

This Week In PHOTONICS

PHOTONICS MEDIA



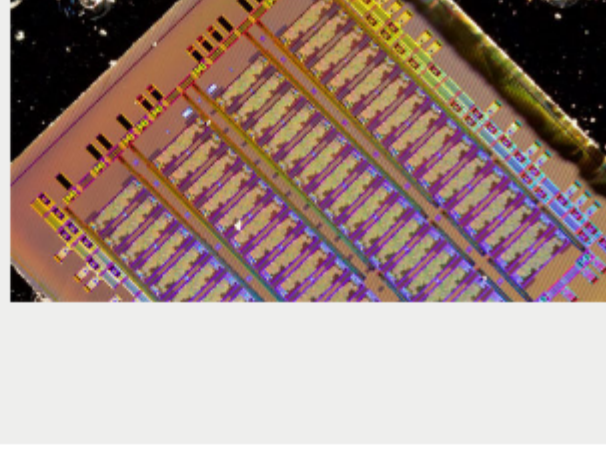
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Top Stories

New Platform Brings Photonics to Bulk Silicon Microelectronic Chips

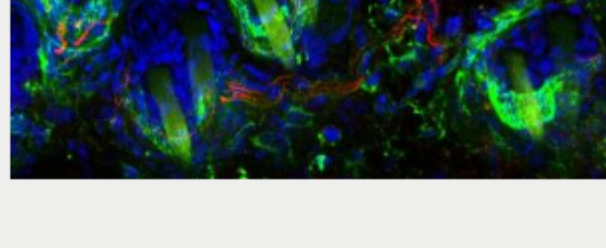
A new platform and fabrication method has been developed for making silicon chips that can communicate with photons. The technology, which is no more expensive than current chip technology, could alleviate bottlenecks in current devices by speeding data transfer and reducing energy consumption by orders of magnitude.



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Managing Chronic Pain with Light

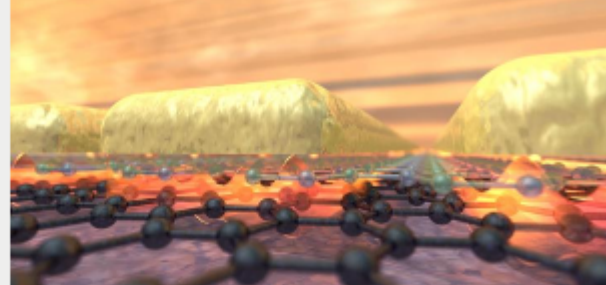
Researchers developed a light-sensitive chemical that selectively binds to the type of nerve cells in the skin that cause severe pain in neuropathic patients. By injecting the affected skin area with the chemical and then illuminating it with NIR light, the targeted nerve cells retract from the skin's surface, leading to pain relief.



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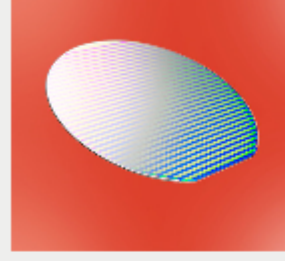
Researchers Confine Light to Space of One Atom in Nanophotonics Advance

Using graphene, researchers have found a way to confine light down to a space that is one atom thick. The ability to confine light to such a small space could pave the way for ultrasmall optoelectronic devices.



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Featured Products



Patterned Thin-Film Coatings

Deposition Sciences Inc. (DSI)

The drive towards smaller photonic sensors, often integrated on monolithic substrates with other processing electronics, has created a need for coatings directly on semiconductor wafers, or on miniaturized substrates. Specifically, this allows the integration of optical filters, apertures or other features which modify...

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PCO-TECH Inc.

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Micro-Tactical Cable

AFL

AFL's new Micro-Tactical Fiber Optic Cable combines the ruggedness of military tactical cable designs with the ultra-high fiber density of AFL's micro-cable technology. Designed for rapid deployment in optical networks requiring high mechanical performance specifications, extreme environmental exposure, and...

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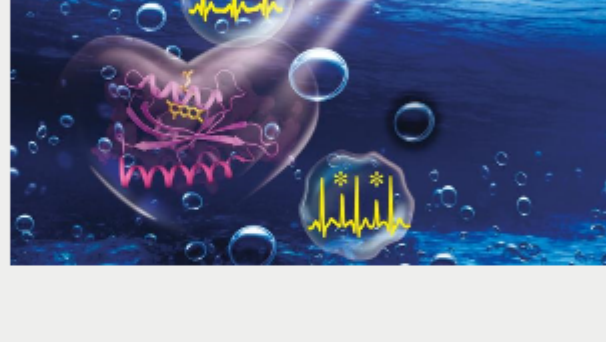
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Optogenetic Tool Controls Voltage-Gated Calcium Channels

An optogenetic tool has been developed for controlling voltage-gated calcium channels to enable photo-tunable modulation of this channel activity in excitable mammalian cells. The tool, called optoRGK, provides a way to interrogate the physiological and pathophysiological processes that are mediated by voltage-gated calcium channels.



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Fractal Antenna Awarded Flat Lens Patent

Antenna and embedded component developer Fractal Antenna Systems Inc. has been awarded a U.S. patent for a flat lens with fractal metamaterials to bend electromagnetic waves. The flat lens technology uses fractals to make more complex designs.



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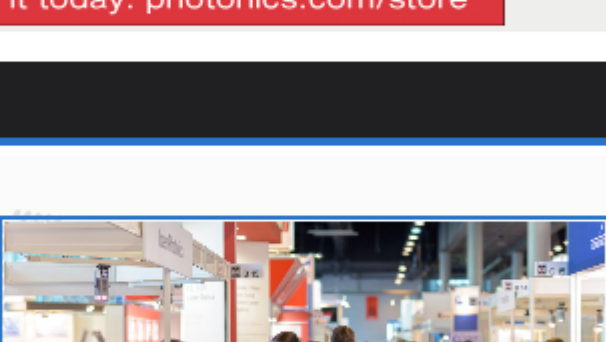
Industry Events

Optatec 2018

May 15-17, 2018 - Frankfurt Exhibition Centre - Frankfurt Germany
 Photonics Media Booth: A53

With its wide offerings for development and production, as well as industrial use of optical components, optomechanics, optoelectronics, fiber-optics, laser components and manufacturing systems, the Optatec international trade fair for optical technologies is well-established within the industry sector and provides a top-level platform which brings suppliers and users together. Exhibitors from all over the world will display future technologies from the field of industrial optics and present their innovations and product premieres.

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Webinars

How the Metalens Will Transform Lens Technology and Everyday Devices

Wed, May 9, 2018 1:00 PM - 2:00 PM EDT

Presented by Federico Capasso, whose work in quantum design led to the realization of the quantum cascade laser, this webinar will discuss monochromatic and achromatic design, applications, and advantages over conventional lens technology. Capasso will discuss applications that his group is currently working on, including a collaboration with Massachusetts General Hospital.

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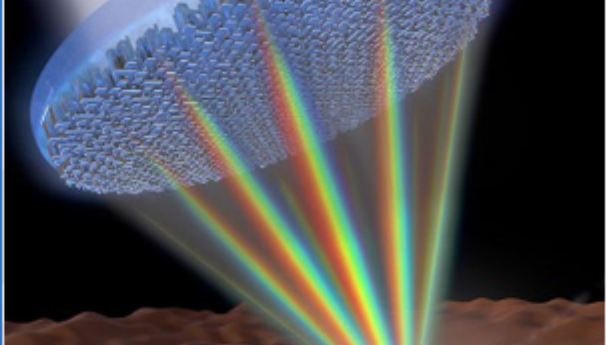


Hand-held Spectrometers in 2018 and Beyond

Wed, May 16, 2018 1:00 PM - 2:00 PM EDT

This webinar will survey the hand-held and portable spectroscopy field, with an emphasis on optical instruments, their underlying technologies and their applications. X-ray fluorescence, laser-induced breakdown spectroscopy and gas chromatography-mass spectrometry will be covered briefly. Presenter Richard Crocombe, Ph.D., will review some of the devices that are on the market today and conclude with a look at where hand-held spectroscopy could be headed.

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