



PHOTONICS IN DEFENSE & AEROSPACE



A quarterly newsletter presenting significant developments in the use of photonics in the vital defense and aerospace industries. Manage your Photonics Media membership at Photonics.com/subscribe.

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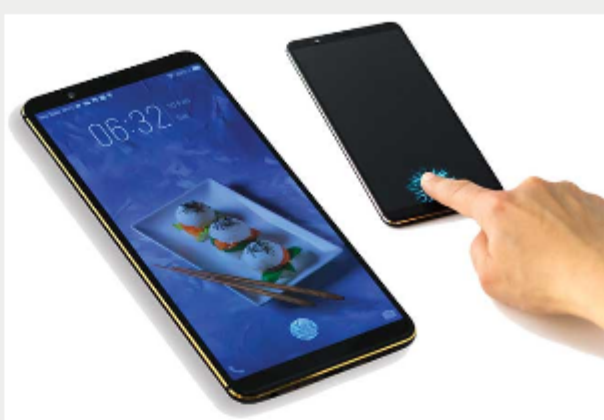
Difference Frequency Combs
low-noise operation - compact design

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Defense & Aerospace News

Optical Sensors Support the Rise in Automation

Optical sensors act as transducers by converting light to electrical signals that can be interpreted, measured, analyzed, and manipulated by instruments. From surveillance and monitoring to fingerprint recognition, optical sensors are essential instruments utilized in industries ranging from aerospace and defense, oil and gas, and health care and construction to consumer electronics and automotive.



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Hidden In The Shadows No More

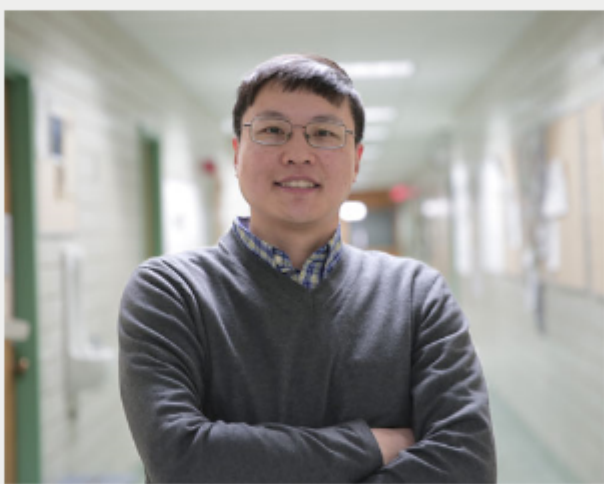
Thermal cameras are actively deployed on aerial and ground vehicles, in watchtowers, and at checkpoints for surveillance purposes. More recently, thermal cameras are becoming available for use as body-worn cameras. Researchers at the U.S. Army Research Laboratory (ARL) have developed an artificial intelligence and machine...



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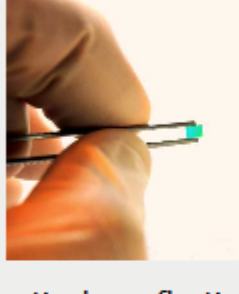
Cloaking Material Can Conceal Hot Objects from IR

An ultrathin cloaking material has been developed that can hide hot objects, such as human bodies and military vehicles, from IR cameras. The new "stealth sheet" is <1 m thick and absorbs approximately 94 percent of the IR light it encounters, making hot objects beneath the cloaking material almost...



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Featured Products



Diffraction Grating Solutions

Optometrics Corporation
Diffraction efficiency and dynamic range are critical parameters in many spectrometric instrument designs. Understanding why a particular reflective or transmission grating may have small yet necessary performance differentiation for instrument optimization success can be critical.


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Compact, High-Performance Frequency Comb

TOPTICA Photonics Inc.
TOPTICA's DFC CORE features turnkey operation in a robust, small volume housing. It has the ability to support high-end applications like optical clocks or low noise microwave generation and can be combined with any of TOPTICA's diode lasers and locking electronics.

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Lasers in Industry

Photonics Media
Photonics Media has gathered articles and other valuable resources into a guide to the current use of lasers in industry, a reference tool and a resource for learning. This book is for anyone working on, implementing or considering the application of lasers for and in industrial settings.

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MIDORI rvi/ndt Fiber-Optic LED Light Source

Ushio America Inc.
For decades, Ushio America, Inc. has consistently provided high quality illumination products in specialty markets world-wide. Responding to needs of customers with discerning applications, Ushio engineers have developed exceptional LED fiber-optic illuminators in compact sizes.

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More News

Optics and Photonics Tech Transfer Programs Merge Industry and Research

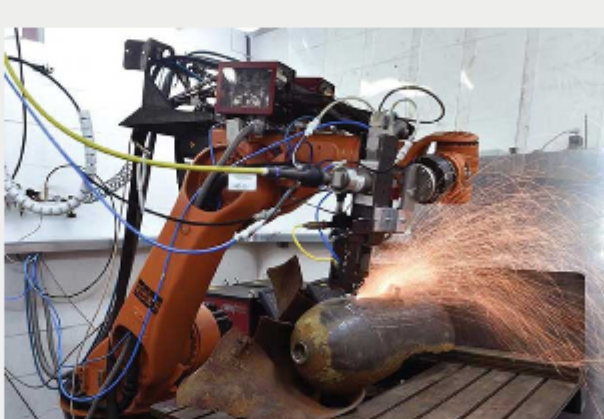
Technology Transfer Programs are often a concerted effort to share skills, knowledge, technologies, methods of manufacturing, samples of manufacturing, and facilities among governments or universities and other institutions. These programs ensure that scientific and technological developments are accessible to a wider...



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Lasers Defuse WWII Duds

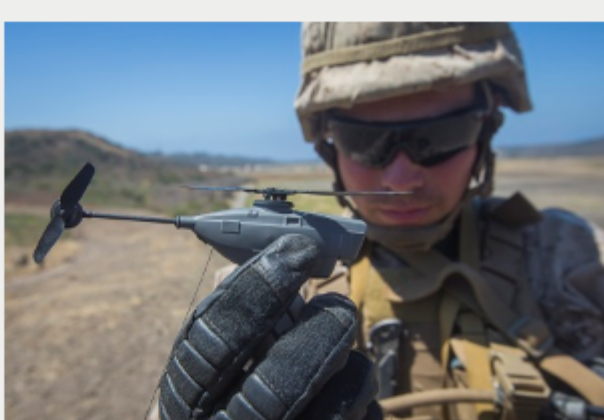
There are some buried relics better left untouched. Seventy-five-year-old duds, or unexploded bombs, fall into that category. There are an estimated 60,000 tons still buried in the ground in Germany, according to the Hamburg fire brigade's bomb disposal unit (KRD/Kampfmittelräumdienst der Feuerwehr)....






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US Army Places \$2.6M Order for FLIR reconnaissance systems

Sensor systems developer FLIR Systems Inc. has been awarded a \$2.6 million order from the U.S. Army to deliver the Black Hornet Personal Reconnaissance System (PRS). The FLIR Black Hornet Personal Reconnaissance System (PRS) will support squad-level surveillance and reconnaissance capabilities. Courtesy of Pfc. Rhita...






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Brimrose AO Modulator Used on ISS

A Brimrose Corporation of America acousto-optic modulator (AOM) is now being used by NASA as part of a new facility known as the Cold Atom Laboratory (CAL) on the International Space Station (ISS). Fiber-coupled version of the acousto-optic modulator. Courtesy of Brimrose. The Cold Atom Laboratory was developed at...



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EQT Acquires Optical Software Provider Zemax

Zemax Software Holdings, a global provider of optical and illumination design software, has been acquired by EQT Partners, a leading investment firm with portfolio companies in Europe, Asia, and the U.S., and with total sales of more than €19 billion (\$22 billion) and approximately 110,000 employees. EQT acquired...

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