroconductivity, and is able to conduct away both the heat and the electrons generated as the electron microscope's beam passes through the sample.

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SERS Technique Diagnoses Meningitis

A new laser-based test uses nanoparticles to speed up the diagnosis and treatment of bacterial meningitis, a disease that can lead to blood poisoning and brain damage if not discovered quickly.

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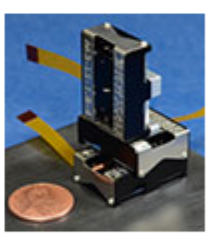
Biophotonics Products

CTL – Continuously Tunable Laser

Toptica Photonics

TOPTICA introduces a new family of Continuously Tunable Lasers! High power, narrow linewidth and high absolute and relative wavelength accuracy help you perform wide scans with the highest resolution.

More info >>



USB Micro Stage

New Scale Technologies, Inc.

The M3-LS Linear Smart Stage has 0.5 µm resolution with absolute encoding. The 29 x 20 x 10 mm piezo stage needs no external controller.

More info >>

Laser Scanner

Applied Scientific Instrumentation, Inc.

The Fiber-Coupled Laser Scanner by Applied Scientific Instrumentation is a 2-D galvo unit designed for generating SPIM (selective plane illumination microscopy) light sheets.

More info >>

CMOS Camera

Hamamatsu Photonics UK Ltd.

Hamamatsu Photonics has introduced the ORCA-Flash4.0 scientific CMOS camera.

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Industry Events

Microscopy & Microanalysis 2014 - August 3 – 7, 2014 · Hartford, CT

Symposium includes: the Instrumentation & Techniques Symposia, the Biological Sciences Symposia, and the Physical Sciences Symposia.

More info >>