

This Week in PHOTONICS



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Light Powers Butterfly-Inspired Hydrogen Sensor

Butterfly wings are the inspiration for a light-activated hydrogen sensor device capable of producing ultraprecise results at room temperature. Tests demonstrated the sensor's ability to detect hydrogen leaks before they develop to a point at which they could pose a safety risk.

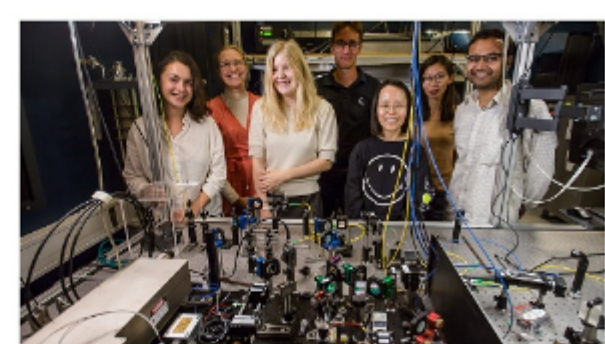
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Nanochip Outlines Path for Quantum Advantage

Researchers from the University of Copenhagen's Niels Bohr Institute and the University of Bochum (Germany) developed a chip with scale-up potential that they say will serve as a core component of a quantum simulator. The researchers produced a large enough number of stable photons, encoded with information, to scale up their nanochip device.

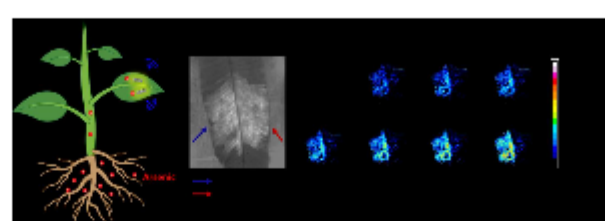
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Optical Nanosensor Helps Plants Detect, Monitor Arsenic Levels

A novel plant nanobionic optical sensor, capable of both detecting and, in real time, monitoring levels of arsenic in underground environments, exhibits changes in fluorescence intensity to indicate the presence and quantity of the metal.

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.: Photonics Spectra Conference



Optical Approaches for Clinical Use

Presentation: Biophotonics Technologies Applied at Point of Care
Presented by: Juergen Popp, Leibniz Institute of Photonic Technology

The ability to pair Raman spectroscopy with other optical modalities is allowing clinicians and medical personnel to provide care outside of highly specialized laboratory settings. From cellular imaging to surgical procedure, advances in optical instrumentation are driving progress in biomedical research and practice.

Juergen Popp, scientific director of the Leibniz Institute of Photonic Technology, Jena, and editor of the *Journal of Biophotonics*, presents an online session introducing an automated Raman platform that incorporates the function of specifically developed chips to enable microbial analysis. Popp's presentation will also include discussion on the usability of multimodal microscopes, and their role in and surgery and in-vivo medical imaging.

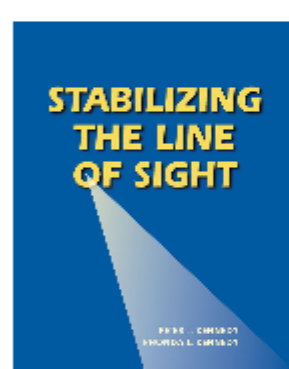
Biophotonics Technologies Applied at Point of Care is part of the Biomedical Imaging track of the *Photonics Spectra* Conference. Presentations will introduce the latest trends and technologies from across the photonics landscape. Registration remains open.

The inaugural *Photonics Spectra* Conference starts on Tuesday, Jan. 19, and runs through Friday, Jan. 22. Registration is free for the event, which is offered exclusively online.

For more information and to register, www.photonics.com/pscinfo.

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.: Featured Products



Stabilizing the Line of Sight

Photonics Media
 In *Stabilizing the Line of Sight*, authors Peter J. and Rhonda L. Kennedy provide a methodology and an example for executing a successful end-to-end line-of-sight

(LOS) design. Comprehensive in scope, this book will give readers a better understanding of the relationships between the various engineering disciplines that are required for successful LOS control.

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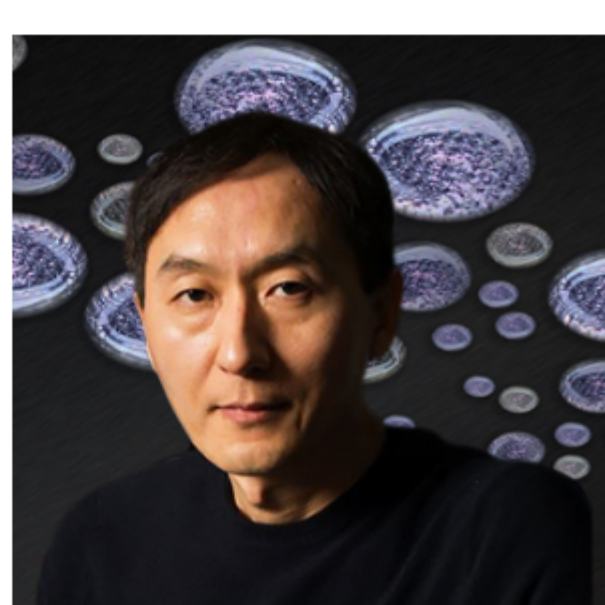
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.: All Things Photonics

Chunlei Guo, from the High-Intensity Femtosecond Laser Laboratory in the Institute of Optics at the University of Rochester, discusses his work in laser processing, leading to the discovery of highly functionalized materials. Guo's research, including with black and colored metals, is addressing societal issues including global access to clean water. Chrys Panayiotou, executive director of LASER-TEC, joins us to talk about developing a highly skilled optics and photonics workforce.

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