

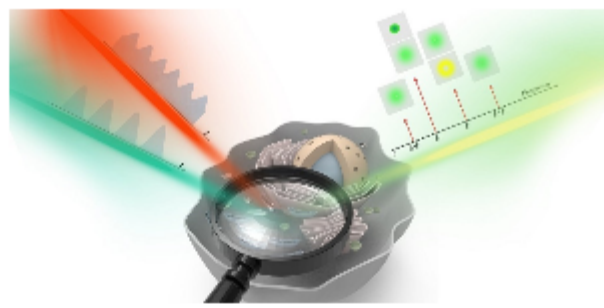
PHOTONICS spectra®

IMAGING NEWSLETTER

The latest news, features, and product developments in imaging components and systems – brought to you by Photonics Media. Manage your Photonics Media membership at [Photonics.com/subscribe](https://www.photonics.com/subscribe).

Method Avoids Drawbacks in STED Microscopy Noise Suppression

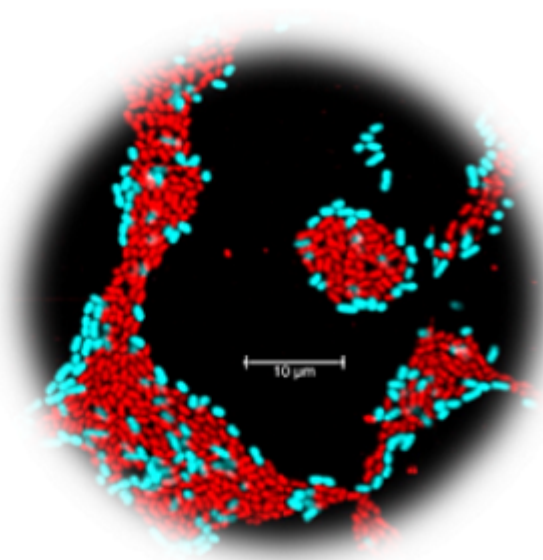
Researchers from Zhejiang University have proposed a novel microscopy method that selectively and effectively suppresses background noise in STED microscopy. The approach bypasses drawbacks that are caused by current methods used for noise suppression in STED imaging, which is considered a limitation of the technique.



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High-Throughput Imaging Links Microbial Metabolism to Identity

An imaging platform for investigating microbiomes in medical and environmental samples can perform high-throughput metabolism and identity analyses with single-cell resolution. Called SRS-FISH, or stimulated Raman scattering (SRS) two-photon fluorescence in situ hybridization (FISH), the technique combines the advantages of SRS for single-cell stable isotope probing with two-photon FISH for identifying cells quickly and with a high level of sensitivity.



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Quantum Dot-based Sensor Captures More Light in Less Space

Researchers from Chung-Ang University introduced a photodetector integrated into a dense sensor array for high-resolution multispectral (color) imaging. The technology uses quantum dots to overcome the space-consuming design of current sensors.



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.: Featured Products & Services



Electronic Focus for XR Display Testing

Radiant Vision Systems, Test & Measurement

The XRE Lens is a game-changer for evaluating visual quality of displays through XR headsets. Measure brightness, color, and image quality across 70° horiz. FOV and adjust electronic focus via software for multiple focal planes. Available in folded ("periscope") and non-folded configurations.

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Fast and Feature-rich Alvium USB cameras

Allied Vision Technologies GmbH

Allied Vision expands its Alvium USB camera series with new features and models featuring fast Sony 3rd generation IMX sensors.

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.: Featured Video

Product Demo: Measuring the XR Experience with the New XRE Lens - Radiant Vision Systems

Meet the XRE Lens — designed to evaluate the visual quality of XR (extended reality) displays. Eric Eisenberg, Optics Development Manager at Radiant Vision Systems, demonstrates this solution's flexible features from the floor of Photonics West 2022. With high-resolution imaging, electronic focus control, and folded configuration options, the XRE lens enables test and measurement of AR, VR, MR displays for high-quality visual experiences — as seen from the user's eye position in headsets and smart glasses.



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.: More News

Metasurface Tech Enables Polarization Imaging on Almost Any Camera

Researchers from the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) have developed a metasurface attachment that can turn almost any camera or imaging system, even off-the-shelf systems, into polarization cameras. The technology developed in the Capasso Lab at Harvard could, in theory, establish a mechanism to turn a standard camera into a polarization camera, albeit without the capacity to identify material compositions.

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Laser Speckle Method Captures Blood Flow in Microvasculature

Researchers at the National University of Singapore developed a confocal laser speckle autocorrelation method to image dynamic flow in microvasculature. The technique is label-free and enables real-time and quantitative imaging of blood flow on the microscopic level.

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Interferometry Provides Basis for LWIR Remote Thermal Imaging

Interferometry Provides Basis for LWIR Remote Thermal Imaging

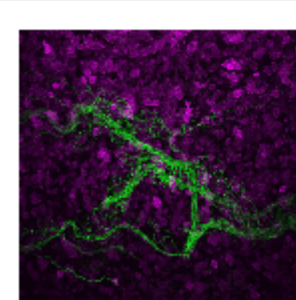
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Lensless Camera Captures Cellular-Level Details in 3D

Rice University researchers have tested a tiny lensless microscope called Bio-FlatScope, capable of producing high levels of detail in living samples. The team imaged plants, hydra, and, to a limited extent, a human.

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.: Upcoming Webinars



Sub-Cellular Biology at Tissue Scales with Cleared Tissue Axially Scanned Light-Sheet Microscopy

Wed, Aug 17, 2022 1:00 PM - 2:00 PM EDT

Large-scale interdisciplinary efforts have worked to comprehensively catalog cellular architectures in health and disease. Kevin Dean Ph.D. shares on the scalable imaging platform, Cleared-Tissue Axially Swept Light-Sheet Microscopy (CT-ASLM), that helps further this research. The CT-ASLM leverages high-speed, aberration-free, remote focusing to achieve an isotropic resolution of approximately 300 nm-scale subcellular imaging with an unparalleled optical sectioning capacity and large field of view. The platform provides global tissue architectures as well as quantitatively detailed morphological and biochemical descriptions of the individual cells that compose tissues in health and in disease. Sponsored by Power Technology.

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