

# This Week In PHOTONICS

PHOTONICS MEDIA



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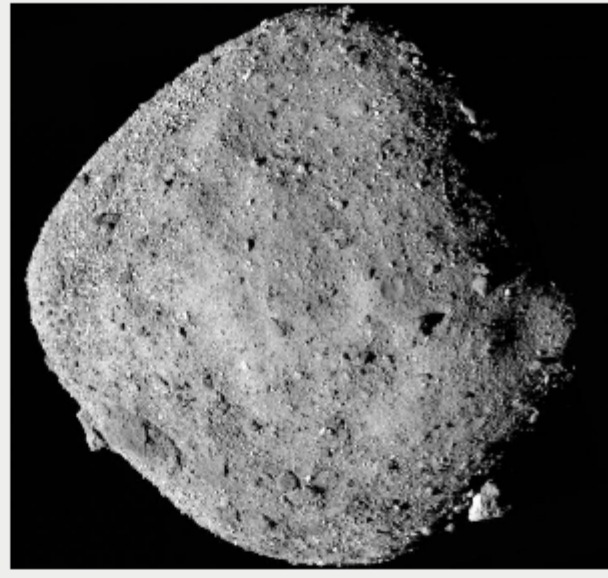
The HyperFine Spectrometer, Brillouin spectroscopy. Ready to go. Out of the box.

[www.lightmachinery.com](http://www.lightmachinery.com)

## Top Stories

### First Observations of Asteroid Bennu Reveal Water Was Once Present

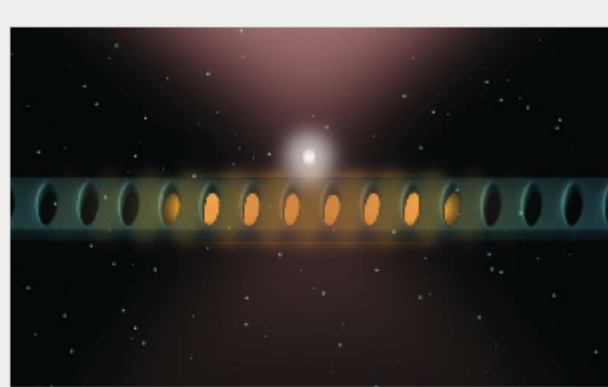
Data obtained from the OSIRIS-Rex spacecraft's two spectrometers, the OSIRIS-REx Visible and Infrared Spectrometer (OVIRS) and the OSIRIS-REx Thermal Emissions Spectrometer (OTES), reveal the presence of molecules that contain oxygen and hydrogen atoms bonded together, known as "hydroxyls," on the asteroid Bennu.



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### Device for Measuring Nanoparticles Could Aid in Quantum Measurement

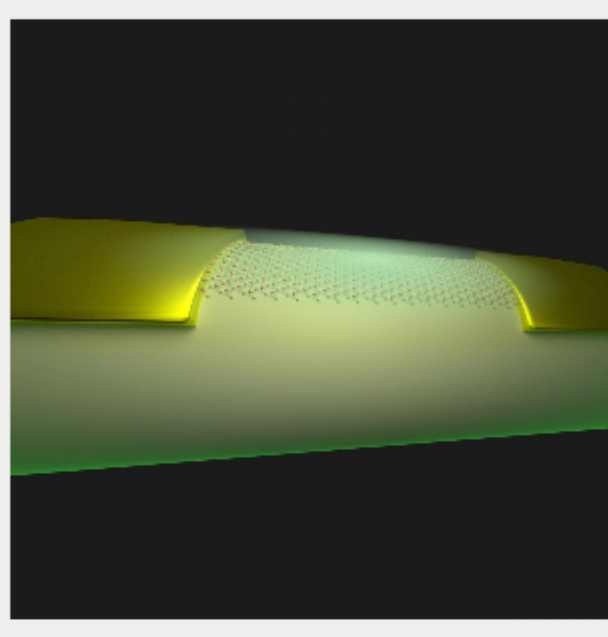
A new device that can measure and control an optically trapped nanoparticle with extreme sensitivity has been developed. Although this approach has been used before with trapped atoms, the researchers said they are the first to use it to precisely measure the motion of an optically trapped nanoparticle made of billions of atoms.



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### Moving 2D Circuits to Any Smooth Surface Could Open Way for Next-Gen Sensors

Atom-flat sensors, made from 2D materials, could be used to monitor performance without adding weight or hindering signal flow if they could be seamlessly integrated onto surfaces with different geometries where detection for near-field signal is desired.



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## Featured Products

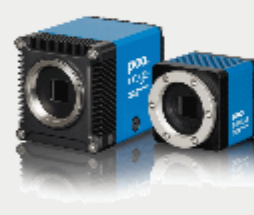


### LIGHT: Introduction to Optics and Photonics, Second Edition

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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### Back Illuminated sCMOS by PCO

PCO-TECH Inc.

Unique technology comes from evolution, combining existing and new technology. When PCO's tried and trusted sCMOS cameras pool forces with modern back illuminated (bi) sensor technology, pco.edge 4.2 bi and pco.panda 4.2 bi come into the world of science. Both cameras stand out with their nearly perfect quantum efficiency up to 95%.

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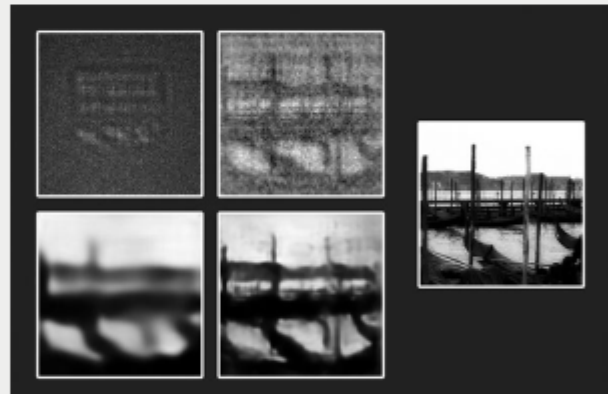
[LEARN MORE](#) **3-7 March 2019**  
SAN DIEGO, CALIFORNIA, USA

**pco.edge 4.2 bi**

## More News

### Deep Learning Is Used to Recover Objects in Low Light

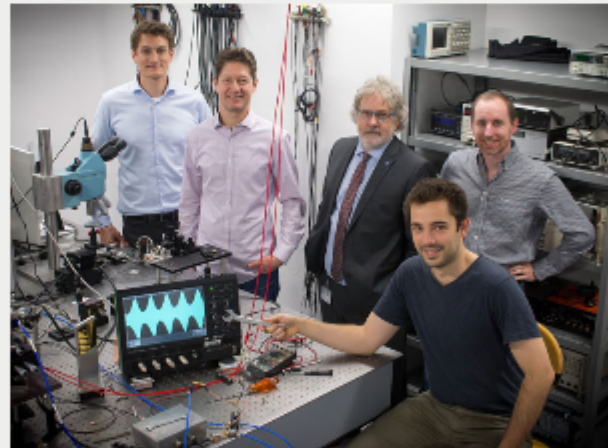
A new imaging technique demonstrates that deep neural networks (DNNs) can be used to illuminate transparent features such as biological tissues and cells in images taken with very little light. The researchers used a DNN to reconstruct transparent objects from images of the objects taken in near total darkness.



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### Miniature QCL Frequency Combs Provide Robust Solution for Chemical Sensing

Researchers at the Vienna University of Technology (TU Wien) are working with laser frequency combs to enable chemical analysis on a chip. This new patent-pending technology will enable frequency combs to be created on a single chip in a simple, robust manner.



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## More Headlines

**TRUMPF Acquires Laser Diode Division of Philips** [Read Article](#)

**Drones Could Simplify Animated Film Production** [Read Article](#)

**Excelitas Technologies Announces Agreement to Acquire Axsun Technologies** [Read Article](#)

**AI-Based System Uses Microscopic Images to Identify Cancer Cell Types** [Read Article](#)

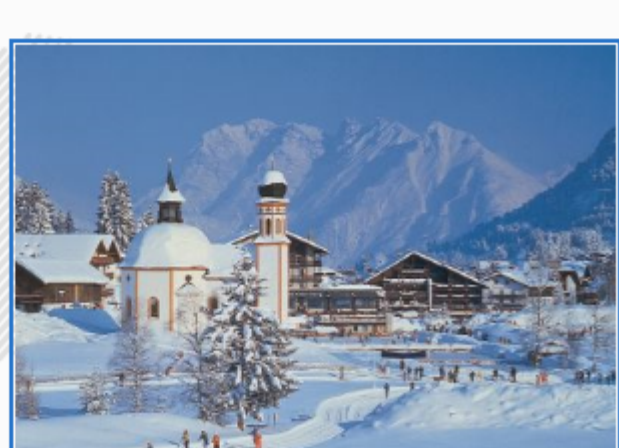
**Mouse Kidney Image Wins Biomed Central Photo Competition** [Read Article](#)

## Industry Events

### NANOMETA 2019

January 3-6, 2019 - Olympia Sport and Kongresszentrum Seefeld - Seefeld Austria

NANOMETA 2019 will bring together the international nanotechnology, photonics, and materials research communities to discuss recent challenges and results in an informal setting. The technical program will include invited and selected contributed papers in the areas of plasmonics, metamaterials, and metadevices; quantum and topological nanophotonics; new materials for nanophotonics; and optical superresolution. The conference will be organized into two parallel sessions, Nanophotonics and Metamaterials.



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### CALL FOR ARTICLES

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