



Monthly Newsletter

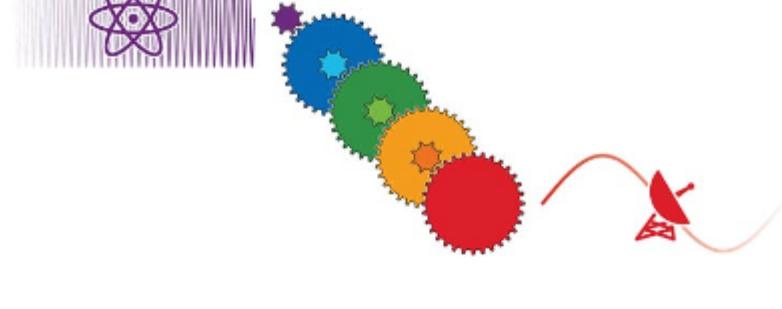
Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue. [Photonics.com/subscribe](https://www.photonics.com/subscribe).



Designing Optics for Manufacturability: Bridging the Gap Between Engineering and Production

In the fabrication of optical components, one of the most common — and most critical — challenges to overcome originates well before the start of manufacturing. Despite abundant technical knowledge, many optical engineers responsible for the design of optical components ranging from basic plano windows to precision mirrors and advanced laser optics have never set foot in a manufacturing shop. This disconnect often results in overspecified or impractical

designs that increase costs, lead time, and complexity without offering any improvement to performance. [Read Article](#)



Photonic Microwave Sources Divide Noise and Shift Paradigms

Radio frequency and microwave signals are central to ubiquitous technologies such as radar, communications, and positioning, navigation, and timing. They also form the

backbone of today's frequency standards. Their importance extends further into research, where they play a crucial role in fundamental scientific experiments, including those using very long baseline interferometry in radio astronomy. Optical frequency division enables the precise scaling of optical frequencies across orders of magnitude, extending

down to the microwave and RF domains. [Read Article](#)



Precision Filters Hold the Key to Measuring How We See

Whether a smartphone screen, automotive dashboard, or surgical monitor, the first thing that one notices upon viewing a scene or object is the color. While this has been true throughout human history, today's technology is consistently displaying higher saturated colors than ever before. Many displays cover the DCI-P3 gamut, defined 20 years ago. Others are now approaching the ITU-R Recommendation BT.2020 gamut, which spans a wider color range than the DCI-P3

space. [Read Article](#)



Featured Products & Services



Photonics Spectra Reference Chart

Photonics Media

This full-color, 29.5 × 20.5-inch poster of the photonics spectrum displays the major commercial laser lines, detectors, and optical materials in the ultraviolet to the far-infrared and beyond. The convenient format makes it easy to quickly find the information you need.

[Visit Website](#)
[Request Info](#)


IR Filters for Thermal Imaging

Spectrogon US Inc.

Spectrogon manufactures infrared filters and windows with high transmission, high rejection outside the passband, while maintaining excellent coating uniformity for thermal imaging and gas detection applications such as cryogenically cooled IR detectors and uncooled microbolometers. Our filters and windows range in dimension from Ø6.0 to Ø200.0 mm, with dicing capabilities down to as small as 1.0 × 1.0 mm.

[Visit Website](#)
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Looking for something else? Check the Photonics Marketplace.



In Case You Missed It

Fusion Ignition Achieved Using Sophisticated Diagnostic Tool

A collaborative research team from Los Alamos National Laboratory and Lawrence Livermore National Laboratory has implemented its Thinned Hohlraum Optimization for Radflow window diagnostic tool in its latest ignition experiment at the National Ignition Facility. The team conducted an experiment that generated a yield of 2.4 +/- 0.09 MJ of energy and created a self-sustaining feedback loop called a "burning plasma." [Read Article](#)

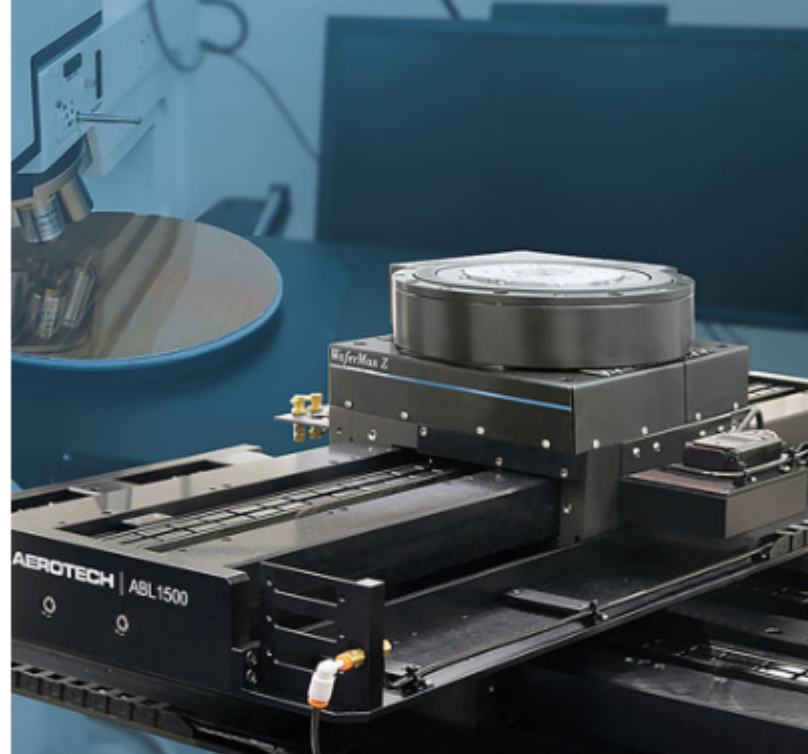
Illinois Team Pioneers VCSEL Breakthrough

Despite the ubiquity of VCSELs, found in everything from computer mice to face-scanning hardware in smartphones, these devices remain an active field of research, with many in the field exploring new applications. The laboratory of Kent Choquette at the University of Illinois Urbana-Champaign has developed a design in which light from multiple VCSELs combines to form a single coherent pattern called a "supermode." [Read Article](#)

Low-Cost Microphone Listens with Light

Traditional microphones capture tiny vibrations on the surfaces of objects caused by sound waves and turn them into audible signals. A microphone developed by researchers at the Beijing Institute of Technology operates differently: Rather than sound, the microphone listens with light. This light-enabled microphone is able to pick up sounds in situations where traditional microphones are ineffective, such as through a glass window. [Read Article](#)

Latest Webinars



Advanced Motion Control for Semiconductor Metrology

Thu, Oct 16, 2025 1:00 PM - 2:00 PM EDT

Join our webinar on advanced motion control for semiconductor inspection and metrology. Learn how precision motion systems power wafer inspection, SWLI, SEM/FIB, and AFM— Best for those working in boosting accuracy, speed, and reliability in manufacturing. Presented by Aerotech.

[Register Now](#)

Featured Video



Spotlight: Hollow Core Fiber: Inside a Surging Technology

Photonics industry luminary Jason Eichenholz discusses hollow core fiber (HCF). Eichenholz is co-founder and CEO of Relativity Networks, a Florida-based startup pioneering the development and rollout of this transformative technology. It is hardly Eichenholz's first such undertaking, and the Spotlight conversation looks back at some of his most consequential and influential projects.

[Watch Now](#)

Next Issue:

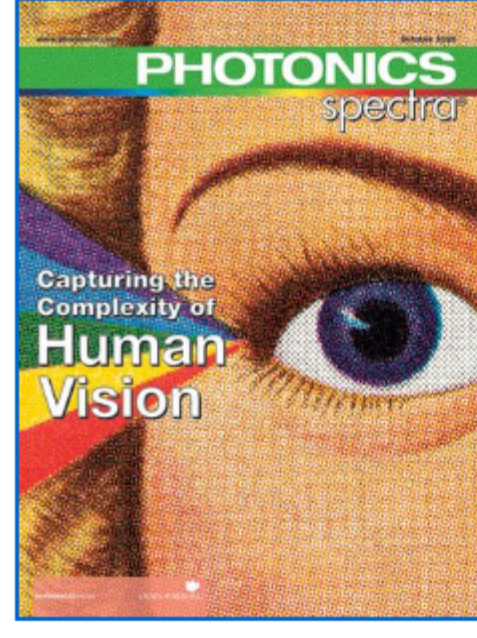
Features

Optics in Quantum Computing, Laser Cooling, Wavefront Sensors, Molecular Spectroscopy

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *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.

About Photonics Spectra



Since 1967, *Photonics Spectra* magazine has defined the science and industry of photonics, providing both technical and practical information for every aspect of the global industry and promoting an international dialogue among the engineers, scientists and end users who develop, commercialize and buy photonics products.

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

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