

This Week In PHOTONICS

PHOTONICS MEDIA



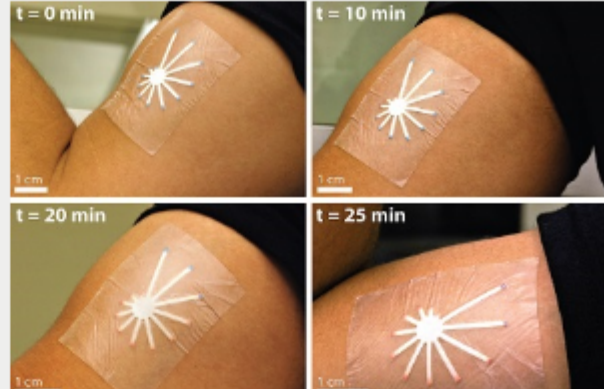
sponsor



Top Stories

Photonics-Based Skin Patch Monitors Hydration

Dehydration can now be measured with ease thanks to laser machined filter paper. Researchers at Purdue University used CO₂ laser processing to create a radial array of strips on their new skin patches that change color to indicate different levels of hydration. The arrays are laminated with a water-impermeable film to form microchannels. These channels are loaded with water-activated dye. As a person sweats, the strips are activated, changing from blue to red to provide easily identifiable levels of moisture loss.



[Read Article](#)

Solar Cells Processed at Room Temperature Could Cut Costs of Wearable Devices

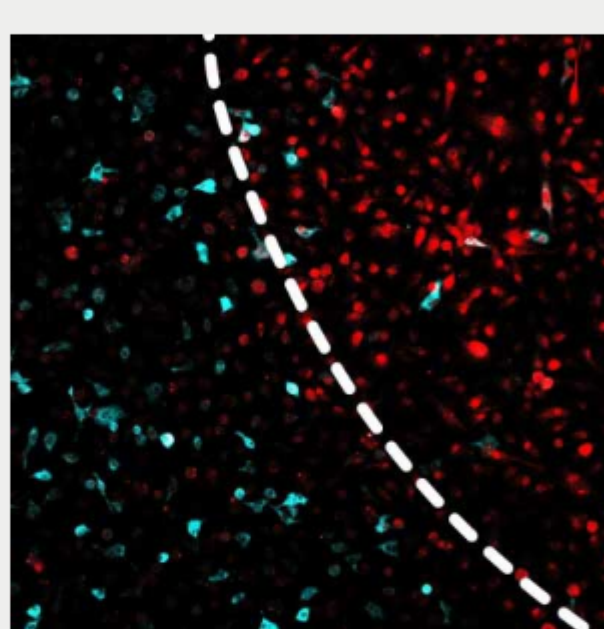
A simple solution-based electrical doping technique could help reduce the cost of polymer solar cells and organic electronic devices, and help move organic photovoltaics into a new generation of wearable devices. Researchers at the Georgia Institute of Technology, the University of California at Santa Barbara, Kyushu University in Japan, and the Eindhoven University of Technology in The Netherlands developed the technique.



[Read Article](#)

Optogenetic Tool Uses UV Light to Treat Inflammation

An optogenetic approach to regulating inflammation and immunity in the human body employs photocontrolled histone deacetylase (HDAC) inhibitors that are selectively delivered to the target cells via UV radiation. This novel approach could further the study of inflammation and the immune system, and could ultimately lead to a means to control inflammation in vivo, while minimizing side effects to healthy tissues.



[Read Article](#)

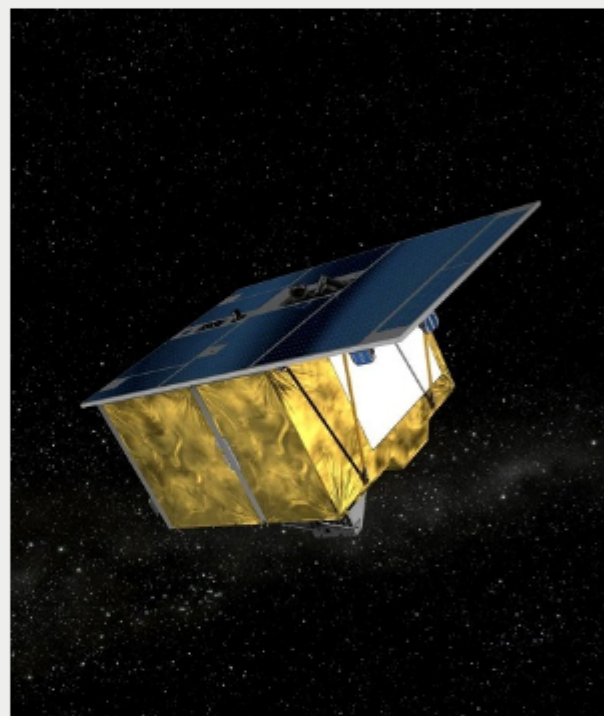


sponsors



Berliner Glas Used for EnMAP Satellite

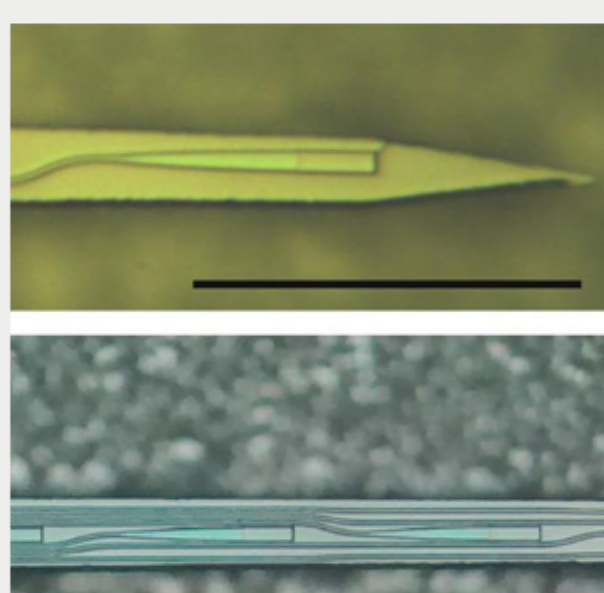
The Environmental Mapping and Analysis Program (EnMAP), a German Earth observation satellite mission, is using prisms from the Berliner Glas Group onboard the craft for laser communication in space. This mission will measure sun rays reflected from the Earth's surface over a wide spectral range. The spectrometers used deliver hyperspectral data from over 240 small channels of the continuous spectrum of visible light up to NIR and create a completely new level of quality for spectroscopic observation of the Earth.



[Read Article](#)

Optical Probe Overcomes Light Scattering in Deep-Brain Imaging

An implantable, ultra-narrow photonic probe has been developed which is able to deliver light deep within brain tissues. Current methods, which project spatially patterned light via free-space optics, excite neurons within superficial layers of the cortex. Light scattering and absorption in neural tissue causes the light penetration to be extremely short, making it impossible to probe brain regions deeper than about 2 mm using free-space optical methods.



[Read Article](#)

More Headlines

- [Jenoptik Receives SPE Automotive Innovation Award](#) [Read Article](#)
- [FTIR Spectroscopy Enables Research at Subatomic Level](#) [Read Article](#)
- [PowerPhotonic Partners with Precitec](#) [Read Article](#)
- [MILabs to Provide CT System to Univ. of Alabama at Birmingham](#) [Read Article](#)
- [Screen Semiconductor Installs UV Laser Anneal Tool on Leti Campus](#) [Read Article](#)

Featured Products



IPEX-700 Excimer Laser

LightMachinery Inc.

Designed for industrial and R&D environments, LightMachinery's IPEX-700 Series lasers deliver high power ultraviolet laser machining combined with state-of-the-art performance.

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



Precisely the Right Semiconductor Laser

National Laser Company

Known as one of the highest quality replacement lasers, the NLC 488nm laser outlives and outperforms competitive models. It is one of the most robust lasers in the industry for Semiconductor Inspection Tools.

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

Industry Events

A3 Business Forum

January 18-20, 2017 - Disney's Yacht & Beach Club Resort - Lake Buena Vista United States

The A3 Business Forum brings together top executives from the robotics, machine vision and motion control industries. It is the world's leading annual networking event for robotics, vision & imaging, motors, and motion control. Over 525 global automation leaders are expected to attend this Forum, making it the largest Annual Forum to date. Come and see why this is the most anticipated networking event in the industry. The A3 Business Forum will help to jump start your business in 2017!

[More Info](#)



PHOTONICS buyers' guide®

Looking for LEDs and other Light Sources products? Search [PhotonicsBuyersGuide.com](#), or browse these product categories:

[Light-Emitting Diode Measurement Systems](#)

[Blackbody Sources](#)

[Linear Actuators](#)

[Machine Vision Illumination Systems](#)

[Spatial Light Modulators](#)

[Infrared Light Sources](#)



CALL FOR ARTICLES!

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazines (*Photonics Spectra*, *Industrial Photonics*, *BioPhotonics* and *EuroPhotonics*). Please submit an informal 100-word abstract to Managing Editor Michael Wheeler at Michael.Wheeler@Photonics.com, or use our [online submission form](#).