

BIOPHOTONICS

BRINGING LIGHT TO THE LIFE SCIENCES®

www.BioPhotonics.com

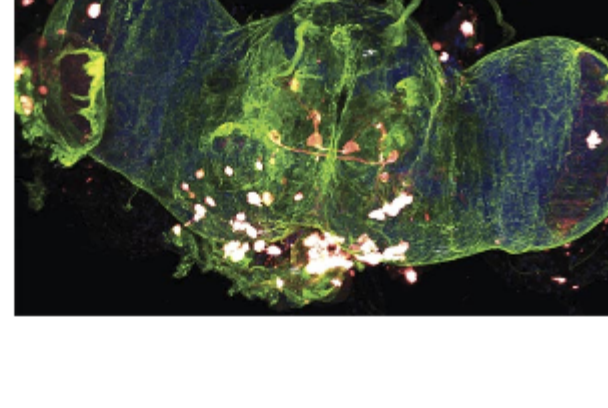
Monthly newsletter focusing on how light-based technologies are being used in the life sciences. Includes news, features and product developments in lasers, imaging, optics, spectroscopy, microscopy, lighting and more. Manage your Photonics Media membership at [Photonics.com/subscribe](https://www.photonics.com/subscribe).



Advancing Insights with the Power of Light
Bright, Stable, Long Lived Solid-State Light Engines

A Multiphoton Microscope Enables Portable 3D Biological Imaging

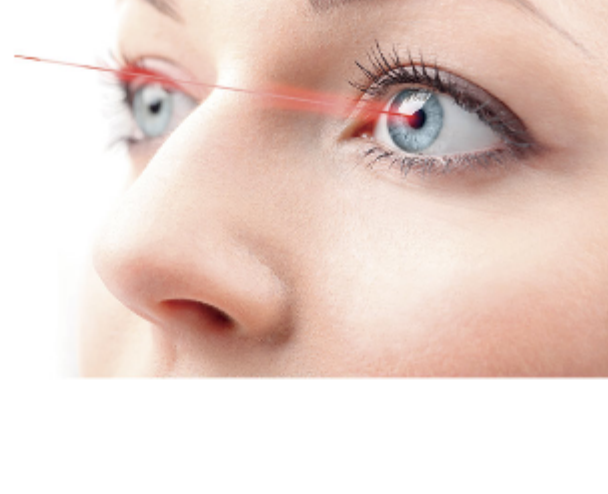
As the applications for multiphoton microscopy grow, so does the demand for an easy-to-use, transportable, and multimodal tool to adapt to any indoor working space. An ideal system should produce high-quality results and process high-volume data quickly while providing a powerful time-saving workflow. Also, the capability to perform multimodal analysis on the same region of interest without the inconvenience of moving the sample to another system maximizes content and provides more powerful complementary insights.



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Advanced Laser Scanning Enables High-Precision Vision Corrections

Scan heads with innovative controls are already used in many industrial laser-based applications that require the highest precision and throughput. Now the benefits of scanning with zero tracking error are being positioned for ophthalmic applications related to vision correction, in which scan pattern fidelity is critical for a good patient care outcome. This smart control technology enables new and different strategies for diagnosis and treatment compared to the limitations of previous controls, which are affected by tracking error, especially when processing circles, spirals, and freeform structures.



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The BioPhotonics Conference Places Biomedical Imaging and Medical Laser Innovations at the Fore

Photonics Media's second annual online BioPhotonics Conference, highlighting the latest advancements in optical biomedical and life sciences technology, will run Oct. 25-27. Attendees can expect an expansive lineup of presentations detailing the cutting-edge research and innovative technologies that are leading to improved diagnostics, treatments, and heightened understanding of the biophotonics field.



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.: Featured Products & Services



Cobolt Skyra: The True Multiline Laser

HÜBNER Photonics GmbH
HÜBNER Photonics celebrates

5 years since the introduction of the Cobolt Skyra™ revolutionary multi-line laser platform. With up to 4 wavelengths permanently aligned in a robust compact package, it has simplified many lab set-ups and next generation analytical instrumentation.

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AURA Light Engine: Ideal OEM Solid-State Illumination

Lumencor Inc.
Lumencor's AURA Light Engine delivers

unprecedented power, stability and reproducibility with bright, solid-state light sources and advanced electronics. This fluorescence excitation subsystem is an ideal platform for instrument manufacturers, enabling precise quantitation and high-resolution imaging. Customization is available, please inquire.

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Ultra Precise Piezo-Z Focus Stage

Applied Scientific Instrumentation Inc.

The stage is capable of XY resolutions down to 10-20 nm and Z resolutions to the 1-nm range. It can be used with rapid z-sectioning and autofocus systems. It prevents focus drift when used with our CRISP system.

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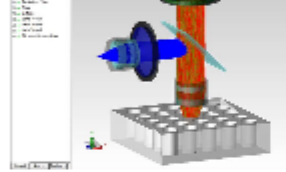
NAN Open-Design Upright Microscope

Sutter Instrument Company

The Sutter NAN™ — A focusing nosepiece microscope designed for electrophysiology. The microscope frame has been reimaged around highly stable, adjustable manipulator gantry stands. This design allows for many possible configurations to match the ever-expanding applications for upright microscopes.

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TracePro 2022

Lambda Research Corporation

Lambda Research Corporation is proud to announce the release of TracePro 2022, the latest release of our award winning TracePro software. TracePro 2022 incorporates many new and improved features.

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Award-winning Microscopy Illumination

CoolLED Ltd.

Maximize the potential of your microscope with the popular 3-channel pE-300 Series LED Illumination Systems, enabling high-performance and cost-effective fluorescence microscopy and optogenetics.

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KeyLight™ OEM Microscopy Light Source

Phoseon Technology Inc.

KeyLight™ illumination sources for fluorescence microscopy are the perfect solution to integrate into your equipment. Phoseon's proprietary LED solutions offer intense, broad-spectrum wavelengths for various colors from UV through visible into the infrared.

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Product Development through Manufacturing and Assembly

Optikos Corporation

Optikos brings 40 years of engineering expertise to serve the development needs of a diverse portfolio of life science clients — from design through manufacturing and assembly in our extensive clean facilities.

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Superresolution Microscopy Poster

Photonics Media

With interest in the superresolution microscopy field growing rapidly, the editors of BioPhotonics magazine — in collaboration with acknowledged experts — created a poster with readers in mind that is suitable for lab, classroom and office.

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SL160 Slide Loader

Prior Scientific Inc.

The SL160 automated microscope slide loader combines reliability and high capacity with easy set up to provide automated slide scanning to a wide variety of existing upright microscopes or with the use of Prior's OpenStand microscope.

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APPLIED SCIENTIFIC INSTRUMENTATION
ULTRA PRECISE PZ-2000FT PIEZO Z-FOCUSING STAGE

- Piezos are integrated into the top plate of the automated XY stage
- The stage accepts standard K-style inserts to support a wide range of samples
- Paired with our control electronics, it provides a fast, high-resolution, and highly repeatable means of controlling focus for 3D samples.

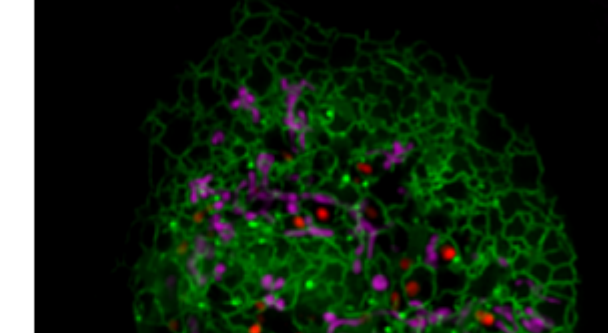
BIOPHOTONICS
BRINGING LIGHT TO THE LIFE SCIENCES
CONFERENCE
October 25-27, 2022

PHOTONICS MEDIA #BPC2022
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.: In Case You Missed It

Optogenetic Tools Restore Cell Function with Blue Light

Researchers from the University of Cincinnati, the University of Illinois Urbana-Champaign, and the University at Buffalo used an optogenetic technique to bring together the mitochondria and lysosomes in human stem cells, to revitalize the cells' fission process.



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Measurement-, Imaging-Based Monitoring Improves Pregnancy Outcomes

An optical method for measuring placental blood flow and oxygenation in real time provides information about placental hemodynamics that could aid in the early detection of adverse pregnancy outcomes. The technique is the result of a collaboration between the University of Pennsylvania and the Children's Hospital of Philadelphia.

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Plasmonics-Based COVID-19 Test Delivers Results in POC Settings

Researchers at Columbia Engineering and Rover Diagnostics used plasmonic nanoparticles with compact optics to develop a real-time, multiplexed, reverse-transcriptase quantitative polymerase chain reaction test. Weighing just two pounds, the ultrafast, portable PCR testing system is practical for use in decentralized and point-of-care settings.

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.: Upcoming Webinars



The Next Step in Optical Design: How Modelling of Optics Fabrication Avoids Common Pitfalls

Wed, Oct 12, 2022 10:00 AM - 11:00 AM EDT

Oliver Faehnle, Ph.D. shares on a new methodological analysis of optics fabrication technologies that enables the modeling and simulation of whole fabrication chains — by reading in lens design data. To that aim both optical systems and optical fabrication technologies have been classified and thus enabled to digitally interconnect. Consequently, the optimal fabrication chain for a given optical element can be determined out of the about 340 existing optical manufacturing technologies. Sponsored by Lambda Research Corporation.

[Register Now](#)

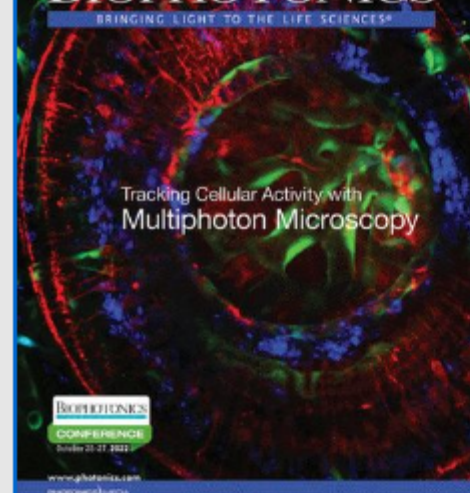
.: Next Issue:

Features

Reflectance Confocal Microscopy, Scientific Cameras, Superresolution Microscopy, Dynamic Light Scattering and Alzheimer's, and more.

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *BioPhotonics*. Please submit an informal 100-word abstract to Senior Editor Doug Farmer at Doug.Farmer@Photonics.com, or use our online submission form www.photonics.com/submitfeature.aspx.

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