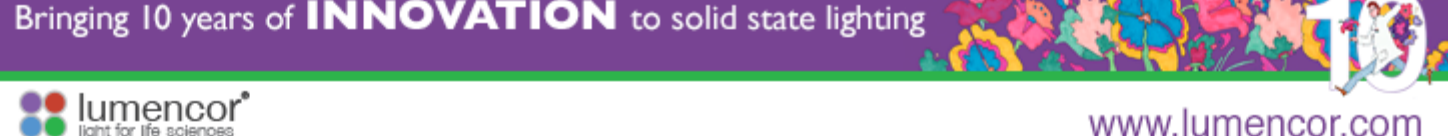


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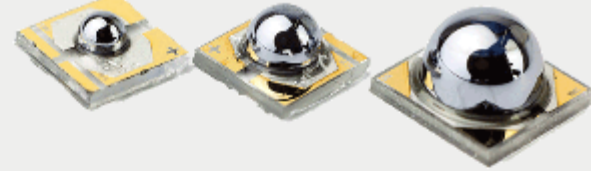
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Fast and Sensitive Mid-IR Detectors for Gas Sensing

Demands from industrial, petrochemical and new medical diagnostic applications are very wide-ranging — from air quality, emission monitoring and leak detectors, to breath analyzers and explosive material sensors. For many years, mid-IR components were considered expensive, immature and unreliable for wide application in this range. Swift growth of the mid-IR market is changing that.

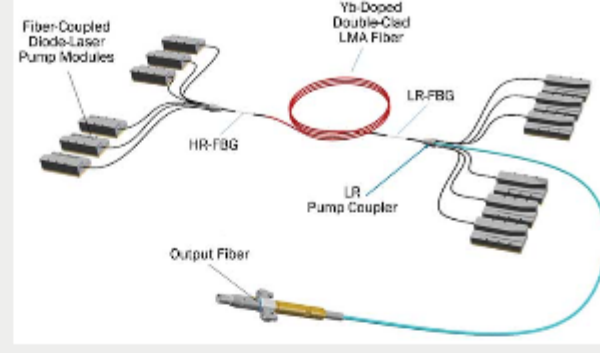


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Fiber Laser Welding Cuts Costs and Improves Results

Fiber lasers have been employed in a variety of welding applications for many years. And, as laser technology further develops and diversifies, its uses in welding continue to expand. The high reliability, excellent uptime and favorable cost of ownership characteristics of fiber lasers make them an economically viable and attractive choice for production welding applications.



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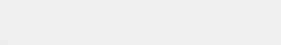


3D Imaging Aids Life Sciences

While human bodies and single cells are three-dimensional, in the past, imaging of them often was not. Data might be captured in 2D slices during a CT, MRI, ultrasound or even microscope study. But the interpretation of how those 2D images related to real-world medical and life science structures sometimes required specialized expertise. Now, 3D imaging and data are finding expanded application, particularly in medicine and the life sciences.



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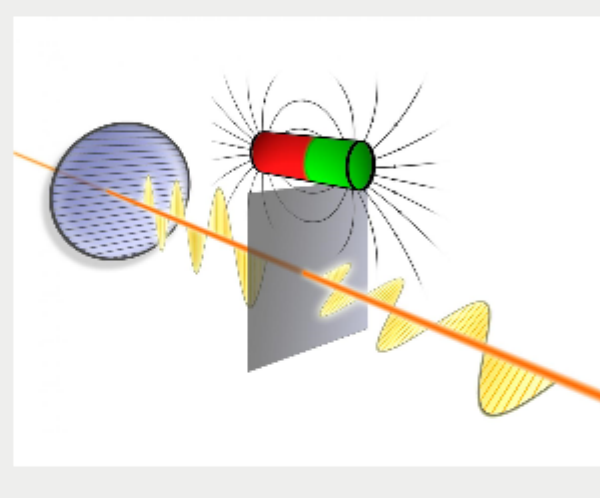
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More News From Europe

Quantum Effect Changes Direction of Light Waves

In a variation of the magneto-optical effect, special materials called "topological insulators" (TI) demonstrated the ability to switch the direction of a light wave in clearly defined quantum leaps rather than continually. This "quantized magneto-electric effect" could open up new and highly accurate methods of measurement.



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Researchers Develop Erasable Ink for 3D Printing

Researchers from the Karlsruhe Institute of Technology (KIT) have developed a method that actually erases the ink used for 3D printing, allowing the small structures up to 100 nm to be repeatedly erased and rewritten if need be. This new development opens up many new 3D fabrication applications.

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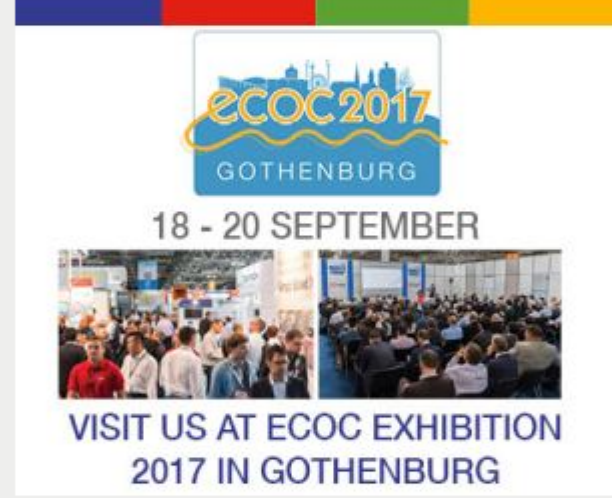
Photonic Research Challenges Conventional Understanding of Quantum Theory

Researchers have shown that when photons are created in pairs, they can emerge from different, rather than the same, locations. The discovery, which is in contrast to the general belief that photon pairs must originate from single points in space, could impact the study of quantum physics.

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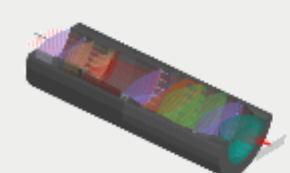
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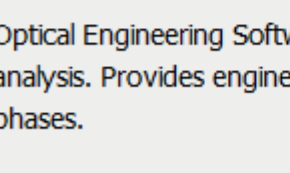


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Photon Engineering LLC

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Lumencor Inc.

Lumencor's SOLA light engines offer access to modern solid state illumination, with all its performance and efficiency benefits, at a price comparable to most metal halide light sources. With reliability and maintenance-free service built in, they provide sustainable and cost-effective replacements for traditional mercury-containing arc lamps.

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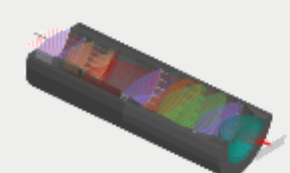


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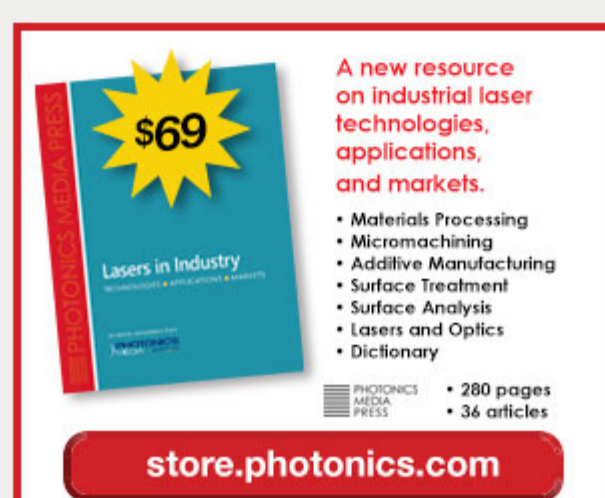
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