

# This Week in PHOTONICS



**PHOTONICS spectra CONFERENCE** Jan. 9-12, 2023

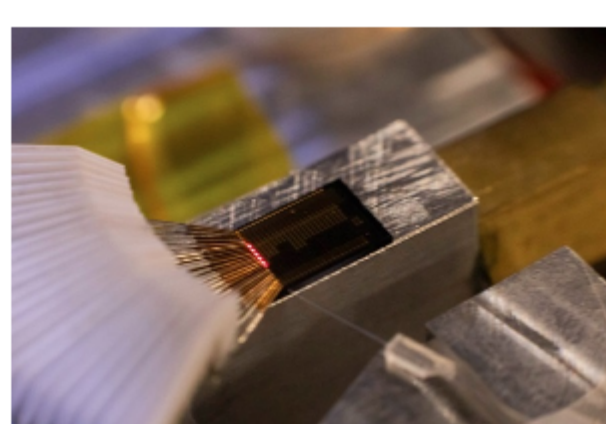
Discover the latest trends, technical advancements, and best practices in photonics.

#PSC2023 Register for FREE

## .: Top Stories

### Electronics Manufacturing Extends Spectrum of Integrated Photonics

Researchers from Nexus Photonics; (UC Santa Barbara); and Caltech have developed a technique to enable photonic chips to operate in the visible to near-infrared spectrum. The team's laser-coupling technique will make high-powered precision photonics orders of magnitude less expensive, and the technology holds potential for biomedical sciences through applications like biosensing and DNA sequencing. It could also open avenues in atomic physics and quantum research.



[Read Article](#)

### Needle-Shaped Beam Bolsters Range of Depth to Photoacoustic Method

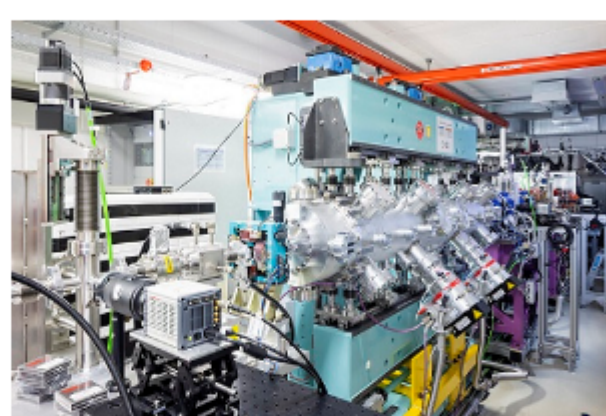
Researchers at Caltech have introduced an approach to photoacoustic microscopy (PAM) that uses a needle-shaped laser beam to extend the depth of field associated with the microscopy method. The technique, named NB-PAM (needle-shaped beam photoacoustic microscopy), delivered a depth of field that is nearly 14x greater than was previously achievable with PAM. With an increased depth of field, NB-PAM users acquired high-resolution images of samples even when their surface was uneven, and clearly imaged objects over a greater range of depths.



[Read Article](#)

### Atypical Accelerator Yields Free Electron Lasing in the Ultraviolet

An international team led by Synchrotron SOLEIL, France, and Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Germany, has demonstrated seeded free electron lasing in the ultraviolet regime based on laser-plasma acceleration. Up to this point, free electron lasers (FELs), such as the the European X-Ray Free-Electron Laser (XFEL), in Germany, have been based on conventional electron accelerators, which makes them long and expensive. The advancement could allow researchers to build more compact systems, which would considerably expand the possible applications of FELs.



[Read Article](#)

## .: Featured Products & Services



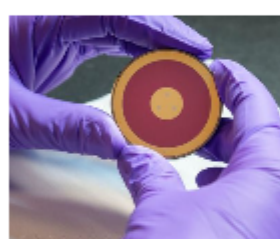
### InGaAs 1100-1700nm Quad Photodiode

**Advanced Photonix**  
New! 1100-1700 nm Bandpass InGaAs Quadrant Photodiode with 2 mm

diameter active area. Hermetic, Leadless Chip Carrier (LCC) Surface-Mount Devices (SMD) feature a 0.03 mm element gap & AR-coated silicon windows to block NIR light. Meets NASA low-outgassing standards; ideal for beam-centering applications.

[Visit Website](#)

[Request Info](#)



### IR Filters

**Deposition Sciences Inc. (DSI)**

DSI designs and manufactures bandpasses, beamsplitters, ARs, and absorption coatings for use in the MWIR thru LWIR wavelength regions, customized to specific applications. Using photolithography, we can also pattern these coatings with feature sizes as small as 20 μm.

[Visit Website](#)

[Request Info](#)



Northrop Grumman SNOPTICS

Now Offers IBS Coatings



ADVANCED LASER FUSION SPLICING AND GLASS PROCESSING

[LEARN MORE](#)

## .: More News

**Chip-Scale Laser Isolator Signals Forthcoming Advances in Compute** [Read Article](#)

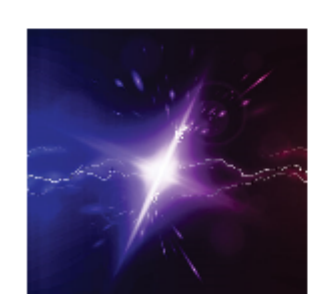
**Microscope Enables 3D High-Speed Image Capture of Living Cells** [Read Article](#)

**Lockheed Martin and RAFAEL Collaborate on Laser System** [Read Article](#)

**Aeluma and RFSUNY Team to Aid AIM Photonics** [Read Article](#)

**Quantum Light Transmitted Through Phase-Separated Anderson Localization Fiber** [Read Article](#)

## .: Upcoming Webinars



### Fused Silica in Radiation Environments

Tue, Dec 13, 2022 1:00 PM - 2:00 PM EST

An increasingly wide range of applications need to be able to function in harsh environments, not only on space missions but also here on Earth, in particle detectors, for example. It is important to understand radiation's key processes and their effects on fused silica in order to design optical instrumentation that can avoid harm to its systems, enabling it to complete its mission. Eduard Klett of Heraeus Conamic provides an overview of fused silica as an optical material and how it is affected by different types and doses of radiation. He classifies types of radiation and discusses their causes. Presented by Heraeus Conamic.

[Register Now](#)



### High-Power Diode Laser Modules for Manufacturing and OEM Integration

Wed, Dec 14, 2022 10:00 AM - 11:00 AM EST

High-power diode lasers have progressed significantly since their first appearance in the market. Today, these lasers are able to utilize high power levels and high-percentage electro-optical efficiencies for selected wavelengths. There are additional techniques that support the manufacture of special products, including line narrowing and spectral locking, with extraordinary results. Dr. Jörg Neukum, provides an overview of this technology, addressing wavelengths, cooling technologies, beam shaping, and power levels. He also presents selected examples of the realized performances. Sponsored by Coherent.

[Register Now](#)



### CALL FOR ARTICLES!

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazines (*Photonics Spectra*, *BioPhotonics*, and *Vision Spectra*). Please submit an informal 100-word abstract to [editorial@Photonics.com](mailto:editorial@Photonics.com), or use our [online submission form](#).



We respect your time and privacy. You are receiving this email because you are a Photonics Media subscriber, and/or a member of our website, Photonics.com. You may use the links below to manage your subscriptions or contact us.

Questions: [info@photonics.com](mailto:info@photonics.com)

[Unsubscribe](#) | [Subscribe](#) | [Subscriptions](#) | [Privacy Policy](#) | [Terms and Conditions of Use](#)

Photonics Media, 100 West St., PO Box 4949, Pittsfield, MA 01202-4949

© 1996 - 2022 Laurin Publishing. All rights reserved. Photonics.com is Registered with the U.S. Patent & Trademark Office. Reproduction in whole or in part without permission is prohibited.

