Thursday, January 10, 2019

This Week In PHOTONICS

PHOTONICS MEDIA

Top Stories

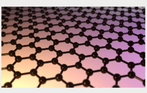
Researchers Use Light Waves to Study Topological Materials

So-called "topological materials" produce electron states that can be useful, but it is difficult to identify these materials and their associated electronic states. To identify these "topological materials," scientists from TU Wien and the University of Science and Technology of China created a "crystal" made of light waves.

Read Article

Pure Graphene Generates Photocurrent Over Great Distances for Ultra-Efficient Energy Flow

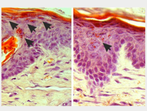
Researchers fabricated graphene with no impurities (pristine graphene) into different geometric shapes, connecting narrow ribbons and crosses of graphene to rectangular regions of the material. They found that when light was shined on constricted areas of the graphene, a large photocurrent was created.



Read Article

Using Light to Stop Itch Could Provide Relief From Skin Diseases

Scientists used NIR light to activate a phototoxic agent that selectively targets itch-sensing cells, which are located in the upper surface of the skin. When the agent is injected into a mouse's affected skin area and the area is illuminated with the NIR light, the itch-sensing cells withdraw from the skin.



Read Article

Featured Products

WEBINAR | Spectroscopic Reference Data for Hot Gases

DRS Daylight Solutions
There exists a marked lack of experimental absorption spectra for gaseous molecules at high temperatures and high pressures. Gases in these high-enthalpy thermodynamic states are present in a wide range of natural and man-made environments, such as cool stars, exoplanets, plasmas, explosions, flames, volcanoes, forest...

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Near-Infrared Intensity Lens

Radiant Vision Systems, Test & Measurement
The Near-Infrared (NIR) Intensity Lens solution from Radiant Vision Systems is a compact camera/lens system capable of capturing the full angular distribution of a NIR-emitting light source in a single image. Compared to goniometric solutions for light source characterization, the NIR Intensity Lens captures complete...

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Machine Vision

Photonics Media
Machine Vision is a new book for anyone designing or selecting machine visions systems, and implementing or considering the use of machine vision for a specific application. This engaging overview is a resource for designers, engineers, researchers, marketers and students looking for a broad survey of advancements in systems, components and processes.

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Laser Welding Photonic Devices

Amada Miyachi America Inc.
AMADA MIYACHI's LF range of fiber lasers are efficient, low maintenance manufacturing tools that offer precise control and a range of beam qualities which can be tuned for each specific welding application. They are particularly well suited for small component welding, like photonic device welding and electrical connections.

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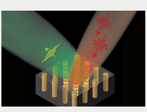
More News

Tunable, Nonlinear Metamaterials Could Facilitate Optical Communication

Scientists have found that several materials with poor nonlinear characteristics can be combined together to form a new metamaterial that exhibits state-of-the-art nonlinear properties. The enhancement comes from the way the metamaterial reshapes the flow of photons.



Read Article

Light Is Dynamically Controlled in a Programmable Electro-Optic System

An integrated photonics platform that can store light and electrically control its frequency in an integrated circuit is the newest development from the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS).

Read Article

More Headlines

Optogenetics Device Provides Targeted Control Over Light Delivered to Neurons Read Article

Stevens Researcher Receives NSF CAREER Award to Develop Portable Solar Panels Read Article

Nanosatellite System Could Lower Cost of High-Resolution Space Imagery Read Article

UD Students Build Millimeter Wave Imager to See Through Solid Objects Read Article

Optogenetics Device Could Provide Safe, Stable Way to Treat Bladder Problems Read Article

Industry Events

Photonics West 2019

February 2-7, 2019 · The Moscone Center · San Francisco United States

SPIE Photonics West is the world's largest photonics technologies event, consisting of three conferences - BIOS, LASE, and OPTO - and exhibitions. Photonics West 2019 will give you access to cutting-edge research through its 5,000-plus presentations and courses, its two world-class exhibitions featuring 1,300 companies, a robust industry program, and plenty of networking opportunities.

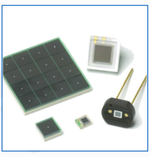
More Info

Webinars

SiPM and SPAD: Emerging Applications for Single-Photon Detection

Thu, Jan 17, 2019 2:00 PM – 3:00 PM EST

This webinar, presented by Hamamatsu Corporation, will provide a thorough overview of silicon photomultipliers (SiPMs) and single-photon avalanche photodiodes (SPADs) for low-light level photodetection. Compared to photomultiplier tubes (PMTs), SiPMs and SPADs are smaller, more durable, and more energy efficient. They also offer better immunity to magnetic fields and ambient light than PMTs. By attending this webinar, you will gain a better understanding of SiPM and SPAD technology, so you can determine whether it is the right choice for you.

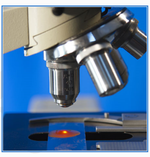


Register Now

Advances in Rapid 3D Imaging of Large Tissue Samples

Thu, Jan 24, 2019 1:00 PM – 2:00 PM EST

This webinar will discuss rapid 3D, multiplexed imaging of large tissue samples, based on recent advances in light-sheet fluorescence microscopy, multiplexed molecular labeling, and optical tissue clearing. It will provide an overview of the various approaches to imaging cleared tissue and organs, along with the advantages and drawbacks of the different methodologies. It is sponsored by Applied Scientific Instrumentation Inc. (ASI), PCO TECH, Inc., and Mad City Labs, Inc.



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