

This Week In PHOTONICS

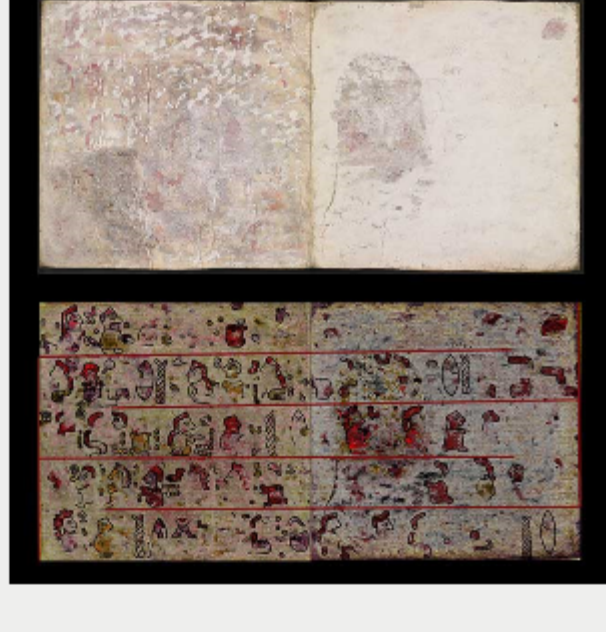
PHOTONICS MEDIA



Top Stories

Hyperspectral Imaging Shines Light on Ancient Mexican Text

Researchers at the Bodleian Libraries have used hyperspectral imaging to reveal never-before-seen pictographic scenes from a rare precolonial Mexican codex that has been hidden underneath a layer of gypsum and chalk for 500 years. Until now, no other technique has been able to unveil the concealed pictorial narrative in a noninvasive manner.

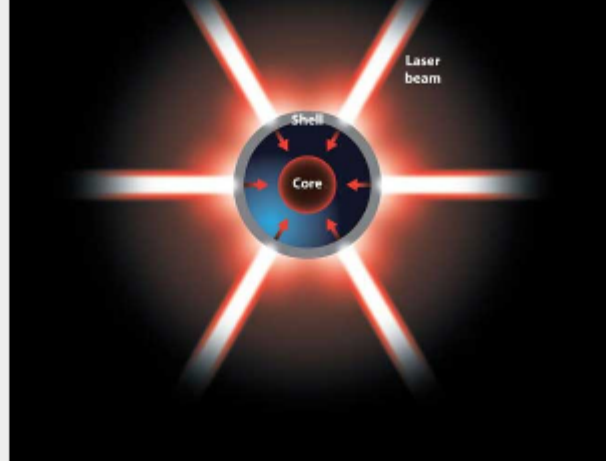


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Direct-Drive Laser Fusion Experiments Move Toward Target Ignition

Conditions capable of producing a direct drive laser fusion yield that is five times higher than the current record for laser fusion energy yield have been demonstrated. The work, which shows the use of direct-drive laser fusion to compress fuel to about half the pressure required to ignite it, represents an advance in a national research initiative to develop fusion as an energy source.

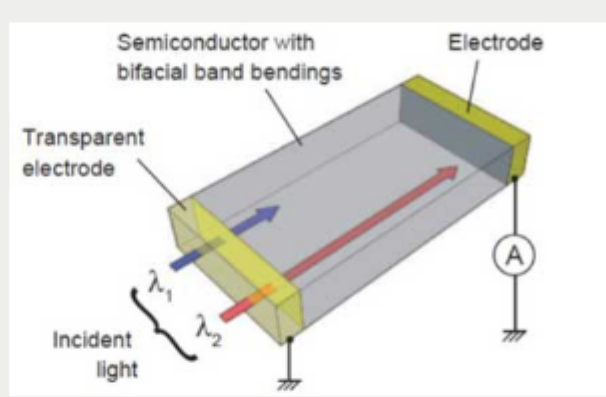


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Solid-State Photodetector May Speed Switching of Optoelectronic Devices

An all-solid-state wavelength-dependent bipolar photodetector (WBPD), composed of a single semiconductor, has demonstrated a faster response time than existing WBPDs that are comprised of hetero-nanostructures. The novel WBPD has also demonstrated tunable switching wavelengths.



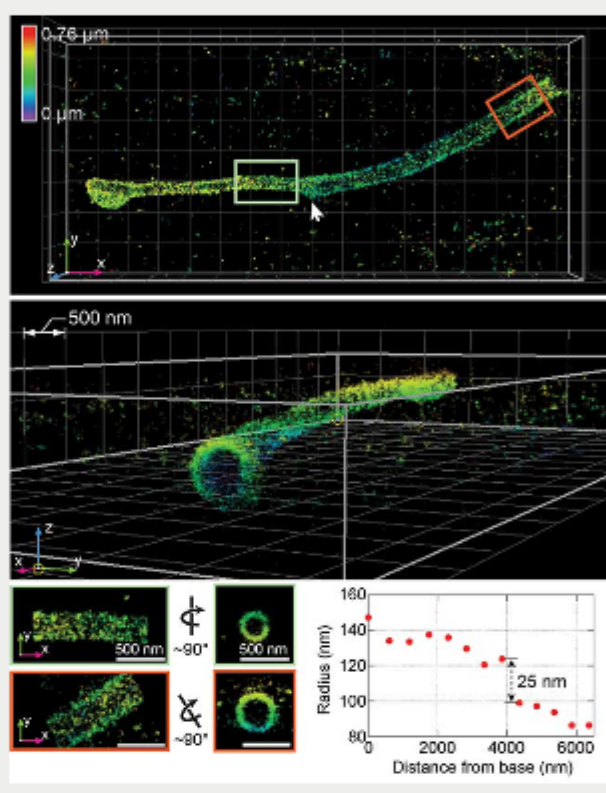
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Ultrahigh-Resolution Microscope Images Whole Cells in 3D

A novel super-resolution microscope allows 3D imaging of an entire mammalian cell and its cellular constituents at a resolution that is 20 to 50 times higher than conventional microscopy, with imaging depth improved approximately tenfold over state-of-the-art IPALM and 4Pi-SMSN implementations. Until now, resolving details at this level was only possible using electron microscopy, which requires samples to be treated.

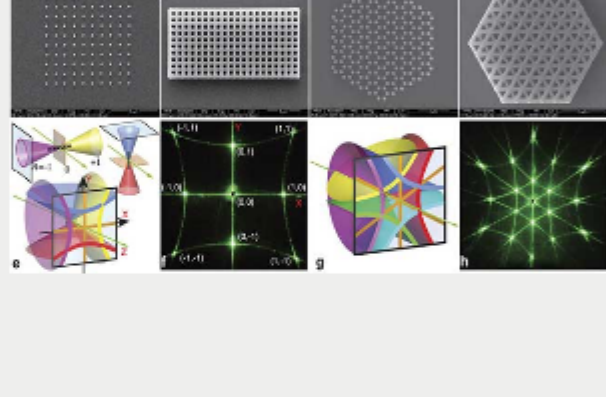


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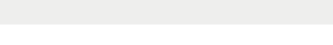


Laser Identifies Size, Shape of Materials for Quicker Optical Design

When optical diffraction was used to analyze the structure of a photonic crystal, researchers found that it created a characteristic light pattern that corresponded exactly to the number of scattering microscopic particles in the sample. The ability to determine the precise number of scatterers in optical materials has previously been done using electron or atomic-force microscopy only. A novel method for determining the properties of optical materials, done without the use of expensive microscopy tools, could help speed the design of optical devices.



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Gurley Precision Instruments Inc.
Gurley Precision Instruments is the one-stop-shop for custom optics without the catalog company mark-ups. High quality lenses, prisms, filters, mirrors, optographics, assemblies, and more, all at the lowest prices in the business.

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Diverse Optics Inc.
Diverse Optics manufactures custom, precision, polymer optics. Our core processes include injection molding, single point diamond turning (SPDT), opto-mechanical design, metrology, assembly, bonding, and thin-film coating.

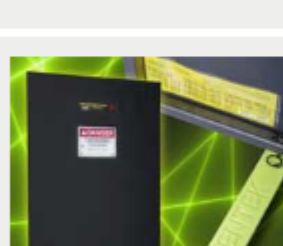
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LIAD Lock-in Amplifier Detectors

Newport Corporation
Ideal for calibrated power measurement of very low-level-light sources, the LIAD detectors are used in conjunction with chopped (at 18 Hz) CW or quasi CW radiation.

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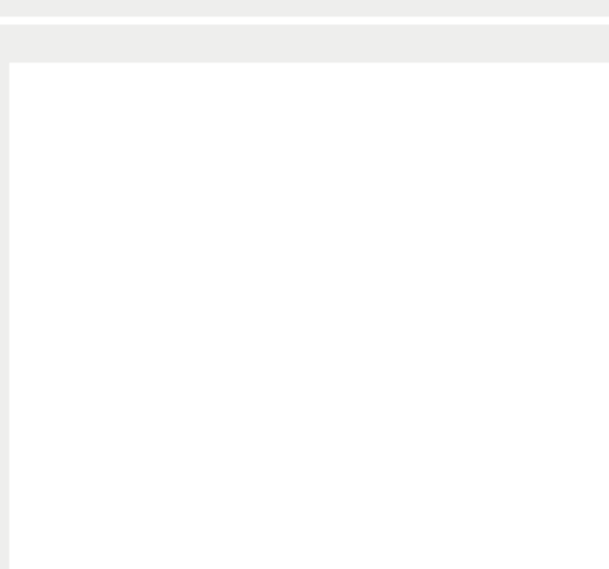
Laser Safety Portable Barriers

Kentek Corp.
Kentek's portable barriers are an alternative to laser safety curtain systems and are available in Flex-Guard™, Ever-Guard® and laser-safe acrylic materials.

Use our Light Blockers, constructed of the acrylic material as the barrier to connect together an unlimited number of partitions.

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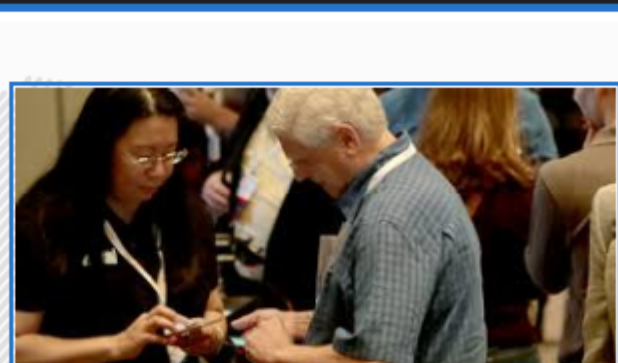
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Industry Events

OSA Frontiers in Optics: The 100th OSA Annual Meeting and Exhibit/Laser Science XXXII 2016

October 17-21, 2016 - Rochester Riverside Convention Center - Rochester, NY
Photonics Media Booth: 102

Frontiers in Optics 2016—the 100th OSA Annual Meeting—encompasses the breadth of optical science and engineering and provides an atmosphere that fosters the exchange of information between those working on fundamental research and those looking for solutions to engineering problems. Special symposia and other major events further highlight major advances in many selected areas. Image courtesy of OSA, the Optical Society of America.



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Webinars

Laser Measurement Best Practices: How to Avoid Choosing the Wrong Power/Energy Sensor

Tue, Sep 27, 2016 1:00 PM - 2:00 PM EDT

Sensors are critical for accurate laser measurement, yet they are often selected based on the wrong criteria. In this webinar, Ophir-Spiricon sales engineer Dick Riley will discuss laser measurement best practices and will guide you through key factors in the sensor selection process, including beam diameter, beam density values, cooling requirements, and exposure duration. Choosing the wrong laser sensor can result in a damaged sensor and invalid measurements of the laser's performance. Join us for this free webinar on sensor selection, to be sure that you make the right choice.

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