Thursday, August 26, 2021

This Week in PHOTONICS

.: Top Stories

World's Smallest Wavelength-Swept QCL Ensures Portability of All-Optical Gas Analyzer
Hamamatsu Photonics and the National Institute of Advanced Industrial Science and Technology (AIST) in Tokyo collaborated on an all-optical, portable gas monitoring system for predicting volcanic eruptions with a high degree of sensitivity.

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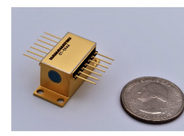

Photoacoustic Effect Can Detect Life-Threatening Events Before They Occur
Researchers at Michigan State University (MSU) used light-activated nanoparticles and photoimaging to locate and image cells found in the arteries. Such cells could lead to heart attacks and strokes. The advance relies on carbon nanotubes that selectively target the types of immune cells that are abundant in inflammatory plaques.

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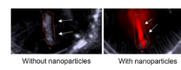

Photonic Security System Uses Hologram Platform to Dissuade, Detect Forgers
Forgeries could become next to impossible with a two-level encrypted holographic security device, built by researchers at Pohang University of Science and Technology (POSTECH). The platform for the technology is a bifunctional, pixelated metasurface that allows several properties of light, including wavelength, phase, and polarization, to be controlled by the same device.

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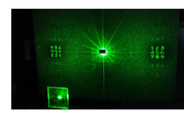

.: Featured Products

Stabilizing the Line of Sight

Photonics Media
In Stabilizing the Line of Sight, authors Peter J. and Rhonda L. Kennedy provide a methodology and an example for executing a successful end-to-end line-of-sight (LOS) design. Comprehensive in scope, this book will give readers a better understanding of the relationships between the various engineering disciplines that are required for successful LOS control.

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HyperFine Brillouin Spectrometer

LightMachinery Inc.
The great challenge with Brillouin spectroscopy is that the scattered signal from the un-shifted wavelength of the laser can overwhelm the small Brillouin shifted return signal. LightMachinery has combined its leading-edge HyperFine spectrometer with a very narrow band tunable filter to suppress the bright un-shifted laser frequency.

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Xanadu and imec Partner on Photonic Chips for Quantum Read Article

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Three Argonne Projects Garner DOE Funding Read Article

Superconducting Nanowire Single-Photon Detectors Excel in DCS Applications Read Article

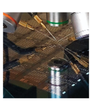
.: Upcoming Webinars

Quantum Sensing in Atomic and Solid-State Systems
Thu, Sep 2, 2021 12:00 PM - 1:00 PM EDT
In this talk, Jennifer Choy, Ph.D., of the University of Wisconsin-Madison describes the realization of quantum sensors in two material platforms: neutral alkali atoms and artificial atoms in diamond. The benefits and challenges of these platforms are illustrated through specific examples, including inertial sensing with cold-atom interferometers and magnetometry with alkali metal vapor and color centers in diamond. Choy also presents the critical developments in optical engineering and material science that are needed to improve device utility and performance in atomic and solid-state quantum sensors. This webinar is the fourth presentation in Hamamatsu's Quantum Technologies Series, presented by Hamamatsu Corporation.

Register Now

Next Leading IR and 3D Sensors: Improved Process and Quality Control for IoT
Tue, Sep 7, 2021 10:00 AM - 11:00 AM EDT
Technology in the field of infrared cameras and 3D sensor technology requires more and more innovation, flexibility and user-friendliness. AT - Automation Technology has designed its portfolio around these parameters and offers customized solutions that can be individually adapted to any application. In this webinar, Guido Deutz of AT showcases that portfolio and how it is delivering precise, highly accurate, and reliable results in machine vision. Presented by AT - Automation Technology GmbH.

Register Now



Silicon Nitride Photonics with MEMS: Enabling New Sensing and Filtering Systems
Wed, Sep 8, 2021 1:00 PM - 2:00 PM EDT
In this webinar, Philippe Babin, CEO of AEPONYX, discusses silicon nitride photonics' advantages and capabilities and takes a systems-thinking approach to product success. He will also discuss how silicon nitride photonics applies to solving today's challenges and future applications.

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