



## Weekly News



### NIF Breaks Records for Laser Fusion, PSN Helps Secure Neal Award for Photonics Media

The U.S. Department of Energy's National Ignition Facility is reportedly setting new records in power output for laser-based fusion. Teams at DARPA have surpassed several milestones for power beaming. Zeiss and Tesa are partnering, with plans for the mass production of functional holographic films for windshields. Scientists at MIT have created a new technique that could change how we study gravity. A new imaging system developed at Duke University could allow for

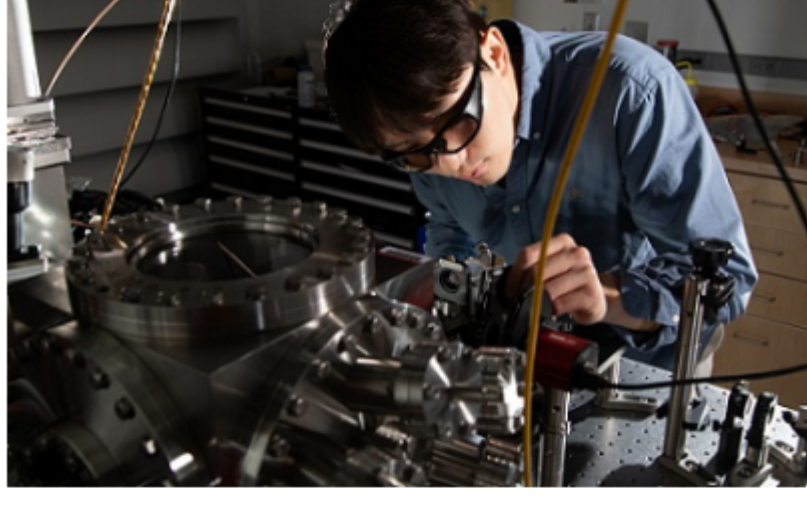
high-speed, 4-D videos of moving organisms. And Photonics Spectra Now is being recognized with national honors, after helping Photonics Media earn a Neal Award for Best Range of Coverage by a Single Author. Sponsored by CeramOptec and Norland Products Inc.

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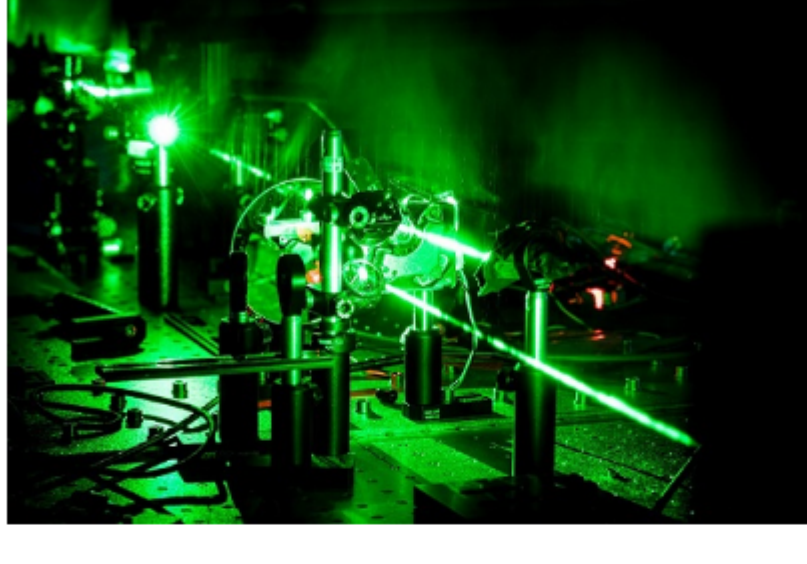
### Collaboration Achieves High-Yield Wafer Production from Nontraditional Material Platform

In collaboration with semiconductor recycling company III/V-Reclaim, researchers at the Fraunhofer Institute for Solar Energy Systems ISE have produced high-quality indium phosphide on gallium arsenide substrates with up to 150-mm diameter. [Read Article](#)



### Lasers Cool Down the Gravity Debate

One of the most profound open questions in modern physics is: "Is gravity quantum?" The other fundamental forces — electromagnetic, weak, and strong — have all been successfully described, but no complete and consistent quantum theory of gravity yet exists. [Read Article](#)



### Easier Path to Light-Matter Study Could Spur Emerging Tech Development

A simple approach to fabricating optical microcavities, developed at the University of Turku, will enable more researchers to engage in the light-matter studies that are critical to the development of quantum optics, next-generation displays, ultra-efficient lasers, and other emerging technologies. [Read Article](#)



## Featured Products & Services

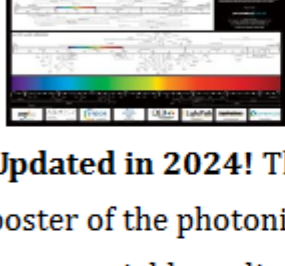


#### LIGHT: Introduction to Optics and Photonics, Second Edition

**Photonics Media**  
Offering a comprehensive treatment of the subject as well as key applications, and employing minimal math, LIGHT: Introduction to Optics and Photonics was written with readers in mind.

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#### Photonics Spectra Reference Chart

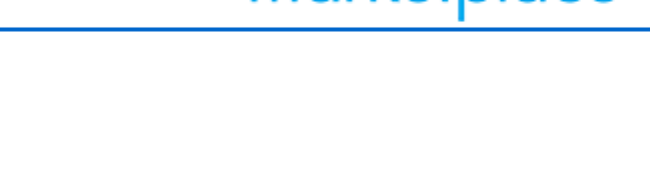
#### Photonics Media

**Updated in 2024!** 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.

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### Looking for something else? Check the Photonics Marketplace.



## More News

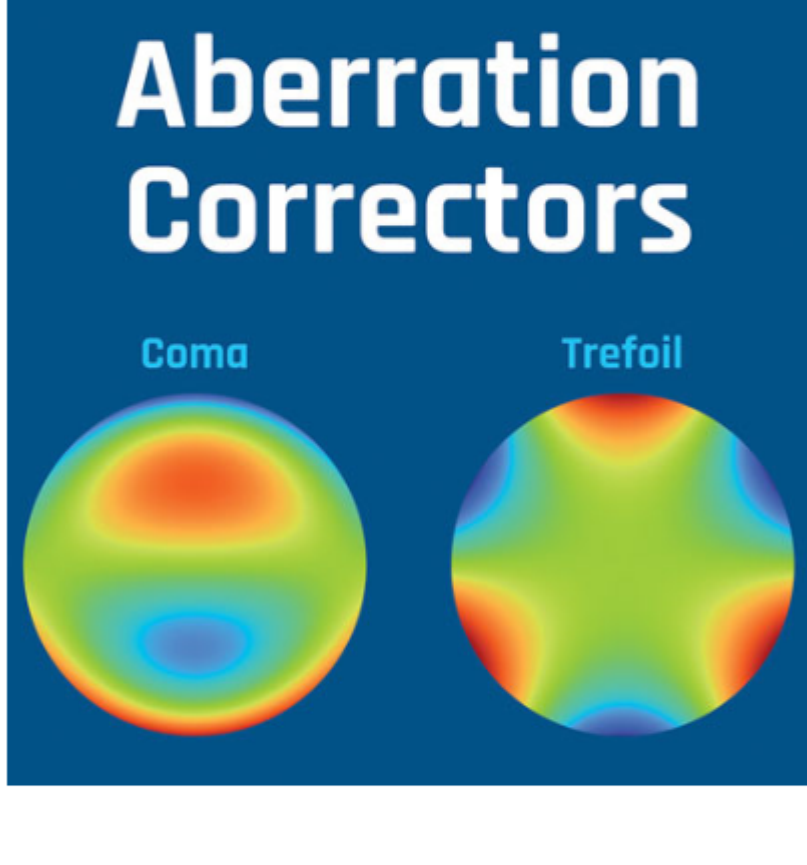
[Jenoptik Appoints Interim President to Lead Optical Systems Business](#)

[Nearfield Instruments, Singapore's A\\*STAR IME Launch Collaboration](#)

[Petahertz-Speed Phototransistor Built for Ambient Conditions](#)

[Imaging System Monitors Rotating Objects for Damage and Deterioration](#)

## Latest Webinars

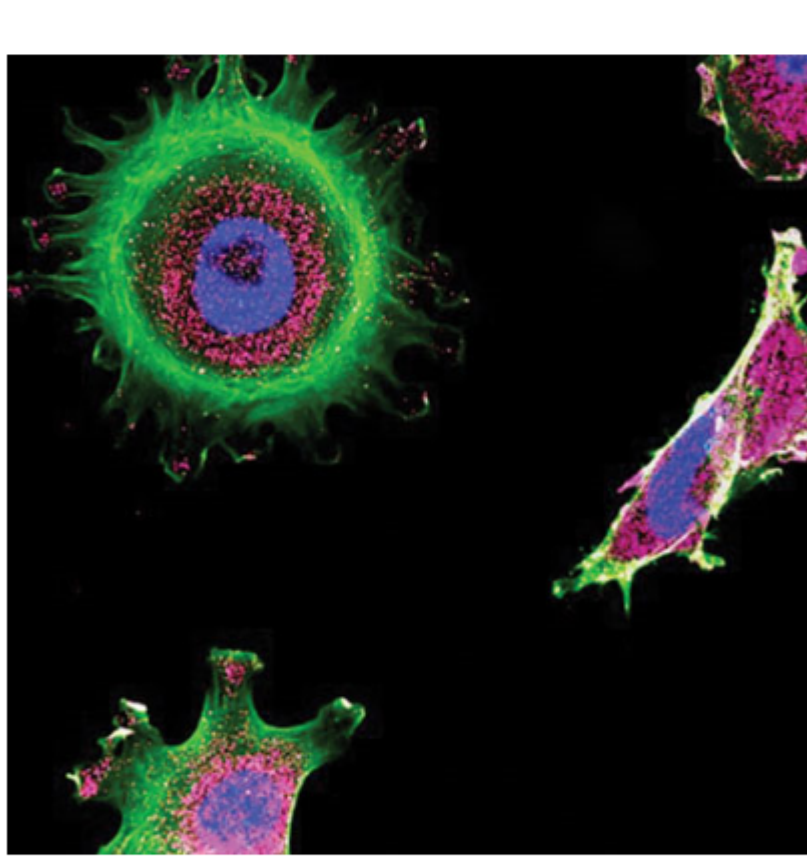


### Practical Aberration Correction Using Freeform Optics — Pushing the Boundaries of Laser System Performance

**Thu, Jun 12, 2025 10:00 AM - 11:00 AM EDT**

Many laser systems — whether they are for industrial, biomedical, or defense applications — are designed to create a well-defined output spot or beam; this is required for the laser process to be as efficient, productive, and effective as possible. Optical aberrations in the laser system (pointing, defocus, spherical, astigmatic, coma, etc.) come from a variety of sources and affect the extent to which the actual output spot (or beam) deviates from that of the design intent of the system. To compensate for aberrations, it is vital to make appropriate measurements of the aberrations, and then ideally represent them as Zernike coefficients. Then, it is possible to design a

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### The Evolution of Microscopy – Current Landscape and Considerations

**Wed, Jun 18, 2025 11:00 AM - 12:00 PM EDT**

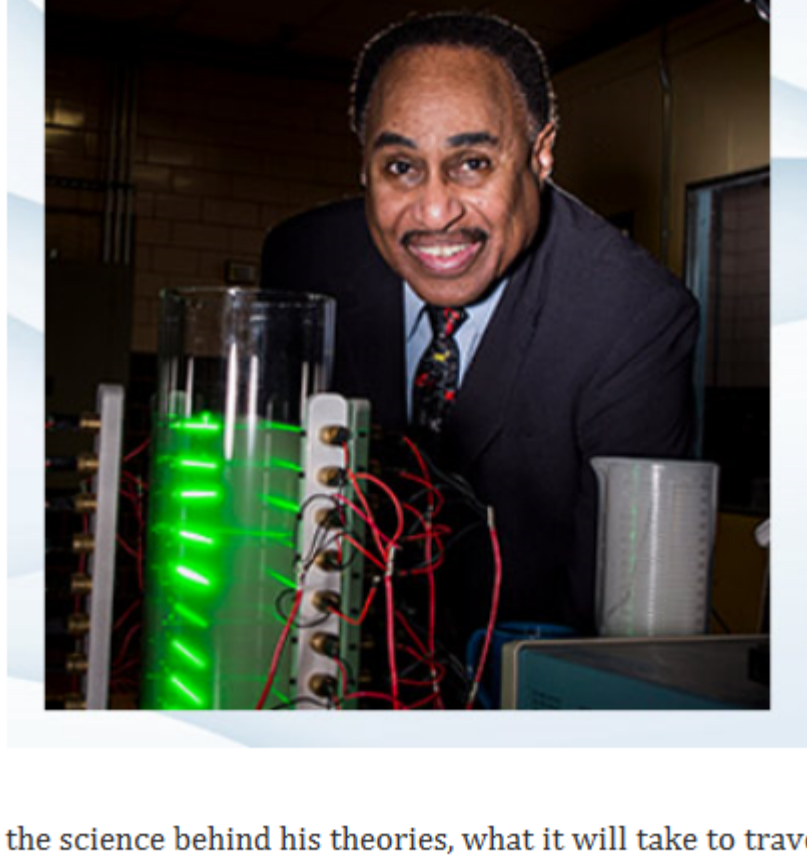
David Biss of Optikos walks through a brief history and primer on microscopy, which was largely unchanged until the last 70 years. With that backdrop, this presentation delves into common types of modern microscopy: confocal microscopy, fluorescence microscopy, multiphoton microscopy, and superresolution microscopy. He explores a comparison of similarities and differences between these modalities and considerations for selection. Attendees will learn that the optical principles of lens design for microscope objectives have not changed significantly over time, i.e., the importance of contrast and resolution. However, new microscopy modalities have improved the core principles to address specific market applications. Specifically, microscopy has evolved significantly from early single-lens

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devices to sophisticated techniques capable of observing individual molecules and complex biological processes. Key advancements include improvements in lens technology, the development of various light sources, the introduction of fluorescence microscopy, and the rise of super resolution microscopy techniques. Presented by Optikos.

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## All Things Photonics



### Laser-Powered Time Travel — With Physicist and Professor Emeritus, Ron Mallett

Time travel is not just theoretical, it's proven. But that doesn't mean we are anywhere close to a functioning time machine just yet. Professor Ron Mallett has been fascinated with the idea of time travel since he was a little boy. A year after his father passed away, he discovered a Classics Illustrated edition of H.G. Wells' "The Time Machine." That comic sparked the imagination of 10-year-old Mallett, convincing him to pursue a career in science and to learn more about controlling the clocks. Decades later, he believes he has cracked the code on time travel. It just requires circular lasers and some cosmic intervention. On this episode, Mallett shares with us

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the science behind his theories, what it will take to traverse the past and present, and which Hollywood movies actually got time travel right.

[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](#).

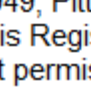


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