Thursday, June 29, 2017

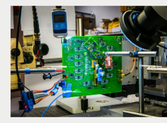
This Week In PHOTONICS

PHOTONICS MEDIA

Top Stories

Ultrathin Camera Creates Images Without Lenses

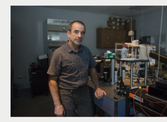
A novel camera uses an ultrathin optical phased array (OPA) in place of lenses to enable a thin, light, flexible design. The OPA manipulates light through a large array of light receivers. Each receiver can add a tightly controlled phase shift to the light it receives, enabling the camera to selectively look in different directions and focus on different things.



Read Article

Light-Matter Interaction in Single Layer of Atoms

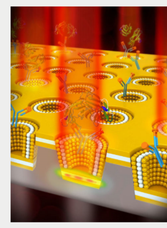
A new and more efficient way of detecting light and matter interactions at the atomic level has been discovered that could lead to advances in the emerging field of two-dimensional materials; it could also potentially lead to new ways of controlling light. Scientists typically use spectrometry tools to study the way light interacts with a gas, liquid or solid. That method is described as "inelastic," meaning the light's energy is altered by its contact with matter.



Read Article

Plasmonic Sensor Improves Detection of Cancer Biomarkers

A plasmonic sensor has demonstrated the ability to detect the presence of the cancer biomarker carcinoembryonic antigen (CEA) to the magnitude of one nanogram per milliliter. According to researchers, this is a significant improvement over current surface plasmon resonance systems, and a dynamic range that is clinically relevant for human CEA levels. The device combines two sensing methods to achieve a sensor design that shows an interactive plasmonic-photonic resonance effect.



Read Article

Using Light to Augment Conventional Methods of Mosquito Control

Exposure to just 10 minutes of white light presented at timed intervals during the late daytime, dusk, dawn and throughout the night could suppress biting and manipulate flight behavior in the Anopheles gambiae mosquito, the major vector for transmission of malaria in Africa. Researchers believe that a photic exposure method could be used to reinforce current insect control techniques or be implemented as a standalone approach.

Read Article

Light-Generated Bubbles Propel Microparticles, Create Optomechanical Force

Energy created from light was converted into kinetic motion using nano-sized laser-generated bubbles. As the bubbles expanded, they acted as a propulsion mechanism for surrounding micron sized particles, propelling the particles at forces many times greater than previously achieved. This technique for creating optomechanical force (OMF) could be useful in the development of micromotors and optical devices for solar cell optics.

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Featured Products

New Revolutionary LIV Test Instrument

Yelo Limited

The LIV Test Instrument a revolutionary design by Yelo and is used for verify the operating characteristics of laser devices. The system performs accurate LIV, Spectrum and Farfield measurements via a touchscreen user interface, by simply plugging in the laser device to be tested.

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Lasers in Industry

Photonics Media

Photonics Media has gathered articles and other valuable resources into a guide to the current use of lasers in industry, a reference tool and a resource for learning. This book is for anyone working on, implementing or considering the application of lasers for and in industrial settings for materials processing, quality control and production.

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Industry Events

SEMICON West 2017

July 10-13, 2017 - The Moscone Center - San Francisco United States
SEMICON West 2017 will connect attendees with the extended electronics manufacturing supply chain, all in one place and at one time - from materials, equipment, design, manufacturing, system integration, and demand channels to adjacencies such as flexible hybrid electronics, MEMS and sensors. With the theme "SMART Starts Here," SEMICON West 2017 will focus on emerging applications and technologies, including SMART Automotive, SMART Manufacturing, SMART MedTech, IoT, and other segments driving industry growth. The MicroE Career Development & Recruitment Forum, a first-time event, will provide insights into the full range of employment opportunities in electronics, from internships to senior management.

More Info

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