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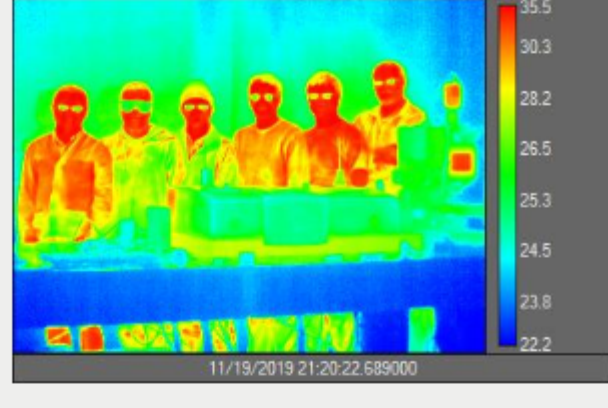
Lasers, photonics, and biomedical optics.

1-6 February 2020 · San Francisco, CA, USA

Top Stories

Coating Made from Quantum Material Conceals Temperature Change from IR Cameras

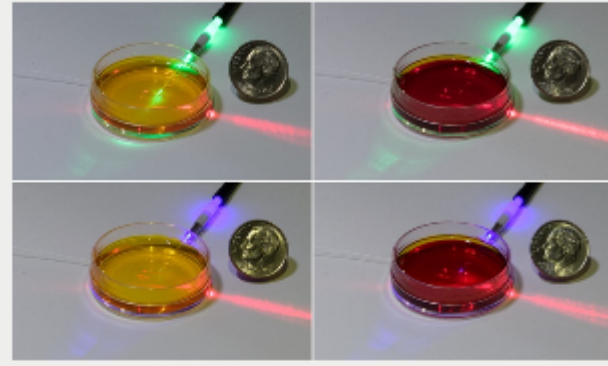
An ultrathin coating engineered from samarium nickel oxide (SmNiO₃) has been found to emit the same amount of thermal radiation irrespective of temperature, within a range of about 30 °C. The coating, which was developed by engineers at the University of Wisconsin-Madison and exhibits temperature-independent thermal radiation, could someday be used to control the visibility of objects to infrared (IR) cameras.



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Fiber Optic-Based Sensor Measures pH Levels in Cell-Growth Environments

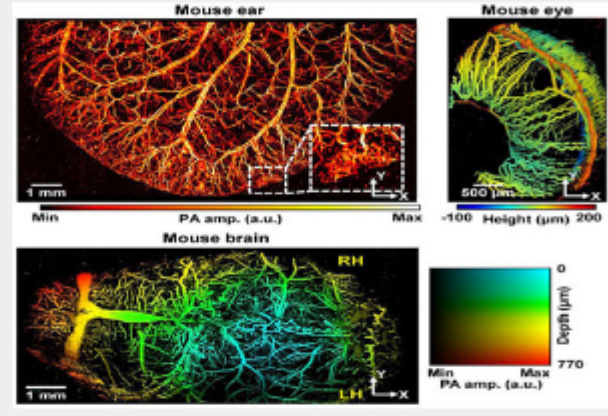
Scientists at the National Institute of Standards and Technology are developing a photonic sensor to study tissue growth in the lab. The proof-of-concept sensor uses a light-based signal to measure pH, an important property in cell-growth studies.



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Photoacoustic Microscopy System Improves SNR and Temporal and Spatial Resolution

A superresolution localization photoacoustic microscopy (PAM) technique has been developed by a team at Pohang University of Science and Technology. The new system can monitor the flow of red blood cells without using a contrast absorber, enabling it to image blood vessels with exceptional resolution. Spatial resolution is improved by a factor of 2.5 in vivo, the team said.



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Featured Products



Canon Surface Reflectance Analyzer

Canon U.S.A. Inc., Industrial Products Div.

Canon RA-532H, Surface Reflectance Analyzer (goniophotometer), is a compact, portable device capable of measuring 4 surface appearance conditions in a single pass: Gloss, Haze, Image Clarity (IC), and BRDF (Bidirectional Reflectance Distribution Function). Additionally, Canon has released its own new parameter, "Scattering" parameter, overcoming the shortage of both IC and DOI (Distinctiveness of Image) when evaluating matte and textured surfaces as well as orange peel surface.

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Meet the Editors

Photonics West
Wednesday, February 5, 3:00 p.m. | Booth 658/659

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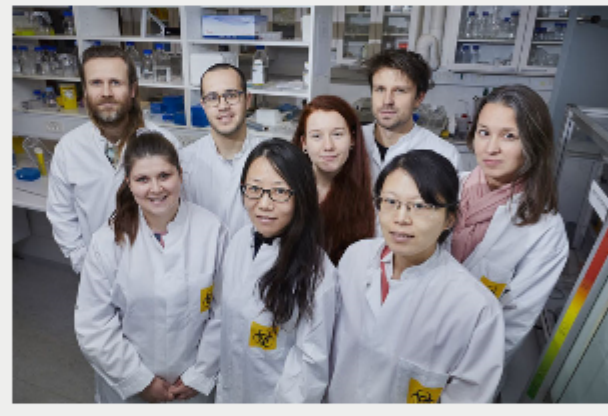
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More News

Researchers Aim to Build Light-Controlled Tissue Scaffolds for Cell Regeneration

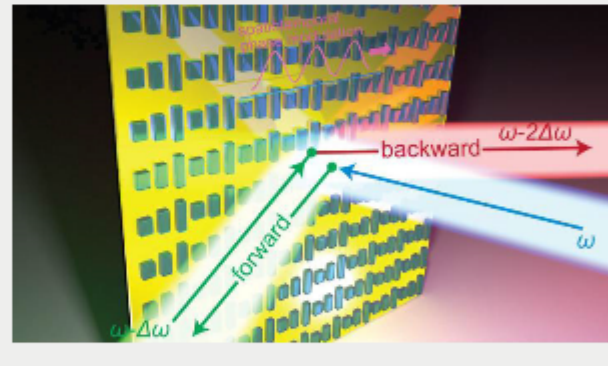
Researchers at Aarhus University are exploring a method of regenerating brain and heart cells using light. Their technique uses water-based nanofibers coated with organic photovoltaic nanomaterials to create light-controlled neural-stimulating scaffolds inside the body.



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Metasurface with Space-Time Phase Modulation Demonstrates Nonreciprocal Light Reflection

Scientists at The Pennsylvania State University developed a new type of optical metasurface that makes light reflect in one direction only. The new metasurface could advance the development of scalable, magnetic-free, nonreciprocal devices that can be integrated with other optical components.



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More Headlines

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Industry Events

SPIE Photonics West 2020

February 4-6, 2020 - The Moscone Center - San Francisco
At SPIE Photonics West 2020, the leading event for the photonics and laser communities with more than 20,000 attendees, you will have access to the latest research in biophotonics, laser technologies, and optoelectronics materials and devices. This will be a full week with over 5200 technical papers, 65 course and workshop options, and notable plenary speakers, including Eric Betzig, 2014 Nobel Prize Winner in Physics. The latest products and devices driving technology markets will be on display at the BIOS Expo and Photonics West Exhibition, which will feature 1400 companies, the Expo Industry Stage, and a Job Fair. 2020 marks the inaugural SPIE AR/VR/MR conference as well as the industry-focused SPIE Venture Summit, part of an expanded entrepreneur program.



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