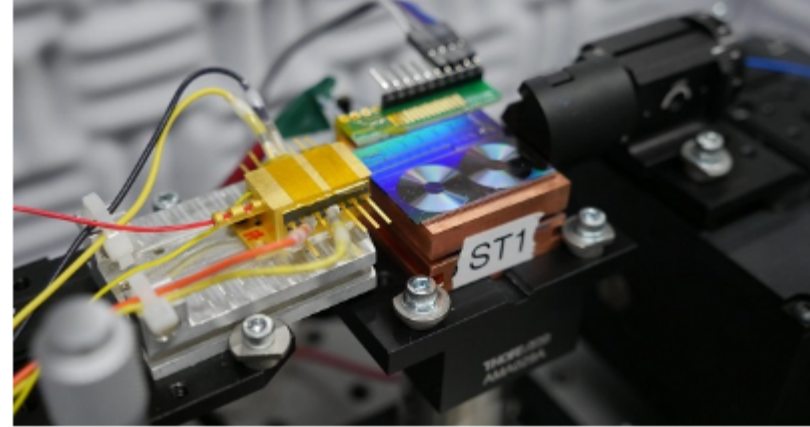




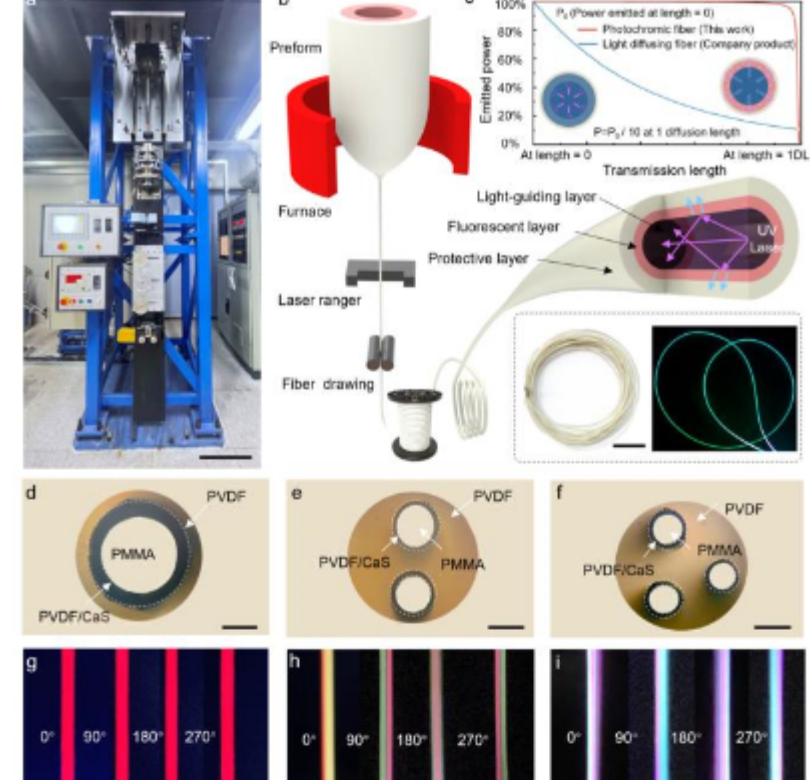
Weekly News



**Photonics-Based Oscillator Provides Precise Signals on Compact Chip**

Researchers from the University of Colorado Boulder, the National Institute of Standards and Technology, the NASA Jet Propulsion Laboratory, California Institute of Technology, the University of California Santa Barbara, the University of Virginia, and Yale University developed a low-noise microwave generator with a compact, portable form factor by

using two-point optical frequency division, a technique for developing high-performance signal sources, with integrated photonic components. [Read Article](#)



**Multicolor Photochromic Fibers Deliver Interactive Wearable Displays**

Inspired by photochromic fibers that exhibit fluorescence effects and polymer optical fibers that emit light when coupled with an external source, scientists from Huazhong University of Science and Technology and Nanjing University created a multicolored, uniformly luminescent, photochromic fiber. They prepared the fiber using a mass-producible, thermal-drawing method that allows versatility in the design of the fiber structures. [Read Article](#)



**Light-Beads Microscopy Reveals New Information About Brain Activity**

To better capture and understand neural activity in mice, professor Alipasha Vaziri and his team at The Rockefeller University used large-scale recordings and light-beads microscopy, a volumetric, two-photon imaging technique developed by the Vaziri lab in 2021. LBM increases imaging speed by eliminating the “dead-time” between sequential laser pulses, when no neuroactivity is recorded, and by removing

the need for scanning. [Read Article](#)

**Featured Products & Services**

**SK-1300 Fused Silica**  
**Ohara Corporation**  
 Ideal for semiconductor equipment, filters, and high energy laser applications. SK-1300 Fused Silica advantages include extremely low bulk absorption and fluorescence, no laser damage at 1070 nm, high transmission from UV through near IR, high homogeneity, and low stress birefringence.

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**CO<sub>2</sub> Laser Glass-Processing**  
**NYFORS Teknolog AB**  
 CO<sub>2</sub> laser glass-processing is designed to produce high-power and sensitive photonic components and complex structures. It guarantees contamination-free processing for fiber linear, 2D and gapless array splicing, ball lensing, end-capping, and many other challenging processes. NYFORS also manufactures automated high-precision solutions for fiber preparation, such as stripping, cleaving, recoating, and end-face inspection. NYFORS offers custom workcell automation solutions.

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**Featured Video**



**FIREFLY3D Laser Scan Head for LPBF Applications - Novanta**

FIREFLY3D is Novanta’s next generation 3-axis scan head designed for Laser Powder Based Fusion (LPBF) machines in additive manufacturing applications. The FIREFLY3D is an enclosed, compact solution designed to increase productivity with real-time process monitoring and improved finish quality of LPBF manufactured parts.

[Watch Now](#)

**More News**

- [Metalens Coalition Details Manufacturing Benefits](#)
- [European Industry Players Unite to Accelerate Quantum Computing Capabilities](#)
- [Tokamak Energy Commits to Testing Laser Tech for Fusion Power Plants](#)
- [EFFECT Photonics Boosted by \\$38M Series D](#)

**Latest Webinars**

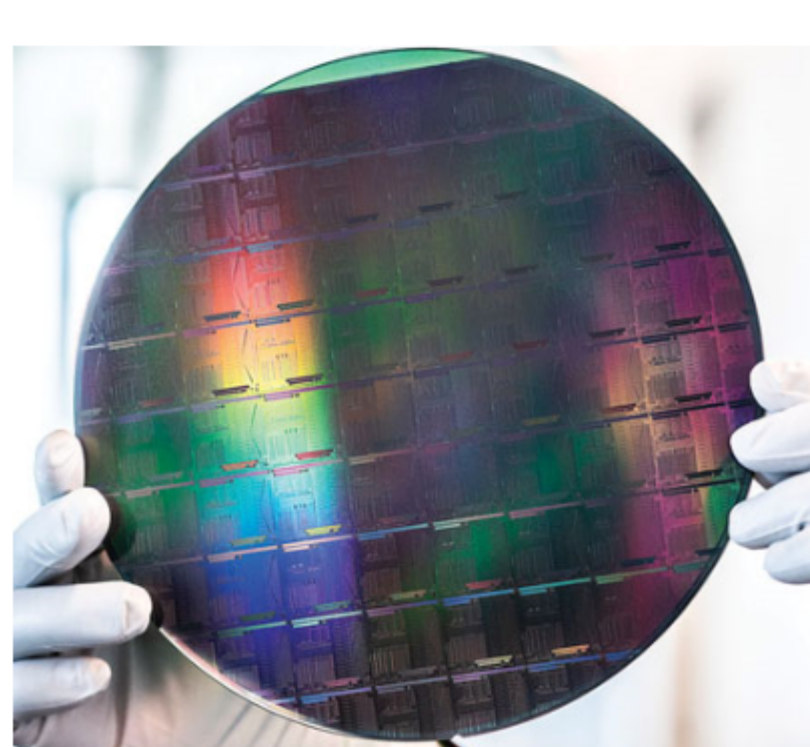


**Optical Filters: Application and Design Considerations**

**Tue, Apr 23, 2024 1:00 PM - 2:00 PM EDT**  
 Optical filters can discretely transmit or reject specific wavelengths or ranges of wavelengths of light. Utilizing this capability in photonics-based instruments creates the need for a better understanding of optical filter design considerations and how specifications influence performance and cost. Craig Hanson of MKS/Newport discusses the fundamental principles of optical coatings and filter types and explains the significance of filter parameters and the benefits of design review. He also explores accessory options and subsystem integration. Next Hanson unveils Newport’s unique manufacturing processes and capabilities for custom optical filters from prototype to high-volume production. Finally, this presentation concludes with an open Q&A, for which Hanson is joined by Mark Roberts,

principal thin-film engineer at Newport. Presented by MKS Newport.

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**Integrated Photonics for Quantum Computing**

**Tue, May 28, 2024 10:00 AM - 11:00 AM EDT**  
 Realizing photonic quantum technologies, such as an optical quantum computer or a quantum communication link between distant superconducting qubits, will require the development of novel photonic components. Monolithic silicon or silicon nitride photonic platforms are falling short with respect to the requirements of the quantum domain, and it is envisioned that a hybrid solution is needed. In this talk, Christian Haffner of IMEC shortly discusses what hybrid detectors the silicon photonic platform can offer in terms of detectors, sources, and modulators. His primary focus lies on the electro-optical modulator covering the requirements that the quantum world enforces. He compares the classical and quantum theoretical framework, and sketches out what performance metrics a

quantum electro-optical modulator needs to fulfill.

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 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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