

# This Week in PHOTONICS

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**LightMachinery**  
Excellence in Lasers and Optics



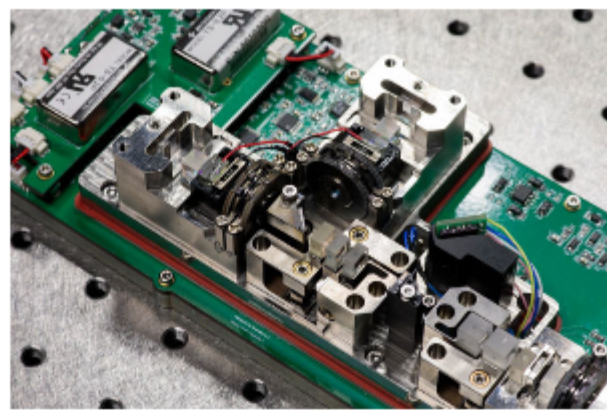
**Hyperfine Spectrometer**  
A sub-picometer resolution spectrometer in a compact package.

## Top Stories

### Quantum Entanglement Demonstrated Aboard Orbiting CubeSat

An international research team led by the National University of Singapore has generated and detected quantum entanglement onboard a CubeSat nanosatellite weighing less than 2.6 kg and orbiting Earth.

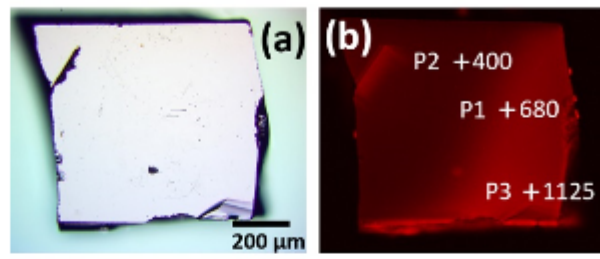
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### Photoluminescence Techniques Map, Measure Semiconductor Thermal Conductivity

A joint research group has developed two new optical techniques — photoluminescence mapping (PL-mapping) and time-domain thermophotoluminescence (TDTP) — that provide rapid, nondestructive characterization of  $k$  in materials and that require minimal sample preparation.

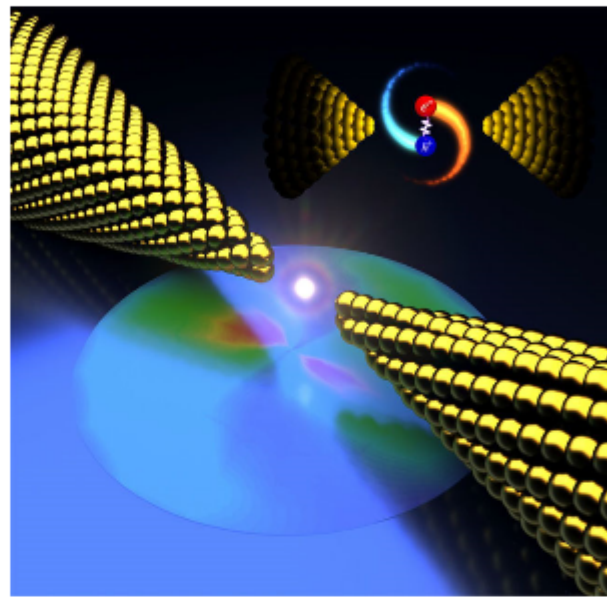
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### Massive Light Emission from Nanogap Between Plasmonic Electrodes

While investigating above-threshold light emission from electromigrated tunnel junctions, researchers from Rice University and the University of Colorado Boulder discovered that an unexpectedly bright emission could emerge from a nanoscale gap between two electrodes made of plasmonic materials, particularly gold.

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## Featured Products



[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. This textbook is for beginning students of optics and photonics in high school, community college, and university STEM courses.

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[Aplanatic Objective](#)

**AdlOptica GmbH**  
The aplanoXX\_NA0.8 objective for diffraction limited focusing from AdlOptica GmbH features a

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[Jenoptik Acquires TRIOPTICS](#) [Read Article](#)

[CMM Optic Expands into Electro-Optical Systems with Acquisition](#) [Read Article](#)

## Upcoming Webinars

### Beam Shaping: The Next Step for Ultrashort-Pulse-Laser-Based Processes

Thu, Jul 16, 2020 10:00 AM - 11:00 AM EDT

The use of ultrashort pulse (USP) lasers in industrial processes is growing, thanks to the high standard of quality that can be achieved. For widespread industrial use of USP lasers to be realized, however, two key challenges need to be solved: The yield has to strongly increase for the process to be cost-effective, and improvement in quality will lead to the processing of new materials and the development of new markets. This webinar will present how beam shaping can solve these two challenges, and how multi-plane light conversion (MPLC) can achieve yield and quality improvement while being compatible with industrial setups.

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### CALL FOR ARTICLES!

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazines (*Photonics Spectra*, *BioPhotonics*, *Vision Spectra*, and *EuroPhotonics*). 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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