

# This Week in PHOTONICS



**LightMachinery**  
Excellence in Lasers and Optics

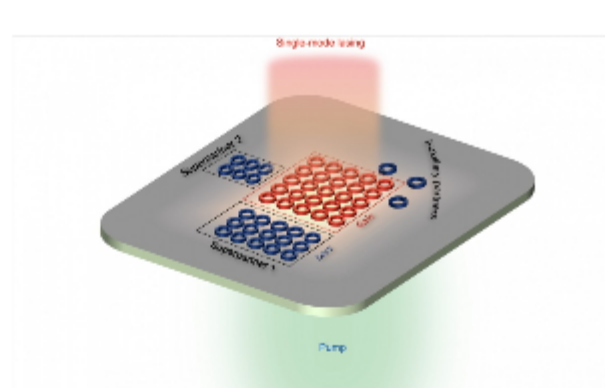


**Hyperfine Spectrometer**  
A sub-picometer resolution spectrometer in a compact package.

## .: Top Stories

### 2D Microlaser Arrays Give Integrated Photonic Systems a Boost

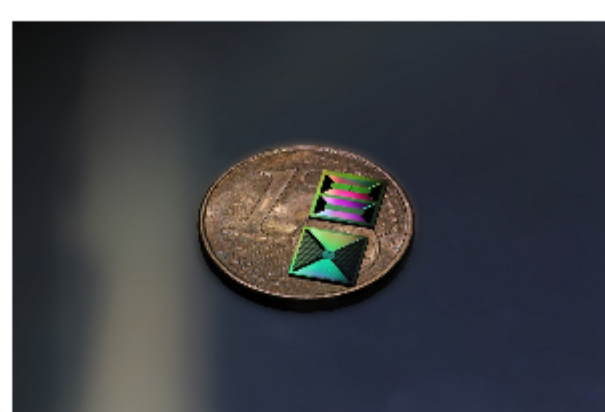
Researchers from the University of Pennsylvania and Duke University designed and built 2D arrays of closely packed microlasers that demonstrated the stability of a single microlaser, and that collectively achieved power density that were orders of magnitude higher.



[Read Article](#)

### Integrated Photonic Circuits Demonstrate Ultralow Loss

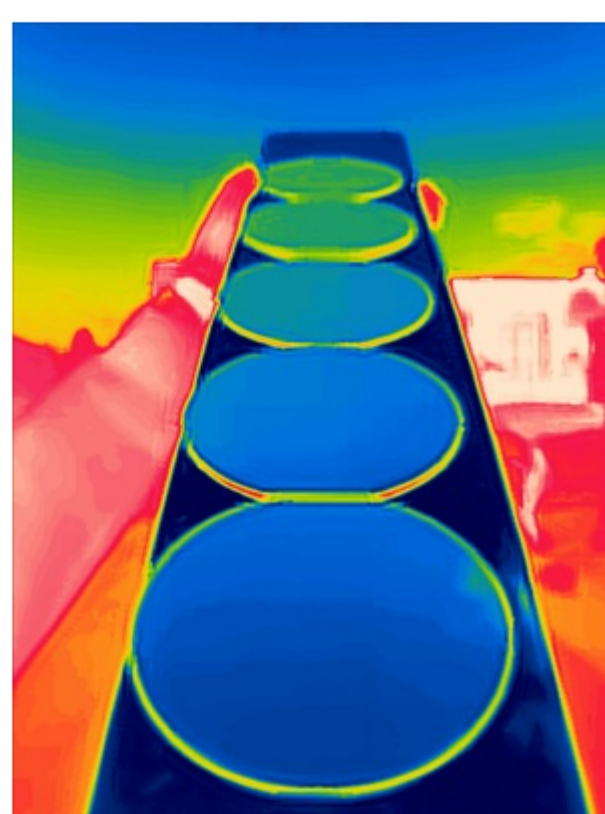
Researchers at École polytechnique fédérale de Lausanne's (EPFL's) School of Basic Sciences have developed a technology that produces silicon nitride integrated photonic circuits with low optical losses and small footprints. The team combined nanofabrication and material science, based on the photonic Damascene process developed at EPFL, to make integrated circuits of optical losses of only 1 dB/m.



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### Optical Tech Improves Heat Transfer

Researchers from UCLA have demonstrated a class of optical materials that control how heat radiation is directed from an object. The advance could improve the efficiency of energy conversion systems and enable more effective sensing and detecting technologies.



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## .: Featured Products



### [HyperFine Brillouin Spectrometer](#)

**LightMachinery Inc.**

The great challenge with Brillouin spectroscopy is that the scattered signal from the un-shifted wavelength of the laser can overwhelm the small Brillouin shifted return signal. LightMachinery has combined its leading-edge HyperFine spectrometer with a very narrow band tunable filter to suppress the bright un-shifted laser frequency. The tunable filter is easily adjusted...

[Visit Website](#)

[Request Info](#)



### [High-Power Tall TO-Can](#)

**Sheaumann Laser Inc.**

Sheaumann's Tall TO-Can has improved upon a favorite in the industry, bringing you a high-power, continuous-wave,

single-mode option up to 600 mW. Thoughtfully engineered to be as compact as possible, it is designed to fit into any system. The cap features a taller ridge that allows the chip to be mounted vertically, with a wide emitter enabling even more power than before.

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## .: More News

[New Leadership for IPG Photonics](#) [Read Article](#)

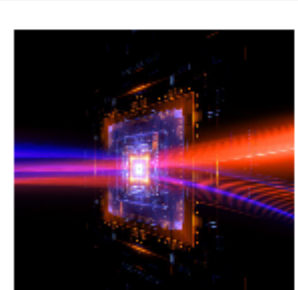
[US Army to Incorporate LiFi Technology](#) [Read Article](#)

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[Optical Device Fine-Tunes Light](#) [Read Article](#)

## .: Upcoming Webinars

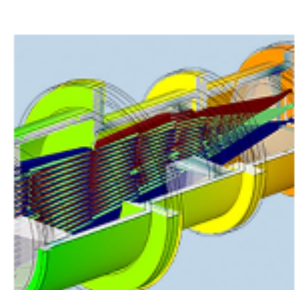


### Photonics in Quantum Computing and Quantum Networking

Tue, May 11, 2021 12:00 PM - 1:00 PM EDT

This webinar with Peter McMahon, Ph.D., will describe how photonics plays a central role in several of the leading candidate technologies for building quantum computers and quantum networks. This webinar is the second presentation in Hamamatsu's Quantum Technologies Series, presented by Hamamatsu Corporation.

[Register Now](#)



### Improving the Design of Optical Devices Through STOP Analyses

Wed, May 12, 2021 2:00 PM - 3:00 PM EDT

There is an ever-increasing interest in structural-thermal-optical performance (STOP) analysis for optical systems, in which temperature change and structural loads affect the optical performance. In this presentation, guest speakers Kyle Koppenhoefer, Ph.D. and Joshua Thomas from AltaSim Technologies will join Christopher Boucher of COMSOL to discuss the development of STOP solutions

for optical devices. The webinar will also include a live demo in the COMSOL Multiphysics® software and an open Q&A session. Presented by COMSOL, Inc.

[Register Now](#)



### Micro-Optics for Wearable Devices

Tue, May 18, 2021 1:00 PM - 2:00 PM EDT

Rick Brown of Accumold will highlight specific design and production challenges that micro-molders have seen in wearable markets and how they have been addressed. Brown will also cover some secondary operations that can add value to a molding operation. Sponsored by Accumold.

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### CALL FOR ARTICLES!

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