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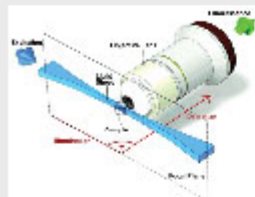

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# BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES

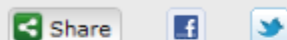
Wednesday, July 23, 2014

## Light-Sheet Microscopy Advances Biological Study



With this fluorescence technique, stacks of images are merged to reproduce a live specimen in 3-D. In recent years, light-sheet microscopy (LSM) has come to the fore as a faster, less phototoxic method than other fluorescence microscopy techniques, making it ideal for studying living organisms and the biological processes that take place within them.

[Read Article >>](#)



## Multispectral Quantitative Phase Imaging Captures Live Human Cells Quickly

Within biological systems, structural, chemical and functional information about a system of interest can be extracted from the wealth of spectral data available. This article focuses on the specific application of multispectral imaging to quantitative phase imaging – specifically, the known chromatic aberration from sequential images obtained from a high-speed multispectral wheel camera yield a quantitative phase, facilitating cell tracking and screening.

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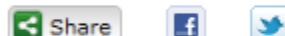


## Nanoballoons and Lasers: A New Cancer Fighter



Chemotherapeutic drugs have long held their own in the fight against cancer, but inefficiency in delivery and unwanted side effects continue to hinder the process. Now, a team from the University at Buffalo, with assistance from the University at Albany, Roswell Park Cancer Institute, the University of Waterloo and McMaster University, is developing a new way to deliver these medications.

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## Optogenetic Switch Now Works Both Ways: On and Off

Since the beginning of optogenetics, the technique has been more effective at switching neurons on than off — but not anymore. Almost a decade ago, Dr. Karl Deisseroth discovered optogenetics, in which light-activated opsins from algae pass electrical current into neurons to control brain circuitry. Recently, his team at Stanford University has re-engineered the light-sensitive proteins to enable more efficient regulation of the cells' "off" switches.

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## Biophotonics Products



### Cobolt DPL™ lasers

Cobolt AB  
Expansion of the 06-01 Series to include higher power 532nm (200mW) and 561nm (100mW).

[More info >>](#)



### Excitation and Illumination

LaserGlow Technologies  
LaserGlow Technologies provides laser sources from 266-2200 nm.

[More info >>](#)



### X-Ray Detectors

Teledyne Dalsa, Machine Vision OEM Components  
Teledyne Dalsa has added two new models to its Shad-o-Box x-ray detector line, the 3K and 6K HS.

[More info >>](#)



### OpticsCage+™

Newport Corp.  
Newport's new OpticsCage+ utilizes an easy-to-use snap in design to expedite the creation of optical systems.

[More info >>](#)

PHOTONICS MEDIA

THE PULSE OF THE INDUSTRY



## FEATURED VIDEO



### Optimax - Prototype Optics

Optimax is America's largest prototype optics manufacturer. Partnering to develop innovative solutions for tomorrow's optics needs, Optimax remains an influential adapter. With lean principles and a responsive process, Optimax is able to commit to small volume, high quality, and quick delivery. We can make prototype optics in one week!

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## UXR-300BF Ceramic Xenon Lamps

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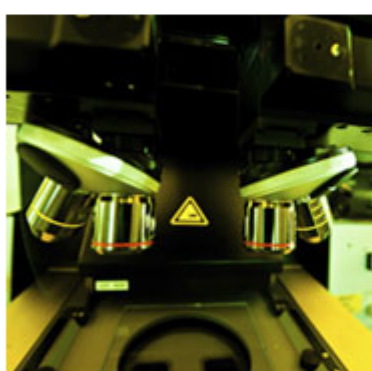


## PHOTONICS buyers' guide

Looking for **Biophotonics products**? Search the Photonics Buyers' Guide or Browse these product categories:

[Atomic Force Microscopes](#)  
[Cardiovascular/Angioplasty Laser Systems](#)  
[Laboratory Instruments and Supplies](#)  
[Medical Laser Systems](#)  
[Ophthalmology Laser Systems](#)  
[Spectroscopy Laser Systems](#)

## WEBINAR



## Join us for a FREE webinar: From Product to Profit

Wednesday, July 30, Noon EDT

Presented by Barbara Foster,  
The Microscopy & Imaging Place, Inc.



Barbara Foster

Early-stage, user-based research can impact business development, RD&E and rapid market penetration, and this webinar will tell you how. The presentation will include:

1. Two magic numbers that can determine if your product will be profitable;
2. Early-stage, user-based market research: the how, when, why, and where;
3. Impact on business development, product profitability, and speed to market;
4. Case Studies

[REGISTER NOW](#)

## Industry Events

### Microscopy & Microanalysis 2014 - Aug. 3-7, 2014 · Hartford, Conn.



M&M 2014 is an annual meeting and conference for the microscopy and microanalysis industries.

The event will feature an awards presentation, as well as numerous lectures and symposiums that focus on topics such as Microscopy and Spectroscopy for Power Generation and Energy Storage, Advances in In-situ Microscopy, Extended Crystal Defects, and Carbon Nanomaterials and Related Counterparts.

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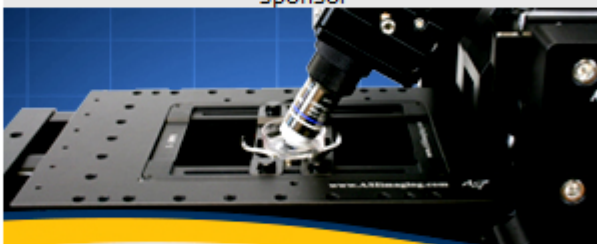
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