

This Week In PHOTONICS

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Top Stories

Osram Outfits Hockey Players

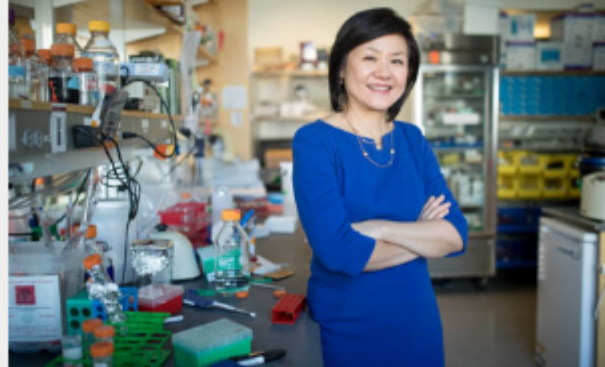
Light developer Osram Licht AG outfitted the Eishockeyclub Red Bull Munich professional hockey team with wearable high-tech lighting for a night event, crowning celebrations for the brand's 110th anniversary. The rink and its surrounding area were illuminated by floodlights and effect lighting, with Osram unveiling its latest offering.



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Light Therapy Shown to Reduce Plaques in Alzheimer's Mouse Model

Using LEDs that can be programmed to flicker at different frequencies on mouse models genetically programmed to develop Alzheimer's, researchers are exploring the potential of using light to reduce amyloid- β (A β) plaque levels and to stimulate brain waves that have been disrupted in Alzheimer patients. A β plaques, which are suspected to cause harm to brain cells, are a hallmark of Alzheimer's disease. Studies have hinted that Alzheimer's patients may also have impaired gamma oscillations. These brain waves are believed to contribute to normal brain functions such as attention, perception and memory.



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An Antireflection Transparent Conductor for Optoelectronic Devices

Transparent conductors are found in many devices such as displays, light emitting diodes, photovoltaic cells and smart phones. Most of this current technology is based on the use of the semiconductor Indium Tin Oxide (ITO) as a transparent conducting material. However, ITO is expensive to produce, lacks flexibility and must be processed under high temperatures. Much research has been devoted to finding an alternative process and alternative materials to replace ITO. Researchers at the Institute of Photonic Sciences (ICFO) and its Catalan Institute of Research and Advanced Studies (ICREA) think they may have found the answer.



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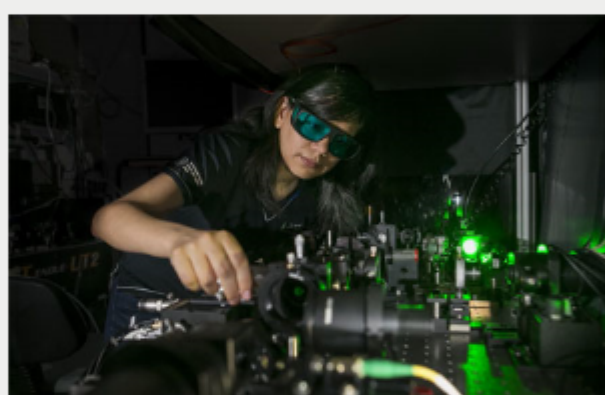


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Nanocrystal can Transform Light to Visible Spectrum

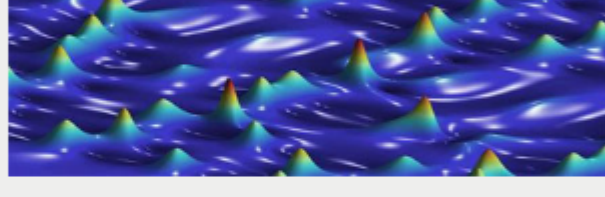
A novel nanocrystal, 500 times smaller than a human hair, is capable of changing the intensity, shape and color of light. Developed by researchers at The Australian National University (ANU), the nanocrystal was built on glass so that light could pass through it. It could be used to convert light to the visible spectrum, enabling objects to be seen in very dark environments.



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Time Magnification Used to Measure Chaotic Pulses in Real Time

A technique that provides the ability to expand timescales in optics has been used to measure ultrafast, intense light pulses directly. Observations from the experiments confirm theoretical predictions that were made decades ago, and could play a role in the prediction of very high, sudden and rare rogue waves on the surface of the oceans or the appearance of other extreme events in nature. Waves similar to rogue waves exist in optics in the form of short and intense light pulses.



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Featured Products



DBR Laser with Beam Correction

Photodigm Inc.
Photodigm DBR lasers are now available with integrated beam correction. A Virtual Point Source (VPS) microlens inside the package corrects astigmatism and reduces fast axis divergence resulting in a user friendly near circular beam.

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3SAE Combiner Manufacturing System (CMS)

3SAE Technologies Inc.
The 3SAE Combiner Manufacturing System (CMS) is a vacuum based optical glass processing system designed to maintain production level repeatability for combiners and other fused optical components. The CMS includes tapering, cleaving, bundling, and splicing utilizing 3SAE's patented Thermally Stabilized Plasma™ technology.

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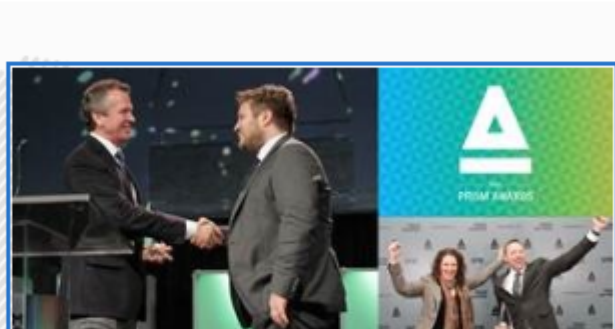
Industry Events

SPIE Photonics West 2017 - Booth 900,901

January 28 - February 2, 2017 - The Moscone Center - San Francisco United States

The SPIE Photonics West Exhibition is the premier photonics and laser event, with more than 1,300 companies and face-to-face access to suppliers, hiring companies and business sessions. Technologies to be featured include: Lasers and other light sources; cameras and CCD components; fiber optics; optical components; high-speed imaging and sensing; optical coatings; and much more. The 2017 Industry Program offers over 30 events covering industry trends, challenges and ways to build your company. Gala awards ceremony honoring the 2017 winners of the Prism Awards for Photonics Innovation, cosponsored by SPIE and Photonics Media, takes place on February 1.

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Webinars

Silicon Photomultiplier: Theory and Applications

Wed, Jan 11, 2017 1:00P EST

The silicon photomultiplier (SiPM), also known as Multi-Pixel Photon Counter (MPPC), is becoming a popular choice of a photodetector in applications where even single photons must be detected. The goals of this webinar are for you to: 1) develop a strong theoretical understanding of how a SiPM functions; 2) become familiar with the key optical characteristics of SiPMs; and 3) understand the pros and cons of SiPMs. The webinar will also cover applications that use SiPMs. Presenter Slawomir S. Piatek is a senior university lecturer of physics at New Jersey Institute of Technology and has developed a photonics training program for engineers at Hamamatsu Corporation in New Jersey. Also at Hamamatsu, he is involved in popularizing SiPM as a novel photodetector by writing and lecturing about it and by experimenting with the device. Piatek earned a Ph.D. in Physics at Rutgers, the State University of New Jersey. This webinar is presented by Hamamatsu Corporation.

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