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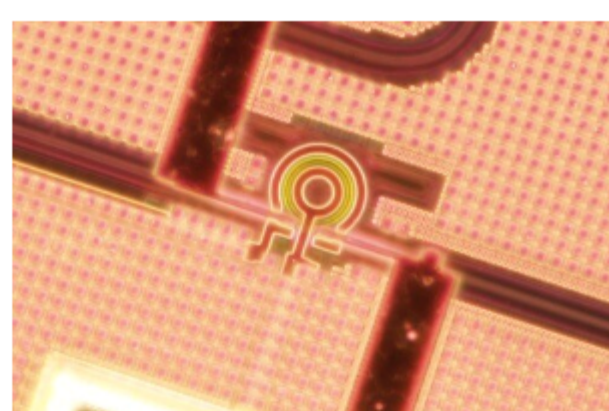
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Ring Resonator Pushes Photonic Sensing to Quantum Limit

A team led by researchers at the University of Bristol developed a method for operating mass manufacturable photonic sensors at the quantum limit. The work paves the way for practical applications, including the monitoring of greenhouse gas emissions and cancer detection.

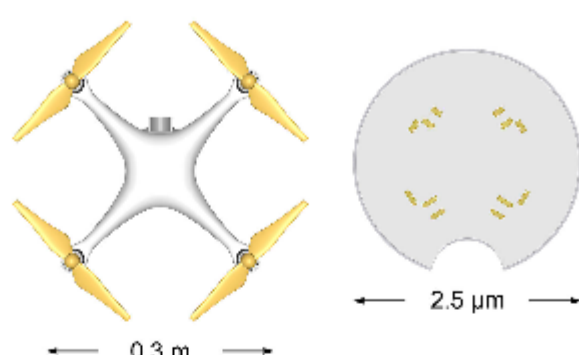
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Light-Driven Microdrones Offer Nanosensing, Motion Possibilities

Physicists at the University of Würzburg have used light to propel micrometer-size objects in an aqueous environment and control them precisely on a surface with all three degrees of freedom — two translational degrees and a rotational degree. The scientists said that the demonstration of this level of control over nano- and micro-objects opens possibilities to precisely control the assembly of nanostructures, such as for the analysis of surfaces with nanometer precision.

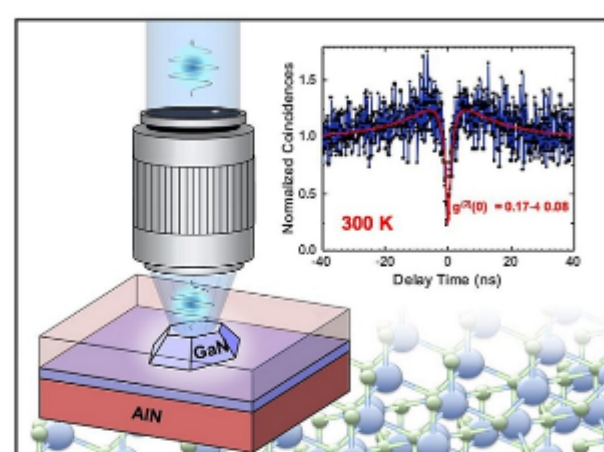
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Single-Photon Emitter Retains High Purity at High Temperature

Scientists at École polytechnique fédérale de Lausanne (EPFL) have developed a single-photon emitter capable of room temperature operation. The technology is based on quantum dots grown on cost-effective silicon substrates.

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.: Featured Products & Services



Ultra-High-Speed 3D-DIC Analysis by 2x HPV-X2

Shimadzu Europa GmbH
Silicon (Si) wafers, are the main material for semiconductor devices, have reached a size of $\phi 300$ mm and more but have a thickness of only 1 mm or less, and great care is necessary in handling these hard, brittle wafers. Here, high-speed deformation of a Si wafers was visualized by 3D-DIC (3D Digital Image Correlation)...

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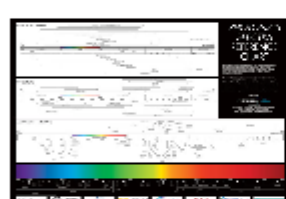


Laser Optics

Edmund Optics GmbH
Edmund Optics offers a wide variety of Laser Optics, including Laser Lenses, Laser Mirrors, Laser Filters, along with a variety of other components designed for laser use. Laser Lenses are designed to focus, homogenize, or shape laser beams. Laser Mirrors are ideal for beam steering applications.

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Photonics Spectra Reference Chart

Photonics Media
This full-color, 30 × 20.5-inch poster of the photonics spectrum displays the major commercial laser lines, detectors and optical materials in the ultraviolet to the far-infrared and beyond. The chart was updated in 2021 to reflect the changing technologies in the photonics industry. The convenient format makes it easy to quickly find the information you need.

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Alluxa Ultra Series Filters, including Narrowband, Dichroic, UV, IR, and Notch filters, provide the highest performance optical thin film solutions available today. For example, the Ultra Series Flat Top Narrowband filters offer the narrowest bandwidths and squarest filter profiles in the industry.

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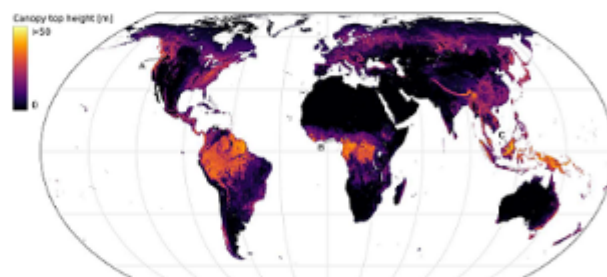


.: More News From Europe

Remote Sensing, Neural Networks Combine to Measure Tree Height

Scientists at ETH Zurich's EcoVision Lab have developed a deep learning framework to map treetop height globally at high resolution, using publicly available optical satellite images as input. The Global Canopy Height Map is the first map of its kind. It could become a critical tool for tracking carbon emissions that contribute to climate change and for planning sustainable regional development.

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European Initiatives Increase Access to Quantum Magnetometers

Researchers from six Fraunhofer institutes are working on two projects that aim to make quantum magnetometers — sensor devices that measure magnetic field — usable in industrial settings. Magnetometers are currently limited in such settings due to the complexity of their operation. Additionally, their spatial resolution is too low for many applications.

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Self-Cleaning Optical Fiber Powers Supercontinuum Light Sources

Researchers at Tampere University collaborated with colleagues at the University of Warsaw and the University of Burgundy France-Comté to create a supercontinuum light source in the mid-infrared, using a nonsilica, graded-index, multimode fiber. The collaborators generated a two-octave supercontinuum in the fiber, which could create a path toward bright, ultrabroadband light sources for applications in the mid-infrared that require high spatial beam quality and high power.

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