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Space Lasers Have 'Bright Future' in Communications

Neither wind, nor clouds, nor even atmospheric turbulence kept NASA's Lunar Laser Communication Demonstration (LLCD) from its mission of providing error-free communications to ground stations from lunar orbit, NASA said recently in releasing results of the 30-day experiment. "Throughout our testing we did not see anything that would prevent the operational use of this technology in the immediate future," said Don Cornwell, LLCD mission manager at NASA's Goddard Space Flight Center in Greenbelt, Md.

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Ultrathin PV Device is Highly Efficient

A thin film of perovskite sandwiched between two very thin organic semiconductors makes for a photovoltaic device with high power conversion efficiency.

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'Warping' Compresses Big Data

A physics-based data compression method outperforms existing technologies, such as JPEG, for images and could eventually be adopted for the capture and analysis of massive amounts of data in real time for communication, scientific research and medicine.

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UN Proclaims 2015 'International Year of Light'

In making the proclamation, the UN recognizes the importance of raising global awareness of how light-based technologies promote sustainable development and provide solutions to global challenges in energy, education, agriculture and health, said the European Physical Society, one of the founding scientific sponsors of IYL 2015.

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Handheld OCT Device Catches Eye Disease Early

A handheld optical device that combines ultrahigh-speed 3-D imaging with a microelectromechanical systems (MEMS) scanning mirror could make early detection of certain eye diseases as easy as scanning a bar code.

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Technique Stabilizes Femtosecond Pulses

A new technique that stabilizes femtosecond pulses generated in a microresonator could improve devices dependent on such pulses for applications in telecommunications, broadband spectroscopy and astronomy, among others.

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Liquid Crystal 'Flowers' Into Lenses

The 3-D, liquid-crystal array shaped like a flower can be used as a lens similar to an insect's compound eye, said a team of material scientists, chemical engineers and physicists.

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Former Trumpf Exec to Lead Highyag

Dr. Ing. Holger Schlüter brings to his new position 20 years of experience in high-power lasers for industrial applications, most recently as chief operating officer of Technolas Perfect Vision GmbH.

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Optics Expert Gathers Chief Scientist Post at ARL

Dr. Joseph Mait, a fellow of both the Optical Society (OSA) and SPIE, has worked at the US Army Research Lab since 1988 in various roles, including group leader for basic research in optics and Sensors Directorate Associate for Science and Technology.

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Beam Expansion - Standard Concepts Re-interpreted

asphericon GmbH

Everyday work in an optics laboratory would be unthinkable without beam expansion systems. They serve to optimally adjust the beam cross sections between the light sources (e.g. lasers) and the subsequent optical elements. Precise illumination of the optically effective surfaces is essential, especially for beam shaping and focusing with high numerical apertures. The most widespread basic principles of afocal beam expansion systems are based on the telescopes of Kepler and Galileo. In the following article, the various modes of action are revealed in more detail and new approaches based on the use of aspherical surfaces are presented and discussed.

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Industry Events

SPIE Photonics West 2014 - February 1 - 6, 2014 - San Francisco, CA

Visit Photonics Media at Booth 700 & 701

Participate at the SPIE Photonics West 2014 conference (20,000 attendees, two exhibitions, 1300 exhibiting companies, 4500+ papers) for biophotonics, biomedical optics, translational research, industrial lasers, optoelectronics, microfabrication, optical MEMS, and more.

In 2013, the exhibition sold out with more than 1234 companies. This year's exhibition will include five days of presentations, courses, and special events that offer opportunities for face-to-face interaction with potential customers.

The Job Fair will be held in conjunction with the SPIE Photonics West Exhibition. An 'Exhibit-Only' badge or any other type of Photonics West badge is needed to enter the exhibit hall. Upload your CV or resume in advance to be found by employers. In-person attendance is not required to upload your resume.

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