



Monthly Newsletter

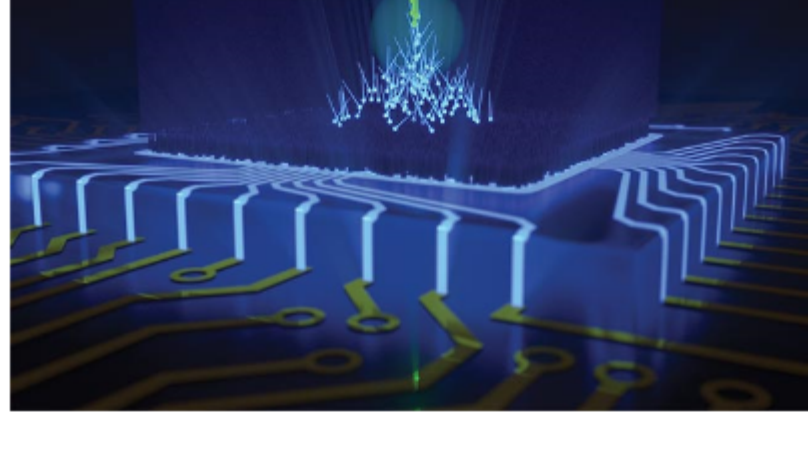
Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue. [Photonics.com/subscribe](https://www.photonics.com/subscribe).



Simulation Belongs Where Decisions Are Made
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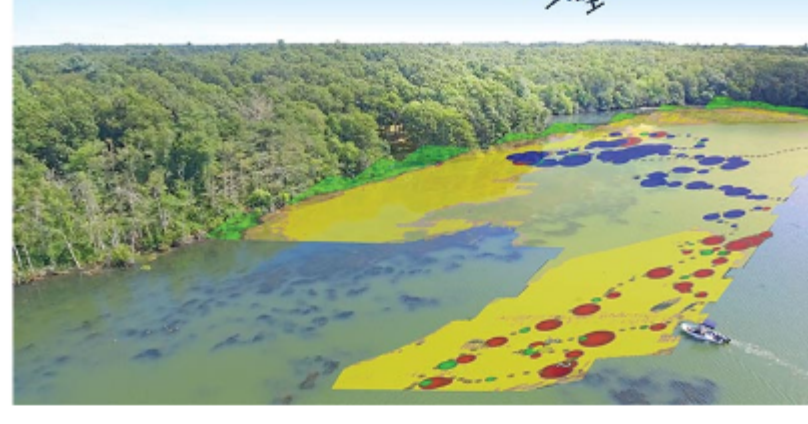
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Black Silicon Offers Enhanced Responsivity to Overcome Near-Infrared Photodetection Challenges

Achieving both high sensitivity and fast photodetection speed within the near-infrared (NIR) band presents a significant technical challenge. At the component level, conventional photodiodes fabricated from silicon face several performance limitations for NIR applications. Opportunity exists for

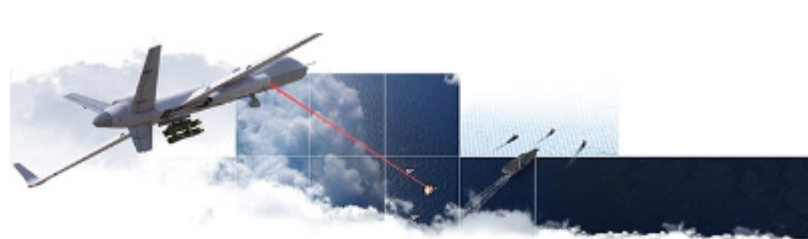
innovative alternative solutions to overcome these hurdles. The use of nanostructured black silicon for the photodiode is one such approach. [Read Article](#)



Component and System-Level Breakthroughs Extend Environmental Remote Sensing from Detection to Prevention

As the world grapples with escalating environmental challenges, demand has never been greater for durable and high-performance monitoring technologies. As a result of the number of different environmental applications that require advanced detection, as well as the volume of necessary

deployments for these solutions, opportunities are surging for systems that offer improved levels of precision and adaptability. [Read Article](#)

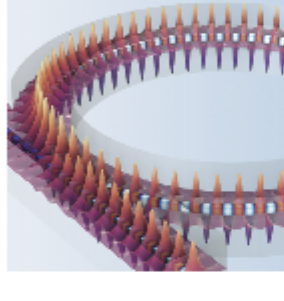


Directed Energy Technologies Mount an Energetic Response to the Drone Threat

“Keep your eye on the sky” is a critical rule in modern warfare, due to the rapid proliferation of low-cost, speedy uncrewed aerial vehicles. These aircraft can be fitted with surveillance equipment for tracking the enemy or loaded with weapons or explosives to take out targets. Today, drones are a mainstay in modern conflicts, including the Israel-Gaza and Russia-Ukraine wars. [Read Article](#)



Featured Products & Services



Multiphysics Modeling and Simulation

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COMSOL Multiphysics® is a software environment for

creating physics-based models and standalone simulation apps. Add-on products provide specialized functionality for electromagnetics, structural, acoustics, fluid flow, heat transfer, and chemical simulations.

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Norland Optical Splice

Norland Products Inc.

Norland's optical splice provides a high-performance connection for optic fibers in a unique one-piece design.

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Looking for something else? Check the Photonics Marketplace.



In Case You Missed It

Luminate NY Names Companies in Eighth Cohort

Empire State Development has named the 10 companies selected to participate in round eight of the Luminate NY accelerator program, investment fund, and competition. Each finalist will receive an initial investment of \$100,000 and will have the chance to compete for up to \$2 million in follow-on funding upon completion of the program. [Read Article](#)

EPIC Adds Board Members, Issues Awards at Annual Meeting

At its 2025 Annual General Meeting this week, the European Photonics Industry Consortium (EPIC) appointed Claire Valentin, Chief Strategy Officer at Exosens, and Maria Chiara Carozza, president of Italian national research council CNR, as new members of EPIC's board of directors. [Read Article](#)

Chinese Academy of Sciences Reports DUV Lithography Breakthrough

A compact, solid-state, nanosecond laser system capable of generating 193-nm coherent light — a wavelength crucial for the fabrication of silicon wafers — could greatly enhance the efficiency and precision of semiconductor lithography and open new paths to advanced manufacturing techniques. The advance comes from a team at the Aerospace Information Research Institute of the Chinese Academy of Sciences and reportedly marks the first time that a 193-nm vortex beam has been produced with a solid-state laser. [Read Article](#)



Latest Webinars



FLIR MIX – A Breakthrough in Infrared and Visible Imaging

Thu, Apr 10, 2025 11:00 AM - 12:00 PM EDT

Until now, researchers have had to choose between thermal and visible imaging: one reveals heat signatures while the other provides structural detail. Recording both and trying to align them manually—or harder still, synchronizing them temporally—can be inconsistent and time consuming. The result is data that's close but never quite complete. The new FLIR MIX is a game changer, capturing and synchronizing high-speed thermal and visible imagery at up to 1,000 frames per second. Visible and high-performance infrared cameras with FLIR Research Studio software work together to deliver one dataset with perfect spatial and temporal alignment—no missed details or second guessing, just a complete picture of fast-moving events. Presented by FLIR.

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Next Issue:

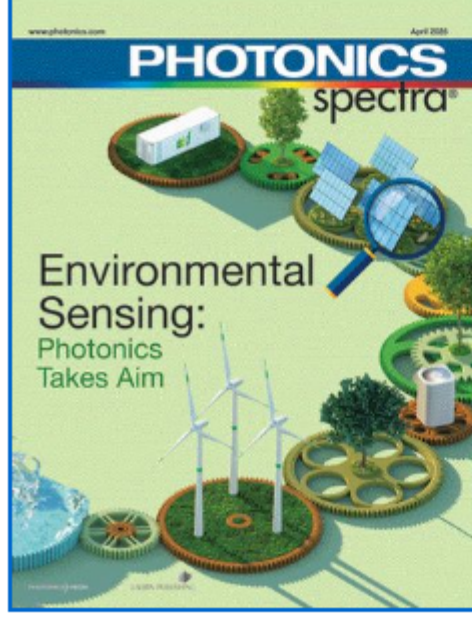
Features

Interferometry, Quantum Integrated Photonics, Liquid Crystal Optical Devices, and Surface-Emitting Semiconductor Lasers

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Photonics Spectra. Please submit an informal 100-word abstract to Jake Saltzman, Senior Editor, at Jake.Saltzman@Photonics.com, or use our online submission form www.photonics.com/submitfeature.aspx.

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