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Tuesday, April 02, 2019

PHOTONICS IN DEFENSE & AEROSPACE

PHOTONICS MEDIA

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.

Defense & Aerospace News

Optics Improvements Prompt Enhanced Component Parameters

For defense and security applications, size matters. So do weight, power, and cost. These four parameters are often referred to as SWaP-C, a key concept that drives the manufacture of defense and security systems, sensors, and optical components.

Read Article

ARL Explores Benefits of Immersive Technology for Soldiers

Researchers at the U.S. Army Research Laboratory (ARL), in collaboration with the University of Minnesota and the U.S. Army's Institute for Creative Technologies (ICT), have investigated methods for assessing the usefulness of virtual and augmented reality (VR and AR) systems for soldiers.

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Featured Products

Remote Sensing

Photonics Media

From space and the sky around us to firmly on the ground, remote sensing is providing an important view of our surroundings that can't be seen with our eyes alone. A variety of optical technologies are having an impact on applications as diverse as agriculture and defense, weather and climate, and are now part of the...

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Alluxa Ultra Series Filters and Coatings

Alluxa

Alluxa Ultra Series Filters, including Narrowband, Dichroic, UV, IR, and Notch filters, provide the highest performance optical thin film solutions available today. For example, the Ultra Series Flat Top Narrowband filters offer the narrowest bandwidths and squarest filter profiles in the industry.

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More News

SPIE's Defense & Commercial Sensing 2019 to Showcase Latest Advances

SPIE Defense + Commercial Sensing 2019 (DCS) — a leading conference on imaging, sensing, and photonic technologies designed for defense and security applications — is set to take place at the Baltimore Convention Center April 14-18, 2019. The conference will include two technical programs featuring 1600 presentations, a 300-company expo, and 29 courses focused on training and education.

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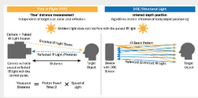
Measuring NIR Sources for Safe and Accurate 3D Sensing

The rapid adoption of 3D NIR sensing systems requires effective methods to measure the quality, performance, and safety of NIR emitters. NIR wavelengths range from 700 to 1500 nm, and NIR light sources can be used for multiple applications. For example, NIR in the 780-nm range is used and considered safe for eye tracking, and in the 850-nm range is used for night vision in security cameras.



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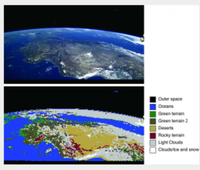
Sensor Uses AI to Obtain Real-Time Images from Satellite Orbit

Researchers at Tokyo Institute of Technology have developed a low-cost star tracker and Earth sensor. The star tracker will be used with microsatellites to handle calibration observations, operation verification tests, and long-term performance monitoring during orbit. The Earth camera will perform image recognition while in orbit using an artificial intelligence system.



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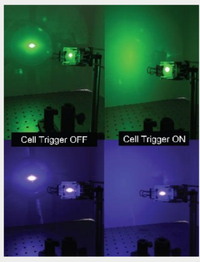
Liquid Crystals Could Help Protect Against Laser Pointer Attacks

Liquid crystals could someday be used to help deflect laser pointer attacks on aircraft, regardless of the wavelength used in the attack. To shield pilots from laser attacks, researchers placed a solution of liquid crystals between two 1-inch-square panes of glass.



Read Article

Millimeter Wave Imager 'Sees' Through Solid Objects

A camera-like device that generates and detects millimeter waves that "see" through solid objects has been built by a University of Delaware (UD) student engineering team. In the future, the device could be useful for military operations and for improving security in airports, schools, restaurants, and other public spaces.

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