


PHOTONICS IN DEFENSE & AEROSPACE



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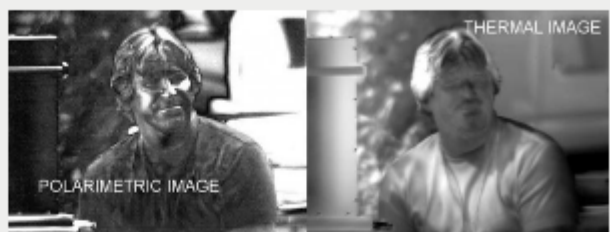


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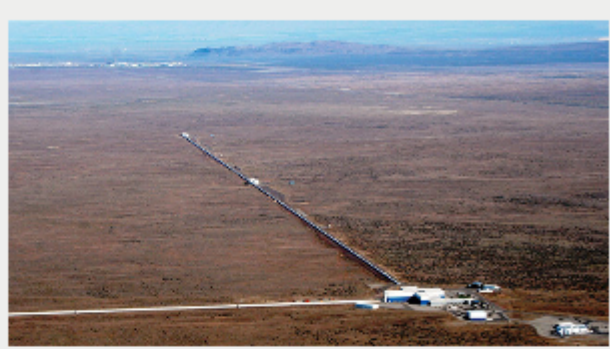
Defense & Aerospace News

ARL Develops New Type of Thermal Imaging Camera
 Researchers at the U.S. Army Research Laboratory (ARL), in collaboration with Polaris Sensor Technologies Inc., have developed a new type of thermal imaging camera that allows soldiers to see hidden objects that were previously undetectable.




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LIGO Continues Making Waves
 Building the Laser Interferometer Gravitational-Wave Observatory (LIGO) took a collaboration of over 1000 people, some \$500 million in funding from the National Science Foundation over three decades, and a lot of patience. But the vision paid off with observational evidence of one of the greatest mysteries in physics — the existence of gravitational waves.



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Featured Products



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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Ushio America Inc.
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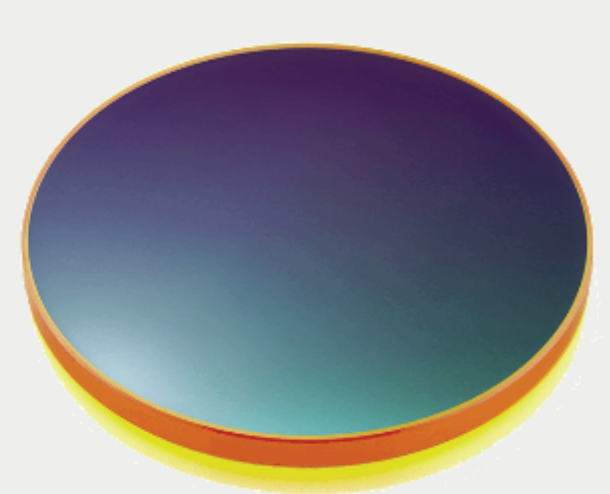
More News

US Navy Granted Patent for Metal Metamaterial
 An electro-optics engineer at the Naval Surface Warfare Center-Crane Division (NSWC-Crane) has developed a special metamaterial to bring full-spectrum IR to soldiers. Using metal metamaterial structures, engineer Ben Conley built an IR antenna that can see the IR lightwaves and expand the sensed spectrum by adding short- and mid-wavelength IR.



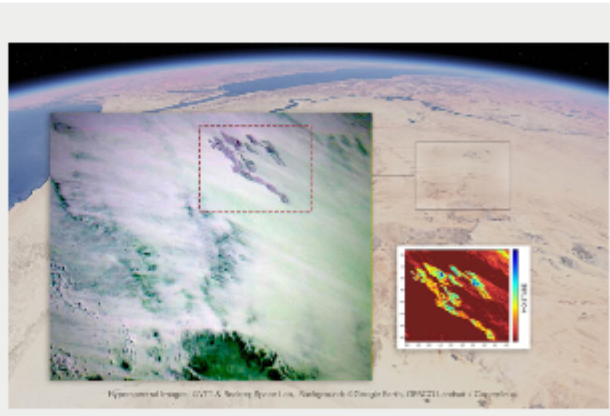
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Optical Coating Innovations Push Performance
 Optical coatings improve the performance of mirrors, lenses, and light-emitting or absorbing semiconductors by enhancing transmission and reducing reflection. To continue to meet rising demands, however, coatings need advancements in control, measurements, and cost — areas vendors seek to address by rolling out innovations.



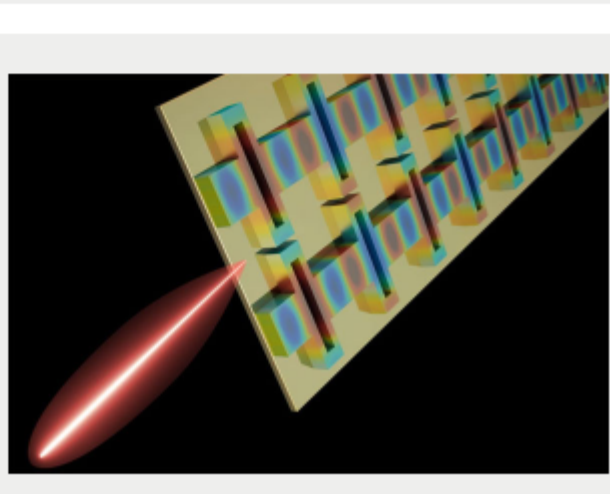
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Hyperspectral Imager Will Communicate Climate Changes from Space
 The photos from a tiny IR hyperspectral camera, taken from a nanosatellite that has now reached space, could provide information useful for managing the effects of climate change. The first images were taken on Dec. 2, 2018, over the Sahara Desert.



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New High-Power, Tunable THz Laser Is Slated for Space Mission
 A tiny terahertz laser designed by MIT researchers is the first to reach three key performance goals at once: high power, tight beam, and broad frequency tuning. The laser has been selected by NASA for a 2021 mission to detect chemical emissions in the “interstellar medium” — that is, the cosmic material between stars.



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