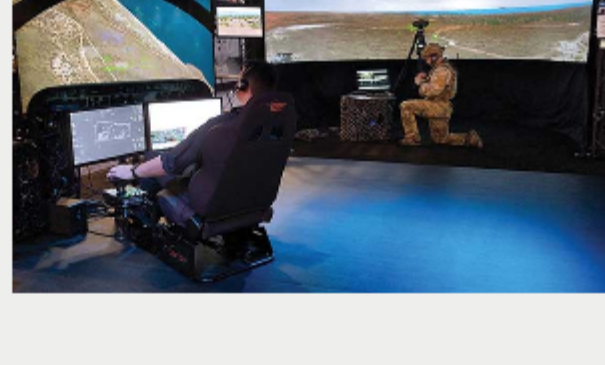


PHOTONICS spectra



As Good as the Real Thing for Military Training

"Fight like you train and train like you fight" is a military maxim. To better do that, the military is turning to virtual, augmented and mixed reality. In virtual reality, digital representations replace the real world, with a high-end example being immersive simulators with realistic sights, sounds and motion. In augmented reality, projected data overlays what trainees see. Mixed reality combines the real and synthetic.



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Defense Drones Take Sensing to New Heights

They're lurking in the air in the trouble spots around the world, from the mountains of Afghanistan to the deserts of Iraq and Syria, to the disputed waters of the South China Sea. Unmanned aerial vehicles (UAVs), or drones, are acting as the eyes in the sky, playing an increasingly prominent role in spying, search and rescue operations, border security and combat operations.



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From Crop Science to Space Exploration, Optical Sensing on the Rise

From smartphones, smart homes and autonomous vehicles to crop science, food inspection and space observations, optical sensors are finding increasing use in the commercial sector. Image sensing evolved from the military arena to commercial applications such as remote sensing, advanced machine vision, the medical/biotechnology world, and even into artwork and antiquities. Once size, weight and cost were driven down, there was an immediate upturn in the market; and this growth has been exponential.



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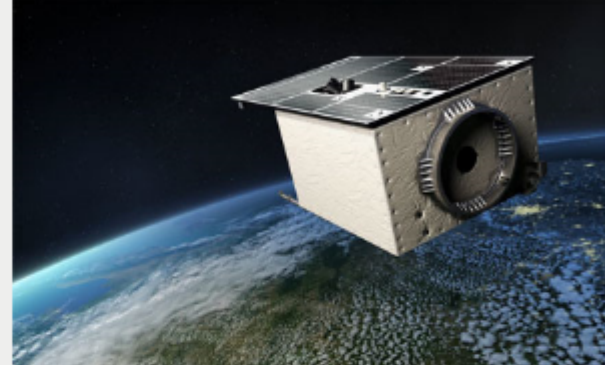
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In Case You Missed It

Remote Sensing Data Helps Scientists Measure Biodiversity

Remote sensing methods, which have been used to measure biological diversity for about 30 years, show even greater potential for assisting biodiversity research in the future. A key task of this research is to record the current state of diversity, study processes within ecosystems and identify possible changes.



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New 4G Optics Technology Extends Limits to the Extremes

Advances in liquid crystalline and liquid crystal polymer materials have made it possible to modulate the orientation of the anisotropy axis at high spatial frequencies, ushering in the next generation of optics for space communications and intraocular lenses.

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Silicon Nanoparticles Used for Photovoltaic Windows

Windows that can efficiently collect solar energy are one step closer to becoming a reality thanks to high-tech silicon nanoparticles. Researchers have developed technology to embed the silicon nanoparticles into what they call efficient luminescent solar concentrators (LSCs). These LSCs are the key element of windows that can efficiently collect solar energy.

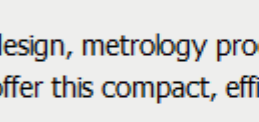
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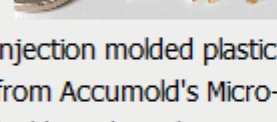
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Optikos Corporation
Optikos, the leader in optically-based design, metrology products and IQ Lab™ services, is pleased to offer this compact, efficient, easy-to-use quality control tool.

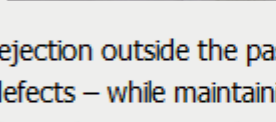
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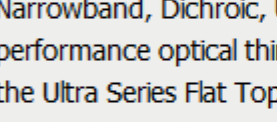
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Low-Cosmetic Defect IR Filters for Thermal Imaging

Spectrogon US
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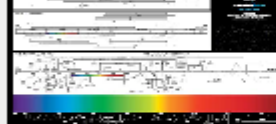
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Alluxa
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Photonics Spectrum Reference Chart

Photonics Media
This full-color, 30 x 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.

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Mid IR Fiber Collimator

Micro Laser Systems Inc.
The FC5 Mid IR Fiber Collimator operates between 2.5µm and 6µm. Output beam is user adjustable. Fine 80 pitch threads allow you to optimize collimation for your operating wavelength and lock it down.

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Webinars

Technology Business Champions' Guide to Successful Commercialization

Thu, Apr 13, 2017 1:00P - 2:30P EDT

When you develop an innovative technology that makes good business sense, it can be a win for you, your organization, and the many thousands who stand to benefit from your innovation. But without a clear path for commercialization, even the most visionary technology can fail. This webinar is for scientists, engineers and others interested in developing and commercializing photonics and other technologies, whether you're an entrepreneur or part of an organization. You will learn how to recognize successful commercialization and how to guard your intellectual property gold. Instructor David Krohn is the Managing Partner of Light Wave Venture LLC, a company focused on developing photonics business opportunities over a broad range of markets. Webinar attendees will receive a coupon for \$20 off the price of Krohn's 12-course series, Commercialization of Innovative Technology through Entrepreneurship (CITE), available from the Photonics Media bookstore.

[Register Now](#)

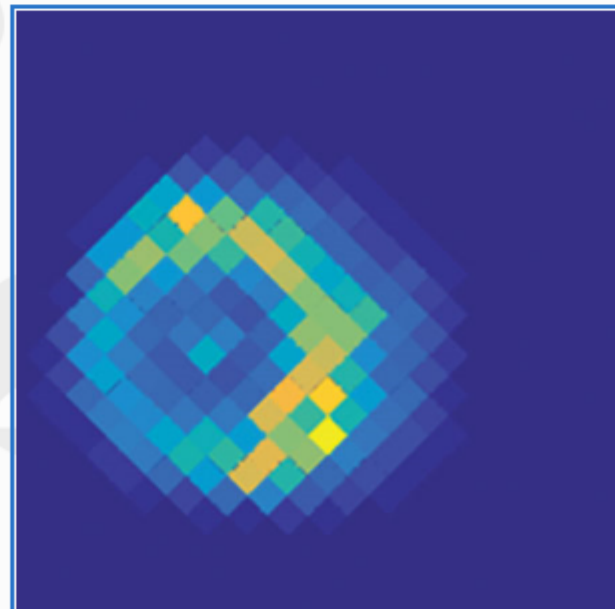


Introducing the CAOS Smart Camera - Empowering Extreme Imaging

Wed, Apr 26, 2017 1:00 PM - 2:00 PM EDT

For security and surveillance applications, achieving true image scene pixel information is vital. This has led to an increasing demand for a smart camera that can achieve true vision through highly directional and adaptive image pixel sifting for high-value targets. Nabeel A. Riza, Ph.D., chair professor of electrical and electronic engineering at University of Colorado, will discuss the development of the Coded Access Optical Sensor (CAOS) and how, working with CMOS sensors, it can smartly extract scene contrast pixel light intensity information using time-frequency coding of selected pixels. He will discuss how CAOS addresses the challenge of reaching extreme all-linear, instantaneous dynamic ranges with multicolor smart capture of targets of interest within extreme contrast images, and will provide a demonstration of the CAOS-CMOS camera. Who should attend: engineers, scientists, researchers and technical professionals who may require or are interested in extreme contrast imaging.

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LEDs; Optical Materials; Displays and Holography; Medical/Diagnostic Sensors; Plasmonics

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Fiber Optics Components & Systems Sourcebook

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