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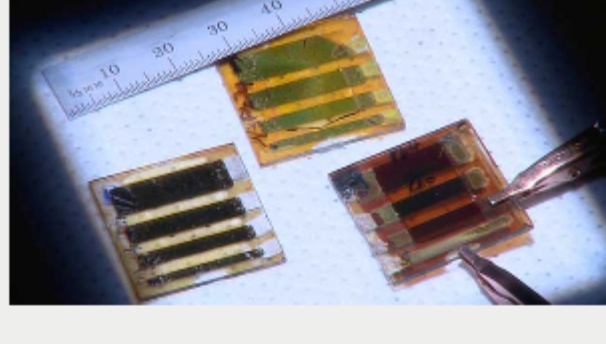
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2D Perovskite Combines High Efficiency and Stability for Photovoltaics, Optoelectronics

A 2D layered perovskite with crystalline properties has demonstrated more than triple the efficiency of previous 2D perovskites, while also demonstrating significantly more stability than 3D perovskite material. The technology shows promise not only for photovoltaic applications, but also for high-performance optoelectronic devices.

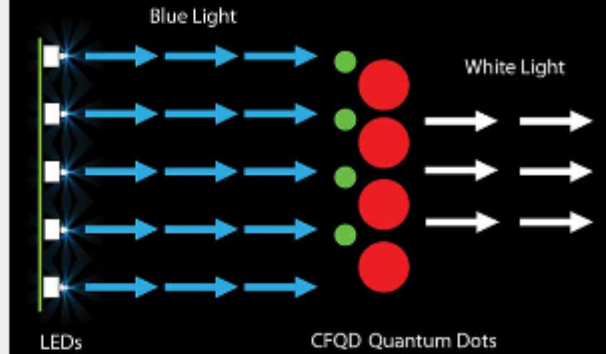


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Achieving Optimum LED Performance With Quantum Dots

The invention of blue LEDs and the subsequent rapid rate of development of new phosphor and down-converting technologies have enabled the phenomenal growth of all LEDs in general lighting applications. White LEDs initially employed the use of a blue LED combined with a single phosphor with broad yellow emission. However, the light quality provided by this relatively simple solution was less than satisfactory, particularly in the red part of the visible spectrum. But more recently, new phosphors and phosphor combinations (green-yellow plus red) have been developed to provide a higher quality of light.

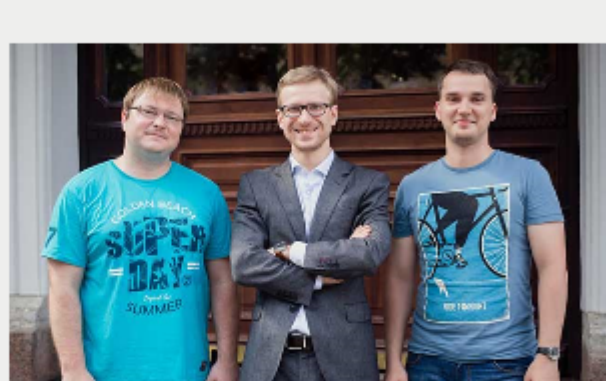


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Nonlinear Light Manipulation Could Provide Basis for Optical Nanodevices

Ultrafast nanoantenna switching between different light-scattering modes, caused by the interaction between an intense laser pulse and the silicon of a nanostructure, could lead to devices that would enable ultrafast all-optical signal processing. To demonstrate ultrafast nanoantenna switching, researchers from ITMO University and the Moscow Institute of Physics and Technology (MIPT) manipulated the optical properties of a nonlinear silicon nanoantenna.



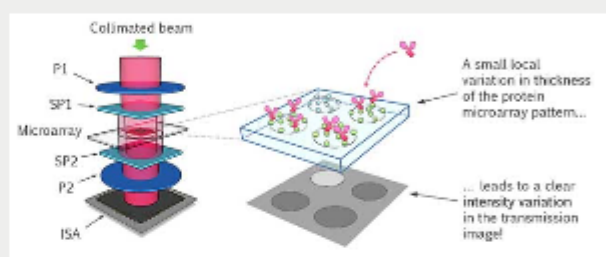
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Portable Microscope Could Speed Sepsis Detection

A portable microscope, developed as part of a scalable, point-of-care, label-free microarray platform, may offer more rapid detection of sepsis and other infections caused by bacteria, ultimately saving millions of lives each year. The device combines photonics technology, microfluidics and molecular biology to produce sample-to-result processing up to 50 times faster than current testing techniques, which can take as long as 24 hours to achieve similar results.

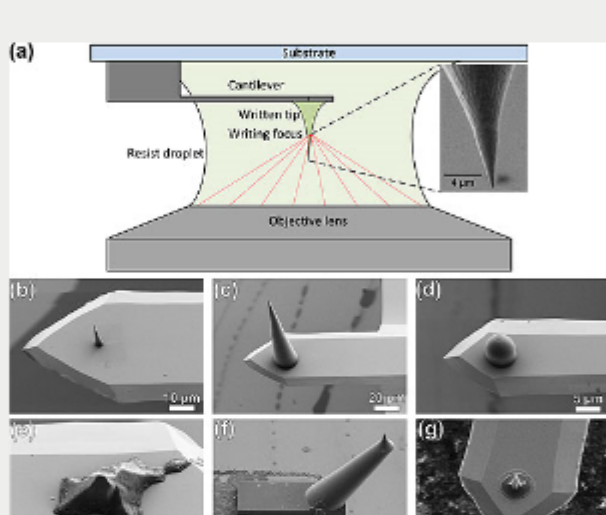


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3D Laser Technology Designs Microscopy Tips at Nanoscale

Mechanically stable atomic force microscopy (AFM) tips with arbitrary shapes can now be added to existing AFM cantilevers using 3D direct laser writing technology based on two-photon polymerization (TPP). TPP, a 3D printing process that provides structuring with extremely high resolution, could offer the ability to design optimal tips and probes with significantly enhanced resolution, leading to more options for analyzing samples.



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1470nm 5W Fiber Coupled Diode Laser

PhotonTec Berlin GmbH
Photontec Berlin's 1470nm diode laser emits 5W through a single 105µm/NA0.22 optical fiber with optional SMA connector, providing high power and high brightness. The diode module comes with electrically isolated and hermetically sealed 2-pins package measuring 42mm by 25mm.

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Advanced Energy® UltraVolt® HVA Series—Precision High Voltage Amplifier

Advanced Energy Industries Inc.
The HVA series of DC-to-DC high voltage power supplies operates a precision filter/divider and linear HV switch to produce a high voltage amplifier (HVA). These modules provide a high-resolution, programmable, high voltage DC to full-scale waveform capability greater than 1 kHz output.

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e2v Launches Dual-line ELiXA+ Line Scan Cameras

e2v
e2v's ELiXA+ family of line scan cameras has been expanded to include two new dual-line 8k monochrome models, providing customers with 5µm pixels that can be operated in two active CMOS line modes.

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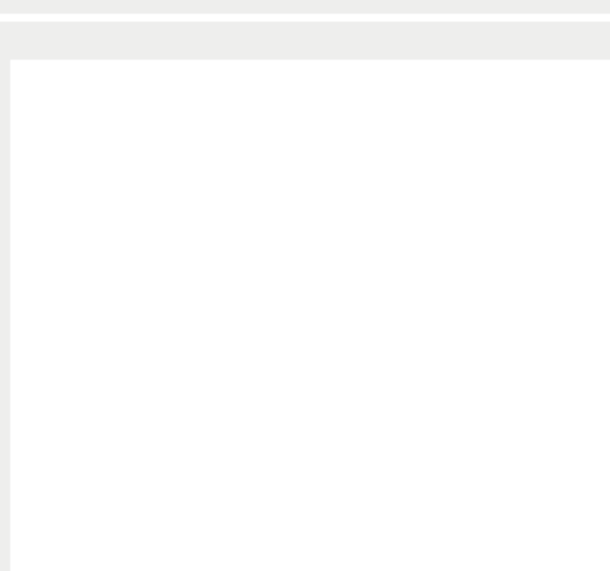
Laser Safety Curtain Systems

Kentek Corp.
KENTEK offers the most complete and versatile enclosure systems for applications requiring an eye-safe operating environment for industrial, medical, and research laser systems. Kentek's patented Ever-Guard® metal barriers and curtain systems provide outstanding protection for all lasers.

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Industry Events

ICALEO 2016

October 16-20, 2016 - Sheraton San Diego - San Diego United States
The International Congress on Applications of Lasers & Electro-Optics (ICALEO®) has a 34 year history as the conference where researchers and end users meet to review the state-of-the-art in laser materials processing, laser microprocessing, and nanomanufacturing as well as predict the future will lead. From its inception, ICALEO has been devoted to the field of laser materials processing at macro, micro and nanoscales and is viewed as the premier source of technical information in the field. This year's featured sessions include diode lasers for processing and pumping, laser process monitoring and control, laser processing of biological materials, lasers in nanotechnology and environmental technology, laser hybrid processing, laser manufacturing for alternative energy sources and laser business development.



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