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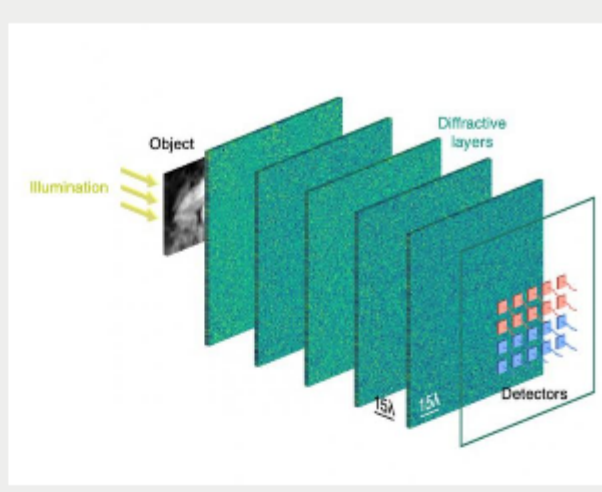


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Top Stories

Differential Detection Improves Accuracy in Diffractive Optical Neural Networks

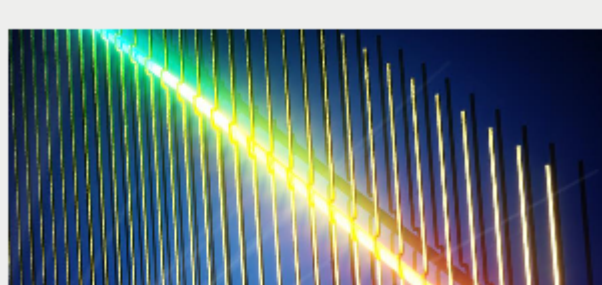
Improvements to an optical neural network being designed at the University of California, Los Angeles (UCLA) take advantage of the parallelization and scalability of optical-based computational systems. The system uses a series of 3D-printed layers with uneven surfaces that transmit or reflect incoming light.



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Single-Nanowire Spectrometer Is Independent of Tabletop Optical Components

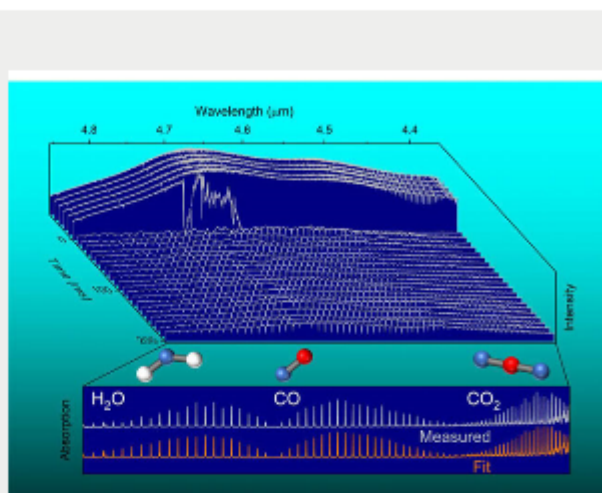
Scientists at the University of Cambridge have developed a microspectrometer based on a single, compositionally engineered nanowire that is independent of complex optical components or cavities. According to the researchers, it is the smallest spectrometer ever designed.



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Midwave Infrared Laser Allows Study of High-Explosive Detonations

Scientists at the University of Arizona and Pacific Northwest National Laboratories used a broadly tunable swept-wavelength external cavity quantum cascade laser (swept-ECQCL) operating in the midwave infrared (MWIR) spectral region to measure transmission through explosive fireballs generated from charges of four different explosive types detonated in an enclosed chamber.



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Featured Products

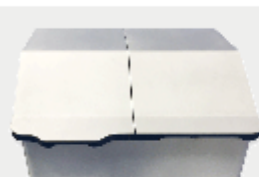


IDS: More Than 100 New U3V Cameras

IDS Imaging Development Systems GmbH

IDS Imaging Development Systems is expanding its USB3 Vision camera range by more than 100 models in the coming weeks. The company integrates the entire range of Sony sensors which are already available with GigE Vision interface. The USB3 Vision cameras will be available both as CP and SE family variants. For the latter, customers can choose between housing or board level versions with different lens holder options...

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Vutara Super-Resolution Microscopy

Bruker Nano Surfaces

Based on single-molecule localization techniques (PALM, STORM, etc.), Vutara 352 enables quantitative imaging at the nanoscale. With SRX software and its Quantitative Localization Microscopy (QLM) analysis suite, Vutara 352 can provide visual and quantitative information from biological samples. Frame rates up to 3000 fps allow data to be collected from live samples and perform time based measurements.

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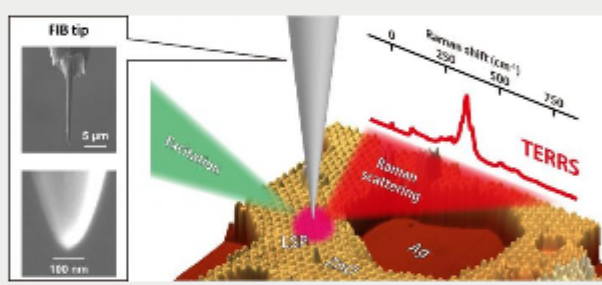
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More News

Tip-Enhanced Raman Spectroscopy Provides 1-nm Resolution

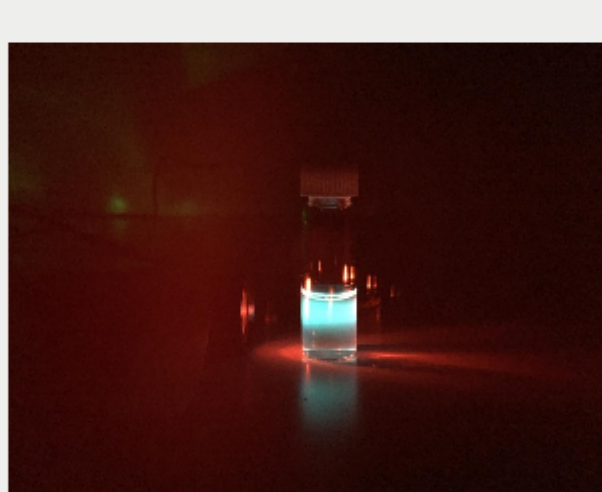
Tip-enhanced resonance Raman spectroscopy (TERRS) has been demonstrated by a research team at Fritz-Haber Institute. The results suggest that TERRS could offer a new approach for the atomic-scale optical characterization of local electronic states.



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Photoreceptor-Binding Nanoparticles Could Enable Mammals to See Beyond Visible Spectrum

To enable the detection of longer wavelength light in mammals, scientists at the University of Massachusetts Medical School, working with colleagues at the University of Science and Technology of China, developed ocular-injectable photoreceptor-binding upconversion nanoparticles (UCNPs).



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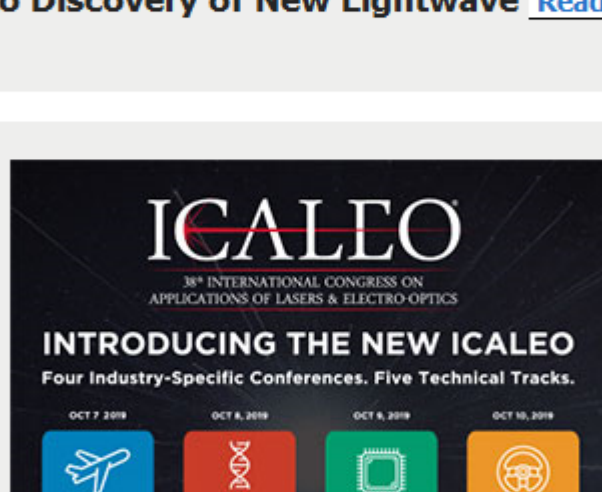
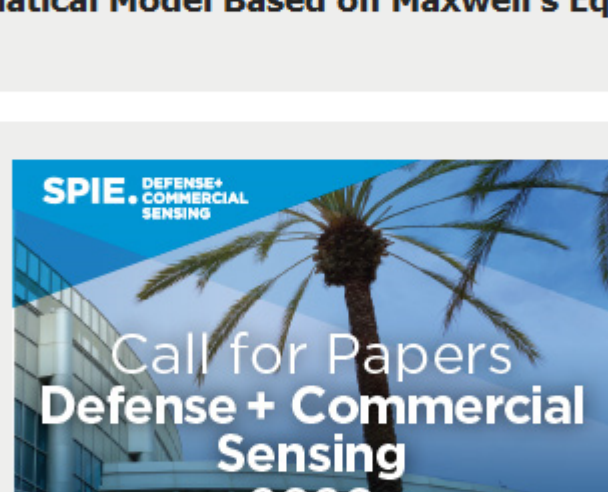
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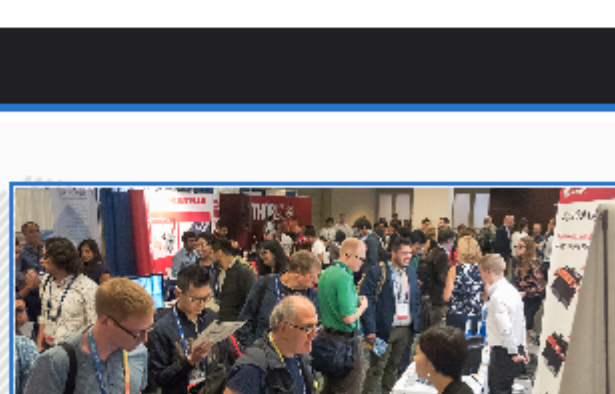
Industry Events

OSA Frontiers in Optics + Laser Science 2019

September 16-19, 2019 - Marriott Wardman Park - Washington United States

Photonics Media Booth: 107

The Optical Society (OSA), in partnership with the American Physical Society's Division of Laser Science (DLS), present OSA Frontiers in Optics + Laser Science APS/DLS. The conference, which also serves as the OSA Annual Meeting, unites communities from both societies for comprehensive and current research in more than 30 optics and photonics topics and across the disciplines of physics, biology, and chemistry. The Technical Conference is organized around four themes that leverage the intersection between science and applications: Autonomous Systems, Nanophotonics and Plasmonics, Quantum Technologies, and Virtual Reality and Augmented Vision. Each theme includes an all-invited program of panel discussions and is anchored by a 45-minute talk offered by a visionary speaker.



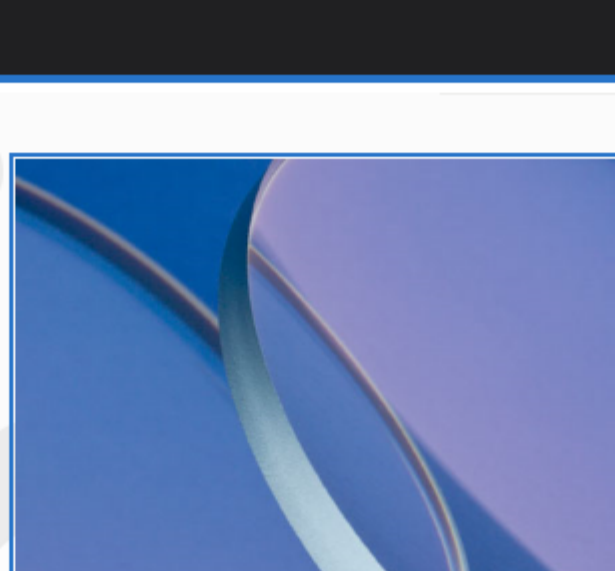
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Webinars

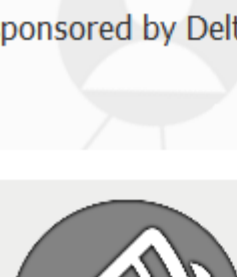
Deposition of Uniform and Laterally Graded Optical Interference Coatings

Wed, Sep 18, 2019 10:00 AM - 11:00 AM EDT

The advantages of reactive magnetron sputtering are its excellent layering properties, the comparatively short deposition times, and its scalability to large substrate sizes. In this webinar, you will learn about the capability of reactive magnetron sputtering technology for performing actual coating tasks. Several results obtained at Fraunhofer FEP using this technology will be presented. The presenter will also discuss application examples, such as variable optical filters and antireflective coatings on lenses, in which the optical function is adapted to the different angles of light incidence. This webinar is sponsored by Delta Optical Thin Film A/S.



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