

This Week In PHOTONICS

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Top Stories

Plasmonics Simplify Printing and Imaging in Color and Infrared

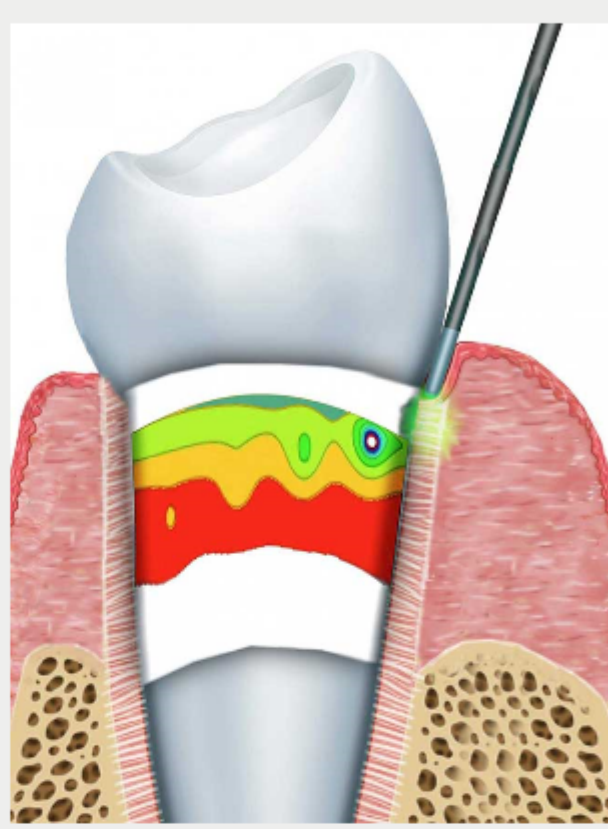
A new manufacturing technique promises to bring a simplified form of multispectral imaging into daily use. Using existing materials and production approaches that are scalable and inexpensive, Duke University researchers have found a way to print and image across a range of colors extending into the infrared.



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Laser Treatments Shown Effective in Killing Bacteria That Cause Dental Disease

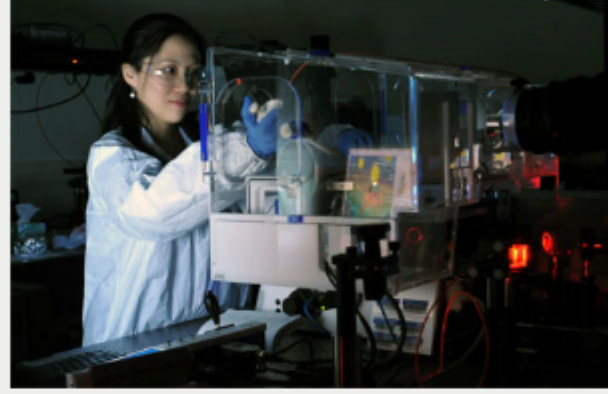
The results of computer simulations depicting various laser wavelengths aimed at dental bacterial colonies in gum tissue suggest that use of lasers in oral debridement is effective in killing disease-causing bacteria and promoting dental health. Selective killing of pathogens by laser is possible due to the difference in absorption of photon energy by the pathogens and the host tissues.



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Biosensor-Based Microscope Measures Cell Interactions Quantitatively Over Time

A novel live-cell imaging method, dubbed the Photonic Crystal Enhanced Microscope (PCEM), could someday help biologists better understand how stem cells transform into specialized cells and how diseases like cancer spread. The PCEM enables scientists to dynamically monitor and quantitatively measure the movement of cellular materials at the plasma membrane of individual live cells.



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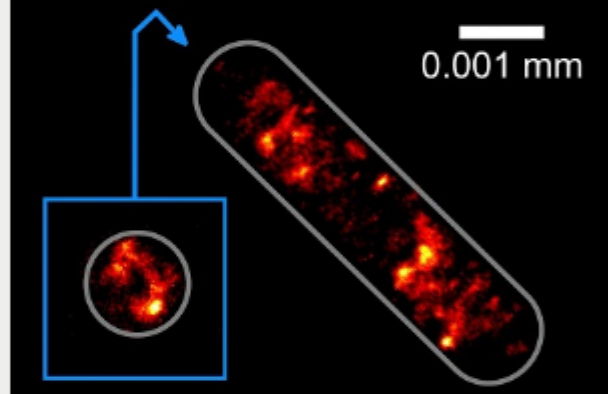


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Optical Tractor Beam Traps Bacteria

Physicists at Bielefeld and Frankfurt Universities are studying blood cells, algae and bacteria by trapping these biological cells with a laser beam. Using this procedure they have obtained superresolution images of the DNA in single bacteria. Professor Thomas Huser, head of the Biomolecular Photonics Research Group in the Faculty of Physics, said their technique offers a different way to examine cells and does not change the cells in the preparatory stage.



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Graphene-Laced Silly Putty Creates Sensors

By infusing silly putty (polysilicone) with graphene, researchers in AMBER — the Science Foundation Ireland-funded materials science research center at Trinity College Dublin — have produced an extremely sensitive sensor they call "G-putty." They found that when the graphene was added, the silly putty was able to conduct electricity and became very sensitive to deformation and impact.



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Featured Products



e2v Line Scan with NBASE-T Interface

e2v's UNIQA+ and ELIXA+ colour line scan cameras are now available with an NBASE-T™ Ethernet frame grabber-less interface. This will provide customers with a more cost effective solution to transmit uncompressed, high bandwidth images from the cameras into their systems at the highest possible speeds.

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SpectrEcology LLC
Our unique products are best described as a tool box - equipped with miniature, modular, flexible components that all fit together to create spectroscopic systems to solve your unique measurement challenges.

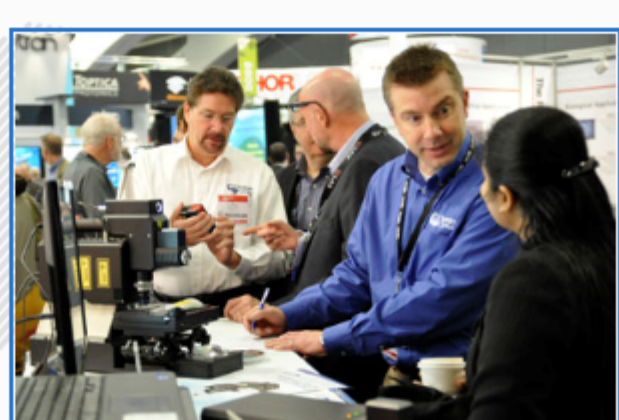
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Industry Events

BIOS
January 28-29, 2017 - The Moscone Center - San Francisco United States
Photonics Media Booth: 8737

The SPIE BIOS Expo is the world's largest biomedical optics and biophotonics exhibition. Held Saturday, January 28 and Sunday, January 29, BIOS Expo kicks off the Photonics West week. At the Expo you will find the latest technologies from more than 200 companies in the biomedical optics and photonics industries. Featured technologies will include: Biomedical optics components, products, instrumentation and applications; lasers; molecular imaging; therapeutic lasers; nano/biophotonics; biosensors; and spectroscopic/microscopic imaging.

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