Wednesday, November 2, 2016

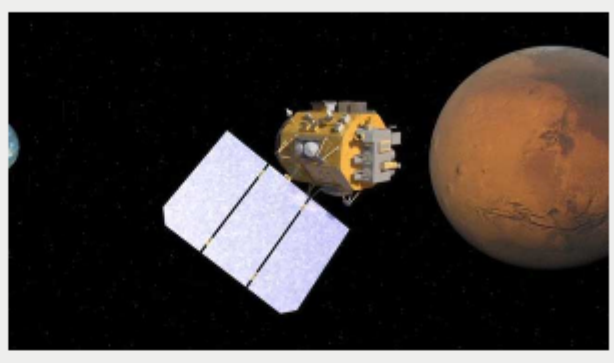
PHOTONICS IN DEFENSE & AEROSPACE

PHOTONICS MEDIA

A quarterly newsletter presenting significant developments in the use of photonics in the vital defense and aerospace industries.

Defense & Aerospace News

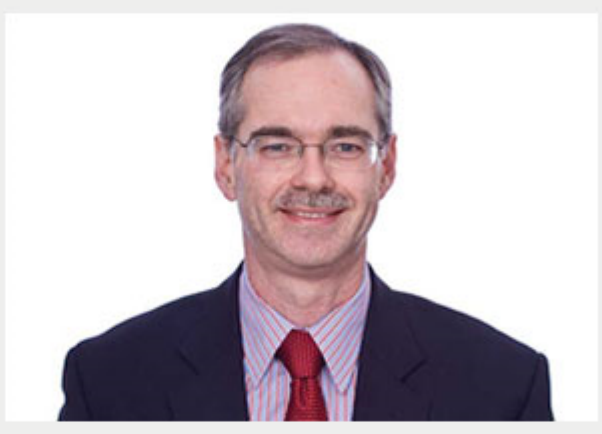
Photonics to Play Key Role in Spaceflight Communications



Making space communications more efficient for both near-Earth and deep-space missions is a priority for NASA, and photonics may provide the solution. Laser communications could significantly improve data rates in all space regions, from low-Earth orbit to interplanetary. After more than 50 years of relying solely on radio frequency (RF) to send and receive data, several centers across NASA are experimenting with laser communications, which has the potential to provide data rates at least 10 to 100 times better than RF.

Read Article

3 Questions Interview: Walter Buell Looks to Laser's Future



Walter Buell, principal director of the Electronics and Photonics Laboratory at The Aerospace Corp. in California, first became interested in lasers and optics more than 30 years ago. When his high school physics teacher allowed him to teach a lab class on interference and diffraction, he "was hooked."

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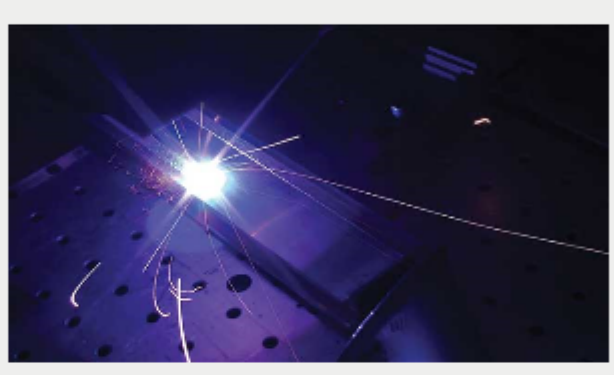
New Milestone in Laser Bonding



The demand for lightweight construction and economic efficiency has led to R&D efforts in metal-plastic combinations. Although primarily driven by the automotive industry, this has become an increasingly important topic for other industries as well. By using a high-power short-pulse laser it is possible to establish a simple joint with a very high loadability.

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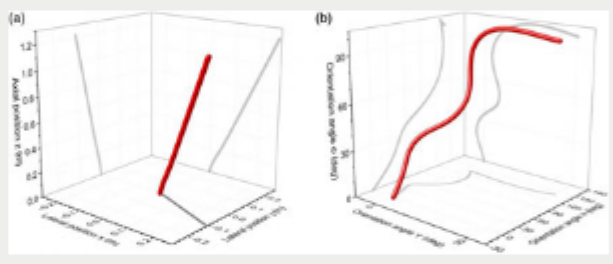
Lasers May Remove Space Debris Using Novel Approach



Laser ablation can be used to remove interference in satellite communications by pushing pieces of space debris into the Earth's atmosphere, where the debris is destroyed.

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BIOpinion: Meet Key Challenges to Create Optical Biosensor Growth

A confluence of scientific, technological and societal change is driving a rapid acceleration in the optical biosensor market. We live in a world that is increasingly aware of biological molecules and their importance: Not only has the cost of sequencing a genome fallen dramatically, but we also are beginning to understand more of what all that genomic information means.

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European Space Imaging, Vricon Partner for Earth Data

Satellite imagery provider European Space Imaging has entered into an agreement with 3D model developer Vricon for access to its "Globe in 3D" geospatial earth data.

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UTC Awarded Study Contract for Air Force Integration

Integrated systems provider UTC Aerospace Systems has been awarded a study contract to complete the integration of its MS-177 sensor system into the U.S. Air Force's Distributed Common Ground System (DCGS).

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Featured Products

1064nm High Energy Diode Pumped All-solid-state Q-switched Laser

Changchun New Industries Optoelectronics Technology Co. Ltd.

High energy diode pumped-all-solid-state Q-switched lasers at 1064nm. Features include high single pulse energy, short pulse duration, and high peak power.

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Hyperspectral Application Development Kit

Corning Advanced Optics

Corning Incorporated's microHSI™ spectral sensor systems; spanning from the visible to the infrared; combine low size, weight and power (SWaP). The development kit contains vis-NIR module and stand, motorized linear-translation stage and ultra-stable light source.

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IXF1.0sa Single-Axis, Aluminum Flexure

Siskiyou Corp.

A new series of OEM, single axis, optical mounts from Siskiyou Corporation offers exceptional stability at a low price point. This performance is achieved in the new IXFs series mounts through the use of Siskiyou's monolithic flexure construction.

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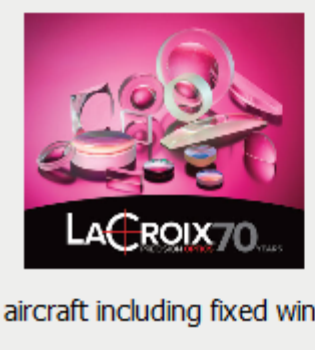

LaCroix Precision Optics Flying High with the Aerospace Industry

LaCroix Optical Co.

Many of the optics LaCroix Precision Optics produce are paired with US military aircraft including fixed wing, rotor craft and UAVs.

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