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PHOTONICS.com

Thursday, March 27, 2014

Switching an Antibiotic On and Off with Light



Soon antibiotics may be switched on and off as readily as a light bulb, treating localized infections and potentially even cancer in the process. A team from the Karlsruhe Institute of Technology and the University of Kiev incorporated a photoswitchable molecule into an antibiotic so that its biological activity can be controlled with light of particular wavelengths.

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Day of Photonics 2014: Enlightening the Public

The annual Day of Photonics will take place Oct. 21, offering the general public a look at the opportunities the industry offers.

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Superconductor LEDs Help Unravel Entanglement

Superconductivity in LEDs could generate the perplexing quantum physics phenomenon known as entanglement.

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Products on PhotonicsBuyersGuide.com



Mid-IR Bandpass Filters

Alluxa

Alluxa announces a new line of high performance durable hard coated, mid-IR bandpass filters and multi-bandpass filters featuring ultra-high transmission.

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SX4 Fiber Optic Switches

JGR Optics

JGR Optics' SX4 fiber optic switches are benchtop instruments ideal for manufacturing production testing. A single common input connects with multiple output channels.

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Smallest SWIR GigE Camera

Xenics

The affordable ultra-compact and high resolution Bobcat-640-GigE SWIR camera is optimized for machine vision and high-temperature process control.

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United Lens Company is the only truly vertically integrated manufacturer of custom optical components. Our commitment to quality provides you a One Stop Solution.

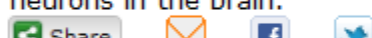
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More Articles on Photonics.com

Ultrabright Nanocrystals Could Image Single Proteins

The recent creation of ultrabright, ultrasmall light-emitting crystals that can image single proteins could be effective for deep-tissue optical imaging of neurons in the brain.

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Video Game Technology Could Prevent Hospital Falls

Video game motion-capture technology may be able to serve a new purpose: preventing hospital patients from falling.

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Shrink Wrapping Disease Biomarkers

A new technique for better detection of infectious disease biomarkers uses ordinary shrink wrap along with a combination of metals.

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In this edition of the industry's **premier weekly newscast**: Optical brain monitoring enables better stroke care, shrink wrap inspires disease biomarkers, antibiotics can be controlled with light, and we highlight SPIE's 2014 award winners.

Zecotek Gains 3-D Display Patent

Zecotek Photonics has been awarded a patent for an optical imaging technology it has developed for an autostereoscopic display system.

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Ultracold Molecules Advance Quantum Computing

Radical cooling could hold great potential for quantum computing and simulations, with the creation of an ultracold molecule using lasers to remove the kinetic energy.

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Optical Brain Monitoring for Better Stroke Care

A new optical device and simple body positioning could be key in providing acute stroke patients with more effective, individualized treatment in real time.

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WHITE PAPER



LED Simulation Reflector Lenses

Lambda Research Corp.

TracePro® is an award-winning opto-mechanical design software for layout, optimization, & analysis of illumination systems. This white paper illustrates how TracePro allows users to begin a project with an initial or basic design for LED lighting systems, use software simulation prior to building hardware, and easily create complex reflector shapes. TracePro's reflector and lens simulation utilities are specifically designed to help CAD designers without traditional optical engineering expertise design LED optical components quickly.

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WEBINAR

Light Advances in Biomedicine

Wednesday, April 9, 2014, 1 - 2 PM EDT

FREE WEBINAR

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Dr. Robert Alfano

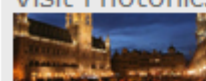
Photonics Media will host Dr. Robert R. Alfano, distinguished professor of science and engineering at The City College of the City University of New York, who will present major advances in optical biopsy and imaging spectroscopy. Alfano will discuss the key fingerprints to detect aggressive cancer cells; two new NIR spectral windows for imaging with less scattering of light in tissue; the use of upper singlet S2 for dyes to increase imaging depth using two-photon techniques; the use of spatial frequency spectra to detect structure in cancerous tissues and the brain; and, most of all, the use of supercontinuum – the ultimate white light – in biomedicine applications.

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Industry Events

SPIE Photonics Europe - April 14-17, 2014 · Brussels, Belgium

Visit Photonics Media at Booth 217 S



SPIE Photonics Europe brings together different disciplines, technologies and perspectives from across Europe and around the world. Participants will learn about new research and the latest funding opportunities, and will have the opportunity to attend a number of conferences.

Session topics to be featured include metamaterials, nanophotonics, photonic crystal materials and devices, micro-structured and specialty optical fibers, silicon photonics and photonic integrated circuits, and photonics for solar energy systems.

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PHOTONICS MEDIA

THE PULSE OF THE INDUSTRY



FEATURED VIDEO



Edmund Optics – Polarization Basics

Polarizers are optical components designed to filter, modify, or analyze the various polarization states of light. Polarizers are commonly integrated into optical systems to decrease glare or increase contrast, or for measuring changes in magnetic fields, temperature, or chemical interactions. Join Brian McCall as he discusses the types of polarization and polarizers. Learn more about polarizers at www.edmundoptics.com/polarizers

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