

This Week In PHOTONICS

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The New Collar Workforce
by Sarah Boisvert

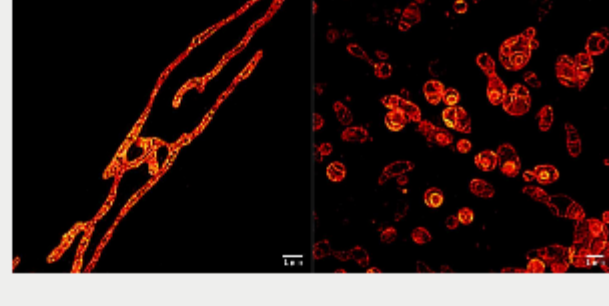
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Manufacturing
is changing dramatically.
Who's ready to work?

Top Stories

New Molecule Marker Enables 'Unprecedented' Study of Mitochondria

A team at Nagoya University's Institute of Transformative Bio-Molecules has developed a marker molecule that bypasses the problem of photobleaching in STED microscopy. It's allowing an unprecedented view of live mitochondria, which could help researchers better understand, diagnose, and potentially cure human mitochondrial disease.

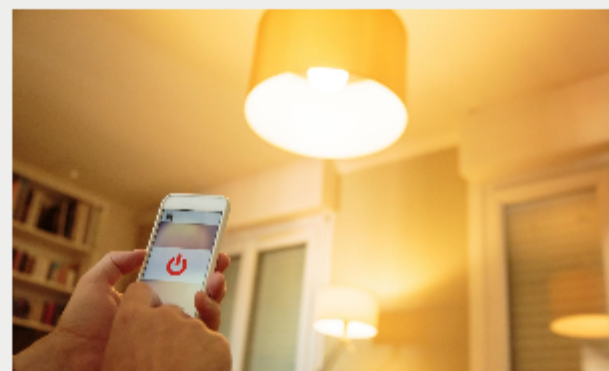


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Smart Light Bulbs Could Be Vulnerable to Hackers

Some smart bulbs can connect to a home network directly, without needing a smart home hub (a centralized hardware or software device that enables IoT products to communicate with each other). If these bulbs are IR-enabled, a hacker could send commands via the IR light that is emitted by the bulb to either steal data or spoof other IoT devices connected on the home network.

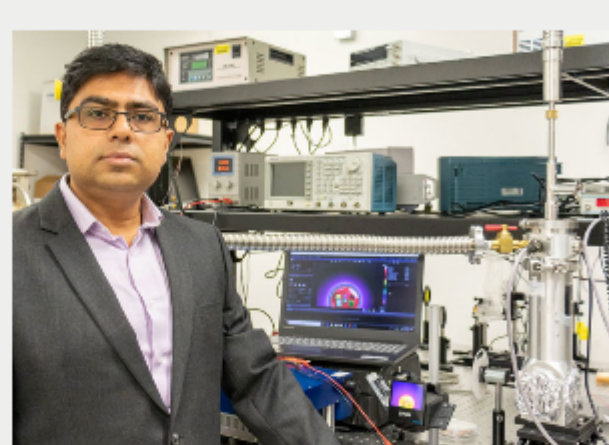


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Infrared Detector Improves Night-Vision Capabilities at Room Temperature

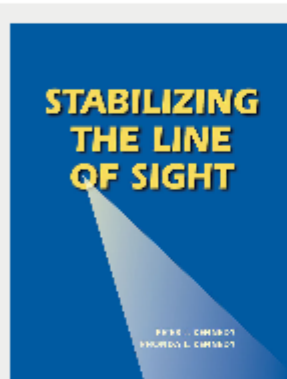
Researchers at the University of Central Florida have devised a strategy for uncooled, tunable, multispectral infrared (IR) detection. The team showed that room-temperature photodetection using 2D monolayer graphene is possible through the interplay of tunable, enhanced IR absorption induced by localized Dirac plasmonic excitations, graphene mobility engineering, and excitation of asymmetric hot carriers.



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Featured Products



Stabilizing the Line of Sight

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In *Stabilizing the Line of Sight*, authors Peter J. and Rhonda L. Kennedy provide a methodology and an example for executing a successful end-to-end line-of-sight (LOS) design. Comprehensive in scope, this book will give readers a better understanding of the relationships between the various engineering disciplines that are required for successful LOS control.

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Industrial Laser Safety at a Glance

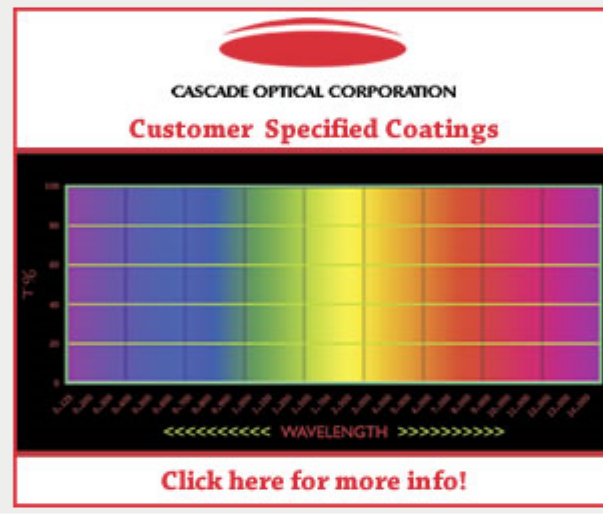
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A straightforward guide, offering clear, real world explanations of laser safety elements and the necessary background materials for the industrial laser environment. It raises awareness of the dangers of laser exposure, the proper tools needed to protect oneself from the potential hazards of industrial lasers, and the steps that must be taken to ensure a safe environment for all workers.

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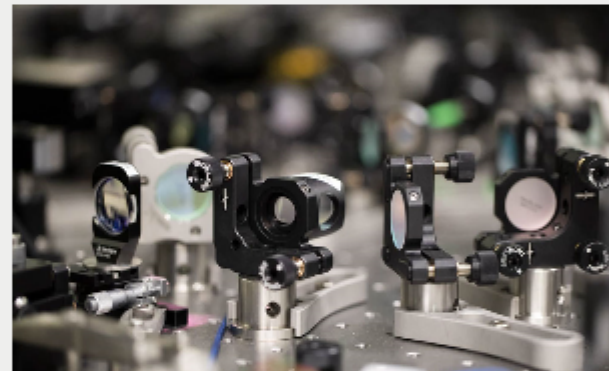
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More News

Optical Quantum Processor Is Scalable

A prototype of a large-scale quantum processor made of laser light has been created by a team from Australia, Japan, and the U.S. The processor has built-in scalability that allows the number of quantum components to scale to extreme numbers.

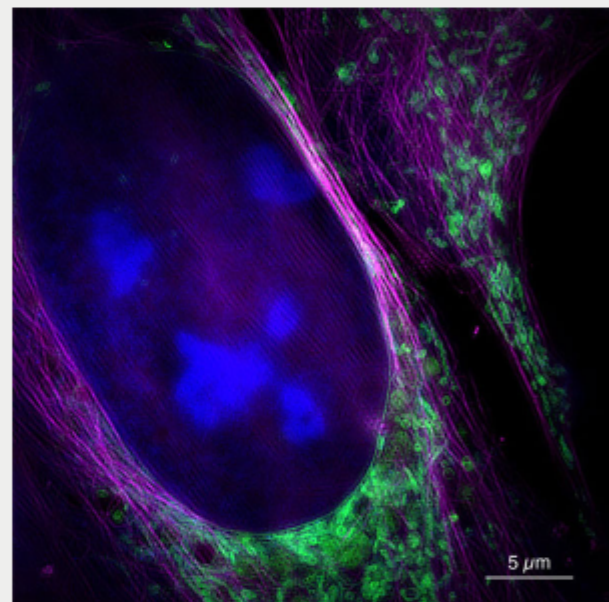


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New Technique Enhances Superresolution Microscopy

Researchers at Bielefeld University have demonstrated improvements in superresolution structured illumination microscopy (SR-SIM), demonstrating that the technique is possible in real time and at a very high imaging rate, which is enhancing observation of even the smallest cell particles.



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More Headlines

Sycamore vs. Summit: Google Claims Quantum Supremacy [Read Article](#)

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UAVenture Capital Fund Invests in New High-Power Laser Technologies [Read Article](#)

BluGlass Launches Laser Diode Business Unit [Read Article](#)

Industry Events

Semicon Europa 2019

November 12-15, 2019 - Munich
SEMICON Europa attracts a highly influential audience from every segment and sector of the European microelectronics industries including semiconductors, LEDs, MEMS, printed/organic/flexible, and adjacent markets. Exhibitors and attendees meet to enact change and address industry-shaping trends. This year SEMICON Europa will be co-located with productronica in Munich, creating the strongest single event for electronics manufacturing in Europe and broadening the range of attendees across the electronics chain.



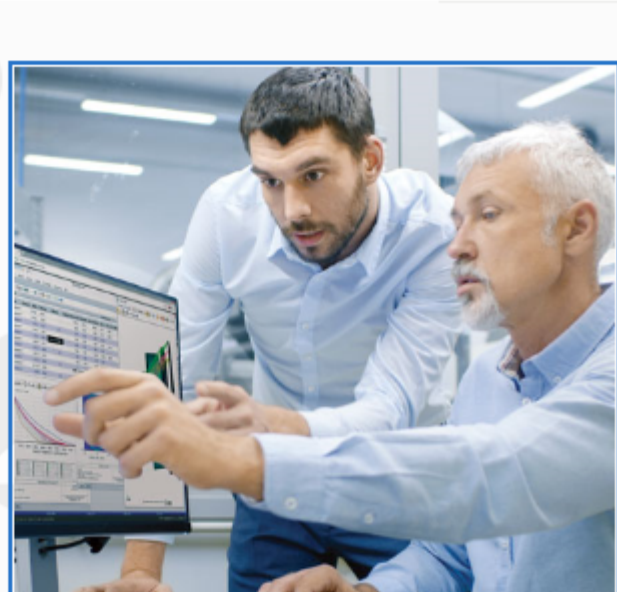
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Webinars

High-Yield Optimization: Streamlining the Path to More Easily Manufacturable Optical Designs

Wed, Nov 6, 2019 1:00 PM - 2:00 PM EST

The conventional optical design approach results in designs that are very sensitive to manufacturing and alignment errors, which means the optical product is difficult to repeatedly manufacture successfully. In this webinar you will learn to a newly method, called High-Yield Optimization, that produces designs that meet tight performance specifications, provide a higher manufacturing yield, and lower manufacturing costs through less waste. High-Yield Optimization will help you optimize for as-built performance, rather than nominal performance. Presented by the founder of Zemax, Kenneth Moore, Ph.D.



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