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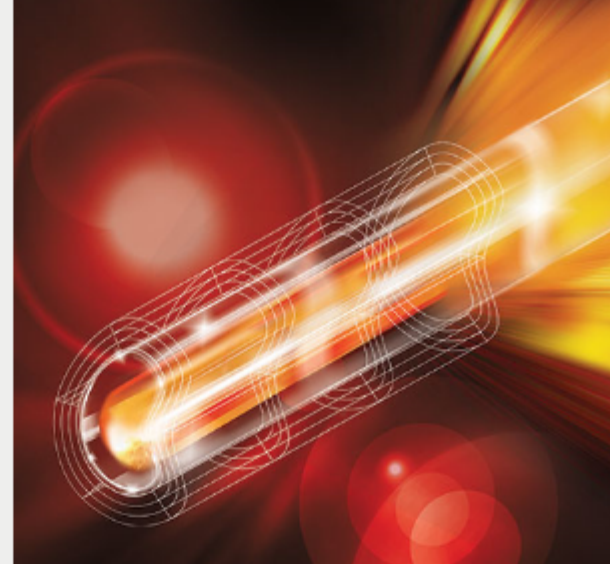
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Top Stories

Silicon Metamaterials Hold Promise for Photonic Circuits, Chips

As data transmission technology moves towards miniaturization, all-dielectric, silicon-based metamaterials may offer the necessary control of light through achievement of total internal reflectance. Researchers from Purdue University seek to engineer total internal reflection in optical fibers surrounded by a transparent silicon metamaterial, which could enable computer chips and interconnecting circuits that use light instead of electrons to process and transmit data.



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Wasp-Inspired Needle Could Advance Spectroscopy for Disease Detection

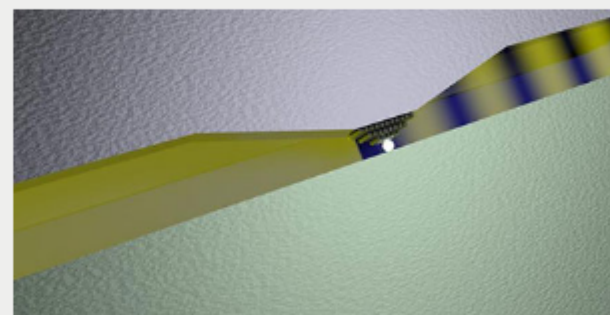
A robotic surgical system inspired by the anatomy of wood-boring wasps could be used in Raman spectroscopy to detect cancerous and diseased tissue. The prototype needle design is based on female parasitoid wasps, which use a bendable needle-like ovipositor to bore into wood to lay eggs in hiding host larvae.



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Optical Nanomodulator Produces Truly Digital Signals

As data rates and volumes continue to rise, an optical modulator that operates at the individual-atom level could both reduce the size of and increase the efficiency of communication networks. Within these networks, components called modulators convert electrical signals into optical signals; effectively, these are fast electrical switches that turn a laser signal on or off at the frequency of the incoming electrical signal.



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Rudolph Receives Lithography Order

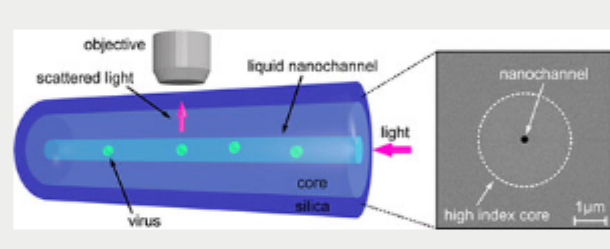
Rudolph Technologies Inc. said it has received an order for its JetStep lithography system from an outsourced assembly and test facility. The customer's name and financial terms of the order were not disclosed. Selected for the industry's first panel manufacturing line, the JetStep S Series will be used for next-generation fan-out processing on rectangular panels.



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Label-Free Virus Detection Method Integrates Optical Microscope, Fiber

A label-free technique has demonstrated the ability to detect freely diffusing viruses smaller than 20 nm. Scientists at the Leibniz Institute of Photonic Technologies (IPHT) have developed a label-free technique on a single-mode silica fiber with a core integrating a subwavelength (200-nm-diameter) nanofluidic channel.



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The Optical Society members share their reflections on 100 years of optics innovation, what inspired their interest in the field and how OSA has impacted their career.



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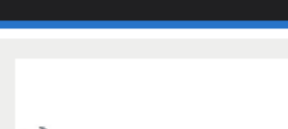
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Higher Quantum Efficiency

PCO-TECH Inc.
PCO a leading camera manufacturer and pioneer of sCMOS technology, presents the new pco.edge 4.2 Camera Link HS camera system.

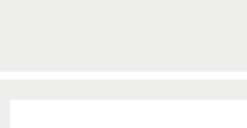
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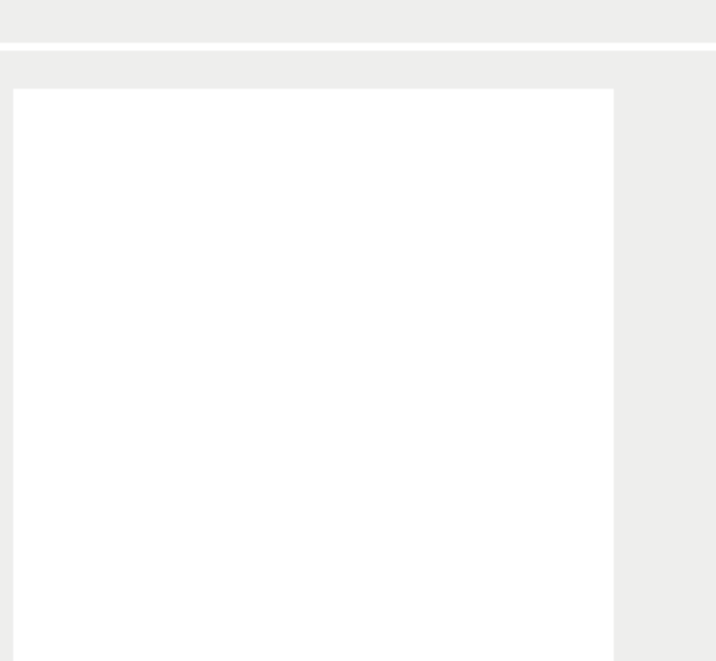
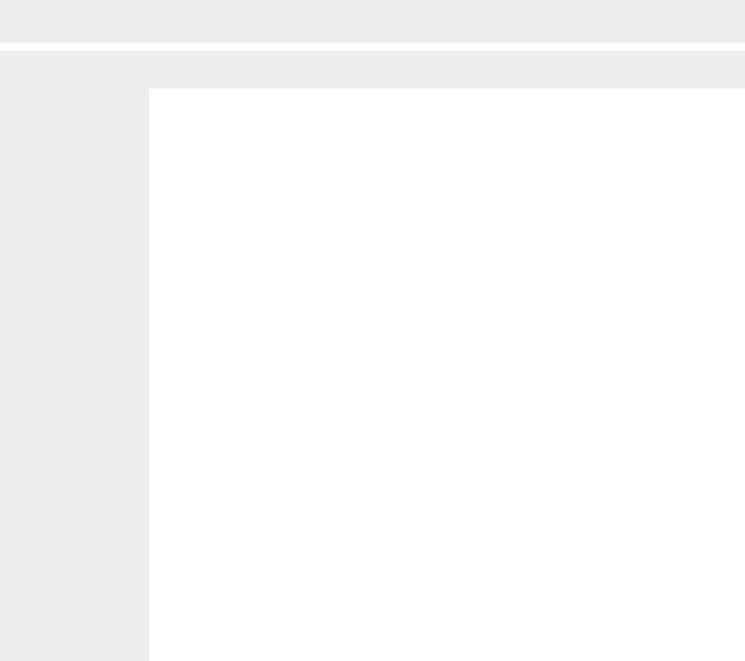


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New Scale Technologies, Inc.
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See the latest research at BIOS 2016. Topics include biomedical optics, diagnostics and therapeutics, biophotonics, new imaging modalities, optical coherence tomography, neurophotonics, optogenetics, tissue optics, and nano/biophotonics. New location in Moscone West. BIOS Expo, held Saturday and Sunday, kicks off the Photonics West week. This is your time to see what's new in the thriving biomedical optics and photonics industries.



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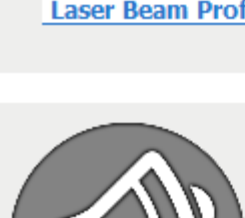
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