

# This Week In PHOTONICS

PHOTONICS MEDIA



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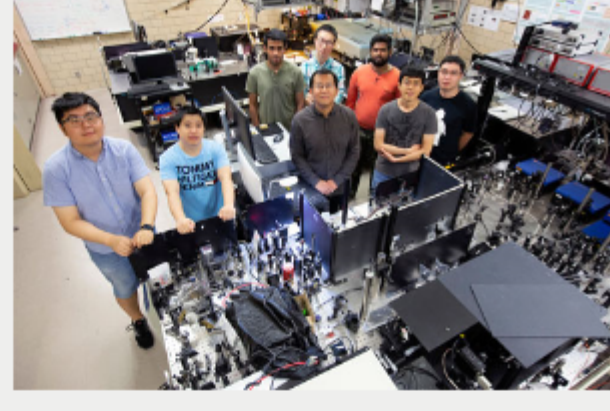
**LightMachinery**  
Excellence in Lasers and Optics

**Introducing the UltraBright Spectrometer**  
No slit, just a giant aperture and a huge field of view.  
Boom. Spectrum. Done.

## Top Stories

### Tuning Quantum States of Matter Using Ultrafast Photonics

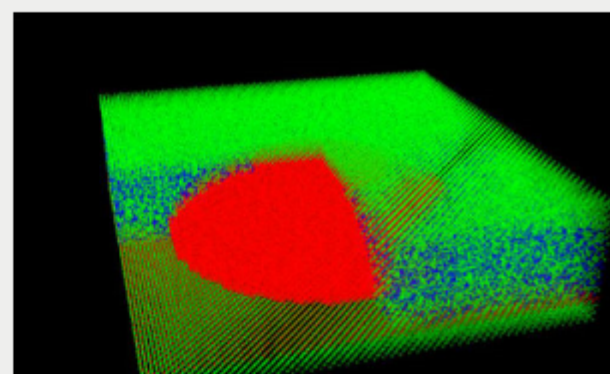
Researchers at Iowa State University, led by professor Jigang Wang, are using quantum terahertz spectroscopy to explore and control quantum states of matter. The researchers have announced three discoveries based on their studies.



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### Naturally Occurring Vibrations in Artificial Atoms Could Be Used to Build Quantum Sensors

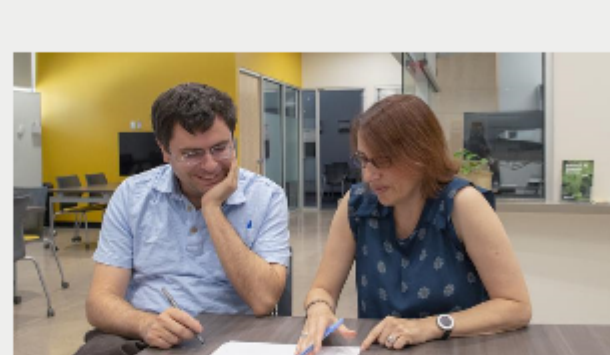
The discrete nature of photons that are emitted from individual atoms ensures low fluctuations in brightness, as only one photon is emitted at a time. Scientists believe this property could be useful in developing future quantum technologies where low fluctuations will be important.



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### Approach Uses Bayesian Analysis to Speed Spectroscopy Results

Scientists from Arizona State University are leveraging the tools of data science to study molecular activity more quickly than is possible through traditional fluorescence correlation spectroscopy (FCS).



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## Featured Products



### Flexible Sputtered Coatings

**Deposition Sciences Inc. (DSI)**

Roll-to-roll thin film coating processes present a number of challenges when coating flexible surfaces, one of the challenges is stress. Balancing the stress between the two sides of the substrate and stress build up from many layers. This stress concern limits the thickness and complexity of the coatings achievable. To address this challenge, DSI utilizes their MicroDyn® batch coating technology. Using their MicroDyn® magnetron sputtering batch process, DSI can create complex coatings...

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### Canon Surface Reflectance Analyzer

**Canon U.S.A. Inc., Industrial Products Div.**

Canon RA-532H, Surface Reflectance Analyzer (goniophotometer), is a compact, portable device capable of measuring 4 surface appearance conditions in a single pass: Gloss, Haze, Image Clarity (IC), and BRDF (Bidirectional Reflectance Distribution Function). Additionally, Canon has released its own new parameter, "Scattering" parameter, overcoming the shortage of both IC and DOI (Distinctiveness of Image) when evaluating matte and textured surfaces as well as orange peel surface.

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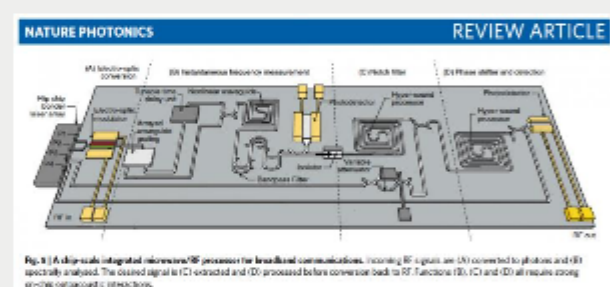
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## More News

### Harnessing Light-Sound Interactions on a Single Chip

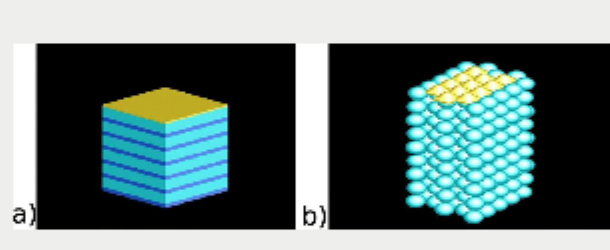
A growing group of scientists is adapting Brillouin scattering to a new generation of integrated circuits for 5G and broadband networks, sensors, satellite communication, radar systems, and defense.



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### Plasmonic-Photonic Crystals Studied to Further Sensor, Laser Research

As part of their research into optical states of plasmonic-photonic crystals (PPCs), scientists at Kazan Federal University investigated three-dimensional opal-like plasmonic-photonic crystals (OLPPCs), focusing on why OLPPCs do not admit light of certain wavelengths.



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## More Headlines

**Alfano Awarded 2019 SPIE Gold Medal** [Read Article](#)

**Delta Optical Thin Film Lays Cornerstone for New Facility** [Read Article](#)

**Rheinmetall and MBDA to Develop High-Energy Laser Effector System for German Navy** [Read Article](#)

**Northrop Grumman Receives \$200M Order for IR Countermeasure Systems** [Read Article](#)

**Vision Components and SLL Solutions Found Carrida Technologies** [Read Article](#)

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## Industry Events

### AutoSens Brussels 2019

September 16-19, 2019 - AutoWorld - Brussels Belgium  
AutoWorld, a private museum in Brussels, will make a spectacular venue for anyone with a passion for cars and once again, the perfect backdrop for AutoSens Brussels and the continuation of technical discussions concerning the future of vehicle perception technology. The AutoSens Brussels agenda will get right to the heart of the challenges facing vision system engineers of today and tomorrow. Content will be geared to provide insight, generate discussion, and propose solutions for shared challenges in advanced driver-assistance systems (ADAS) and semi-autonomous vehicle technologies. Agenda topics include: AI and Deep Learning for Driverless Vehicles; How to Integrate Mapping and Geolocation Technologies into Vehicle Perception; How to Show That Autonomous Vehicles Are Safe; and more.



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## Webinars

### Accelerating the Commercialization of New Optics, Photonics, and Imaging Technologies

Thu, Sep 5, 2019 1:00 PM - 2:00 PM EDT  
Startups often can't find the funding or the right resources to bring emerging technologies to market. This webinar will take an in-depth look at how the Luminate Accelerator is addressing these challenges to help speed the commercialization of optics-, photonics-, and imaging-enabled applications. If you are an OPI startup, from early stage to Series A funding, or a scientist or engineer who has a technology that's moving from lab to market, this webinar could point to the ultimate resource. Presented by Luminate.



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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](#).

