

# This Week In PHOTONICS

PHOTONICS MEDIA



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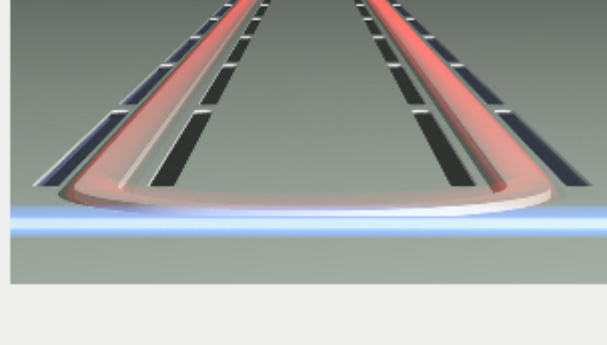
The HyperFine Spectrometer, Brillouin spectroscopy. Ready to go. Out of the box.

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## Top Stories

### Photonic-Phononic Waveguides Used to Create Brillouin Laser

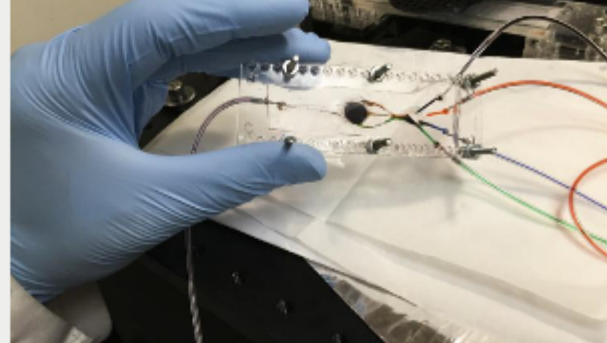
A laser that uses sound waves to amplify light could help address the need for silicon lasers that can overcome obstacles associated with silicon's indirect bandgap when powering photonic integrated circuits. The laser design corrals amplified light within a racetrack shape to trap the light in a circular motion.



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### Stereolithographic Bioprinting Device Can Create Biological Tissue

A stereolithography-based bioprinting platform for building biomaterials from multiple materials could help advance on-demand printing of artificial tissues for regenerative medicine. The platform uses a specially adapted 3D printer that has a custom-built microfluidic chip with multiple inlets. Each inlet prints a different material.



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### Study Shows How Quantum Magnets Mimic Light

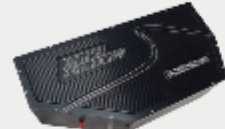
Several years ago, researchers predicted a characteristic signature that could signal the presence of emergent light inside a quantum spin ice. The researchers report that they have now observed this signature in a material called praseodymium hafnate.



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## Featured Products

### The HyperFine Spectrometer



#### LightMachinery Inc.

Designed for measuring hyperfine spectra and subtle spectral shifts, the HyperFine spectrometer from

LightMachinery is a compact, low cost spectrometer capable of sub-picometer resolution. It is ideal for pulsed laser characterization and for measuring the small spectral shifts from Brillouin scattering.

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### New Vision App-based IDS NXT Vegas Model

#### IDS Imaging Development

#### Systems GmbH

IDS has expanded its product range of vision app-based industrial cameras. A color sensor model of IDS NXT vegas has joined the product family. German camera manufacturer IDS has also introduced a new firmware and a new cockpit to the market, which offer additional features and simplify the handling even further.

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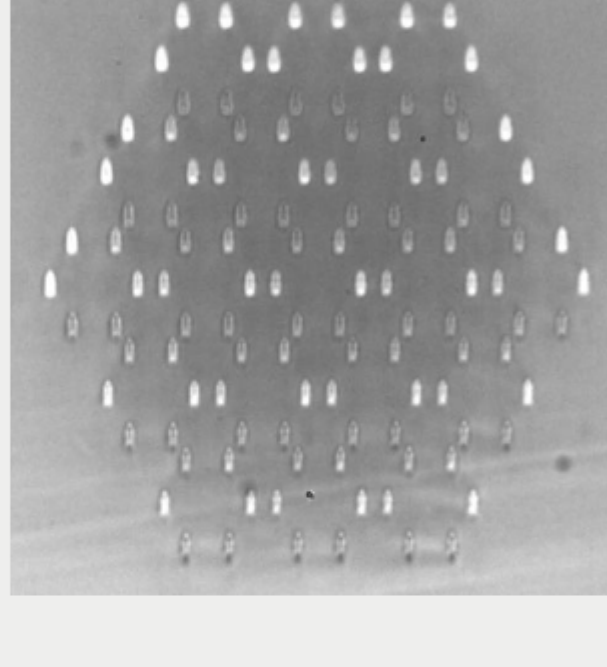
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## More News

### New Approach Contains Light, Protects It from Defects

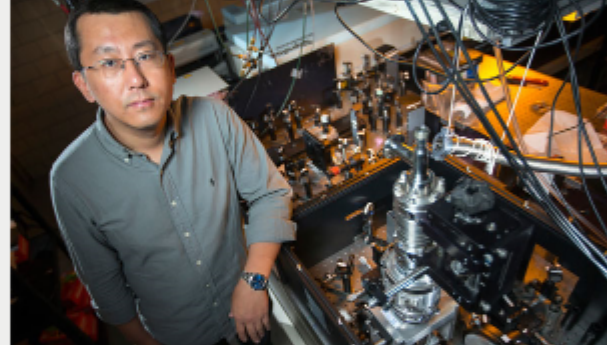
Researchers have found a way to confine light so that it is insensitive to imperfections in the material that confines it. The new approach is based on "topological protection," a concept used extensively in solid-state electronic physics. It could help lower the cost while improving the speed of photonic devices.



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### Terahertz Frequency Pulses Uncover Hidden State of Matter

Researchers have used ultrafast photonics to visualize electrons interacting as a hidden state of matter in a superconductive alloy. When fully understood and tuned, this state of matter could be used for faster, heat-free quantum computing, information storage, and communication.



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## More Headlines

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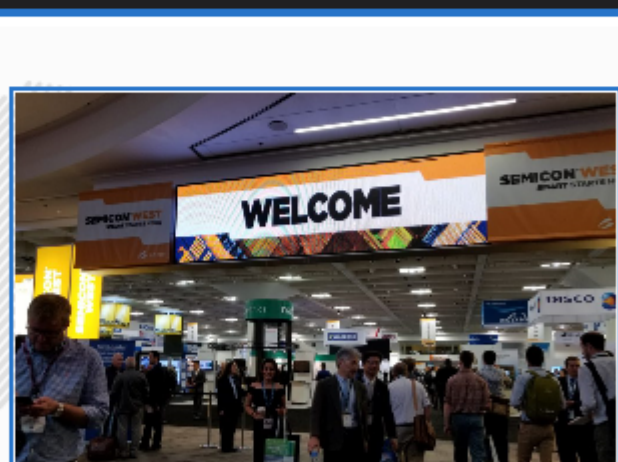
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## Industry Events

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SEMICON West 2018 will feature three days of presentations with more than 80 hours of technical and business programming, plus hundreds of exhibitors who can provide the insights, innovations, and intelligence you need to get ahead and embrace today's disruptive landscape. From materials, equipment, design, manufacturing, system integration, and demand channels to new verticals and adjacencies such as flexible hybrid electronics, MEMS and sensors, you'll gain access to the best in the business and get a glimpse at what's next.

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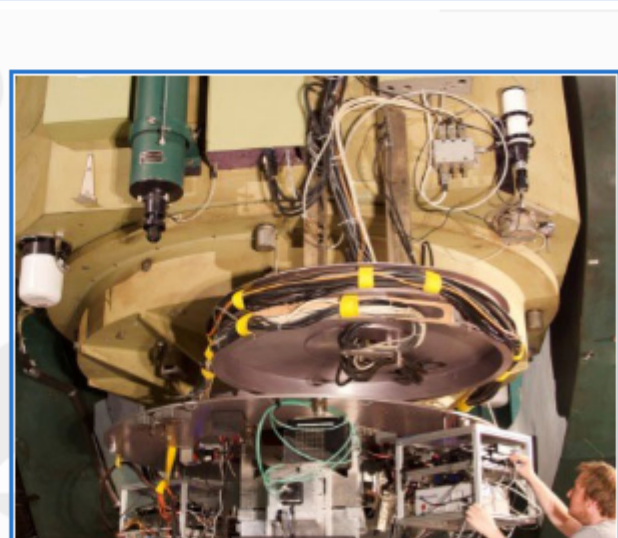
## Webinars

### Optics and Astronomy

Wed, Jun 20, 2018 1:00 PM - 2:00 PM EDT

This webinar will cover optical and IR instruments for astronomy, with a particular focus on how innovations in adaptive optics and IR spectroscopy are pushing the technical and scientific envelope. The speaker will discuss how these optical tools can be used to make extremely sensitive and high fidelity measurements of astronomical objects at next-generation extremely large optical telescopes like the Thirty Meter Telescope (TMT). The design and fabrication of novel astronomical instrumentation will be covered from both a scientific and an engineering standpoint.

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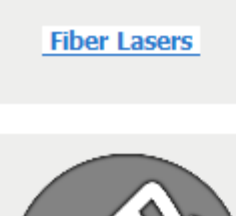
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