


# 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](http://Photonics.com/subscribe).

sponsor



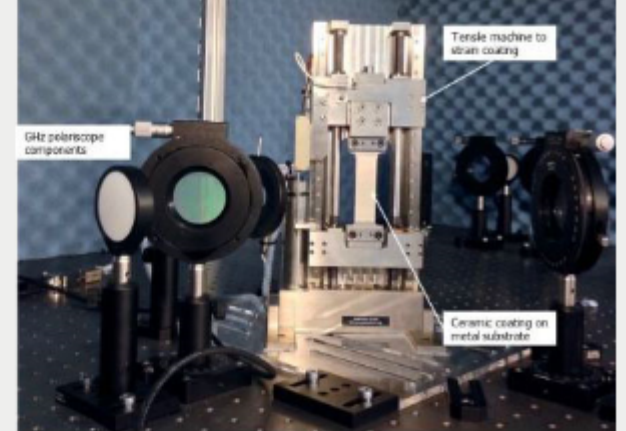
**Lasers in Industry**

A resource on materials processing, micromachining and more.

**ORDER NOW!** **Only \$69.00**

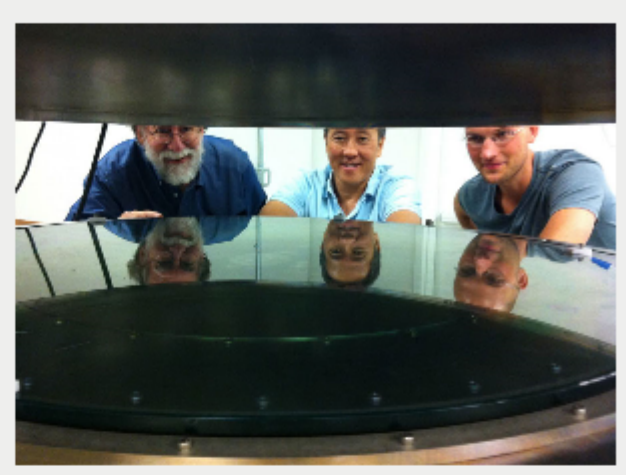
## Defense & Aerospace News

**Optical Approach Finds Jet Thermal Coating Weak Spots**  
 A strain-measurement technique uses optical analysis to reveal weak areas in the ceramic thermal barrier coatings that protect jet engine turbines from high temperatures and wear. This technique could be used to predict coating lifetime and could lead to novel thermal barrier coatings that would make engines more efficient.



[Read Article](#)

**Scaled-Up Mirror-Coating Technology Could Improve Telescope Efficiency**  
 Scientists are adapting atomic layer deposition (ALD), a technique widely used in the microelectronics industry, to develop protected silver coatings suitable for telescope mirrors. These coatings could help telescopes maintain high reflectivity at wavelengths from 340 nm through the mid-IR spectrum. Most astronomical...



[Read Article](#)

## Featured Products

**High-Speed Testing with Imaging Colorimeters**  
**Radiant Vision Systems, Test & Measurement**  
 Evaluate the accuracy of light and color in backlit signs and other illuminated components with increased throughput and consistent data. Radiant Vision Systems ProMetric® I Imaging Colorimeters are the fastest, most accurate light and color measurement devices for R&D and production applications.

[Visit Website](#) [Request Info](#)

**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 diffraction grating may have small yet necessary performance differentiation for instrument optimization success can be critical.

[Visit Website](#) [Request Info](#)

**Precision Custom Sapphire Optics**  
**IRD Glass**  
 IRD Glass and IRD Ceramics are World Class Suppliers of precision sapphire, glass, optical and ceramic components. IRD serves the aerospace, defense, sensor, machine vision, laser, technical glass, optical, process control and medical industries.

[Visit Website](#) [Request Info](#)

**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.

[Visit Website](#) [Request Info](#)

**SPIE. 15-19 April - Orlando, Florida**  
**Call for Papers**  
**Defense + Commercial Sensing 2018**  
 Sensors, IR, laser systems, spectral imaging, radar, LiDAR, and more.  
 Abstracts due 9 October

sponsors



**Inspired by Light**  
 Optical Components, Coatings, and Sub-Assemblies

SHOP NOW!

## More News

**US Army Research Helping the Development of Autonomous Sight Systems**  
 The development of small autonomous robots through a 10-year effort led by the U.S. Army Research Laboratory (ARL) is helping to inform the development of future swarms of collaborative, heterogeneous Army systems for air and ground. Researchers from ARL, the Army's corporate laboratory and their academic partners...

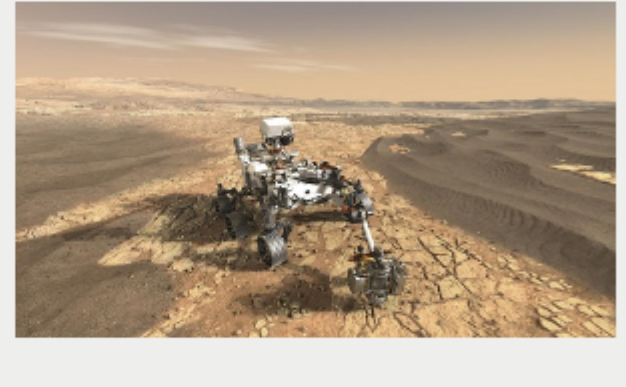
[Read Article](#)

**BGU to Analyze Israel's VENUS Satellite Images**  
 Ben-Gurion University of the Negev (BGU) is playing a key role in the research component of the Vegetation and Environment Monitoring on a New Micro Satellite (VENUS), Israel's first environmental research satellite launched at the Guiana Space Center in Kourou, Guiana.



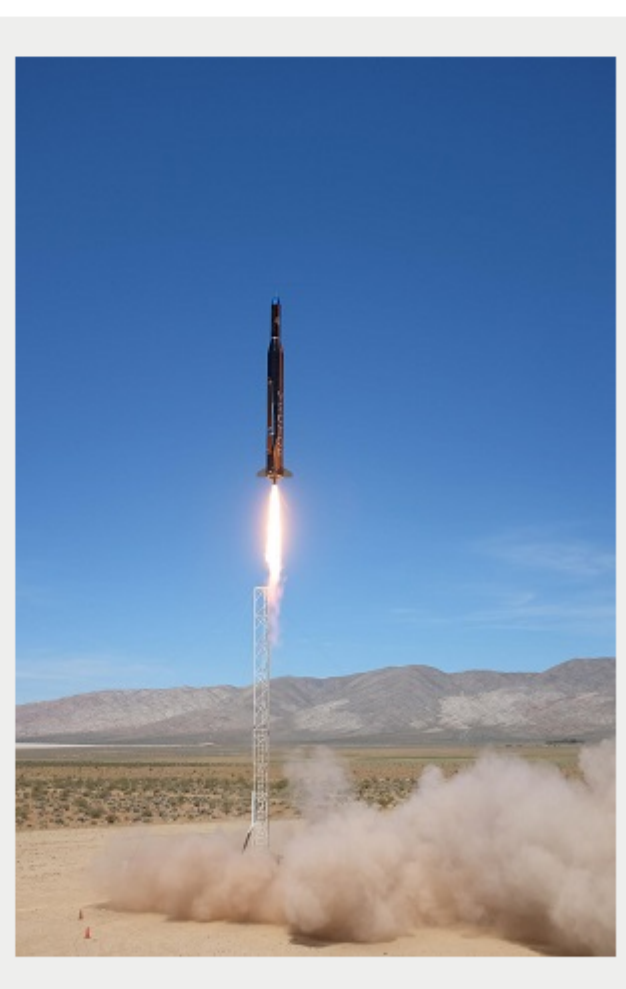
[Read Article](#)

**NASA Mars 2020 to Use Spectroscopy, Fluorescence Imaging in Biosignature Analysis**  
 NASA's Mars 2020 mission, which will look for signs of past life on Mars, will use smart methods originally developed to find the oldest life on Earth. A concept image of the Mars 2020 Rover. Courtesy of NASA/JPL-Caltech. The 2020 mission builds on the successes of prior rovers to make coordinated measurements that...



[Read Article](#)

**HRL Laboratories Receives NASA Award for 3D-Printed Rocket Development**  
 HRL Laboratories LLC has received an award as part of NASA's Space Technology Research, Development, Demonstration and Infusion Program to develop 3D-printed ceramic rocket engine components. Vector rocket. Courtesy of Vector Space Systems. HRL achieved a scientific breakthrough with preceramic resins that can be 3D...



[Read Article](#)

**Univ. of Arizona to Support Sandia, Raytheon Consortium for DoD Project**  
 The American Institute for Manufacturing Integrated Photonics (AIM Photonics), a public-private partnership that aims to advance photonics manufacturing capabilities in the U.S., has announced that a team led by the University of Arizona (UA) will support a consortium that includes Sandia National Laboratories, the...

[Read Article](#)

## Webinars

**Mobile Hyperspectral Imagers: Implementations and Applications**  
 Tue, Oct 10, 2017 1:00 PM - 2:00 PM EDT  
 This webinar will provide an overview of the state of the art in hyperspectral imaging (HSI) and cover a number of diverse applications for HSI, from medical imaging to agriculture and anti-counterfeiting. The webinar will conclude with an outlook on some of the exciting new technologies that are expected to continue to transform this imaging modality and move it into the domain of the consumer. Presenter Hod Finkelstein is CTO of TruTag Technologies where he leads imaging systems development and microparticle production teams.

[Register Now](#)

