

This Week In PHOTONICS

PHOTONICS MEDIA



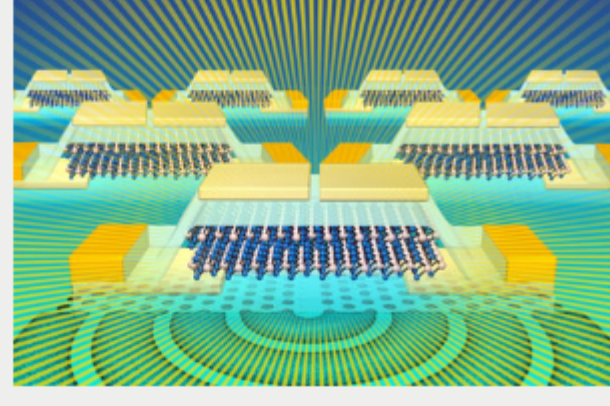
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Top Stories

Optical Solution Addresses Interconnect Bottleneck on Silicon Chips

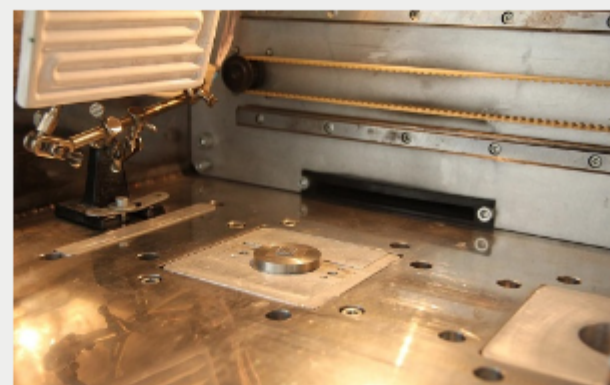
A combination light emitter and detector device that is compatible with silicon could help mitigate communications delays resulting from signal leakage between microchip components. The device is made from molybdenum ditelluride (MoTe₂), an ultrathin semiconductor that belongs to an emerging group of materials known as 2D transition-metal dichalcogenides (TMDs).



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Additive Manufacturing of Titanium Aircraft Parts

An additive manufacturing technology that uses direct metal laser sintering enables the printing of titanium aircraft parts with a modified surface layer. The production of metal products via additive manufacturing ensures less material consumption as well as possibilities to develop complex geometric products.



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Proposed NASA Mission Employs 'Lobster-Eye' Optics to Locate Source of Cosmic Waves

An optics system that mimics the structure of a lobster's eyes could be employed on the International Space Station to enable NASA to precisely locate, characterize and alert other observatories about the source of gravitational waves. The Transient Astrophysics Observatory on the International Space Station, or ISS-TAO, is being considered by NASA as a potential Explorer Mission of Opportunity.



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Featured Products



Lasers in Industry

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.

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PhaseCam 6000 Dynamic Laser Interferometer

4D Technology Corporation
The PhaseCam® 6000 is an extremely compact and lightweight laser interferometer for measurement of optics and optical systems. With an easy-to-position, fiber-coupled measurement head and motorized controls, the PhaseCam 6000 is ideal for on-machine metrology, and remote mounting in measurement towers or pressure vessels.

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One-Step 3D Laser Printing of Catalysts

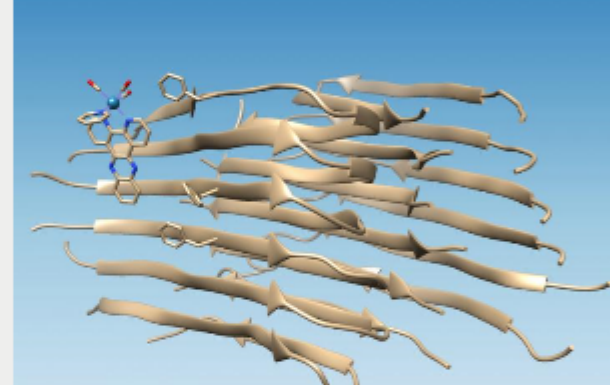
A 3D laser printing process that creates a chemically active catalytic object in a single step has opened the door to more efficient ways to produce catalysts for complex chemical reactions in a wide scope of industries. While 3D printing has found applications in many areas, its use as a way to control chemical reactions is relatively new.



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Light-Activated Probe Could Aid Alzheimer's Drug Development

Researchers have developed a probe that lights up when it binds to a misfolded amyloid beta peptide (Aβ), enabling footprinting of this protein, which is a suspected cause of Alzheimer's disease. The probe was able to identify a specific binding site on the Aβ, a discovery that could facilitate better drug treatment for the disease.



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Industry Events

Collaborative Robots and Advanced Vision Conference

November 15-16, 2017 - Doubletree by Hilton San Jose - San Jose United States

This dynamic conference will introduce you to the technologies, trends, challenges and people that are disrupting the status quo with revolutionary innovations. It will explore a range of current advancements in the fields of collaborative robots and advanced vision, focusing on technology, applications, safety implications and human impacts. The conference welcomes OEMs, integrators, start-ups, venture capitalists, educators, users and potential users across industries including automotive, agriculture, life sciences and medicine.



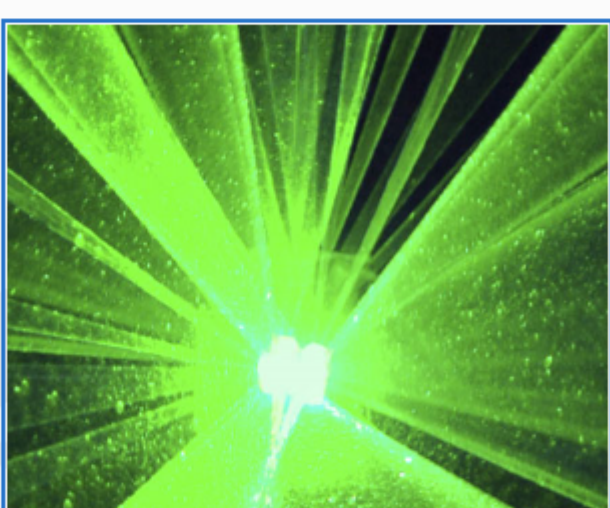
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Webinars

Practical Solutions for Laser Safety

Tue, Nov 14, 2017 12:00 PM - 1:00 PM EST

This webinar will explain the most important elements of laser safety and provide practical advice on how to implement a laser safety program in a research, academic and/or product development laboratory setting. Presenter Ken Barat, a laser safety consultant and long-standing expert in the field, will present a number of lessons he has learned on lab design for a safe environment and laser accident prevention. He will also address common misconceptions about laser safety, before opening the floor to questions from attendees. This webinar is sponsored by Kentek.

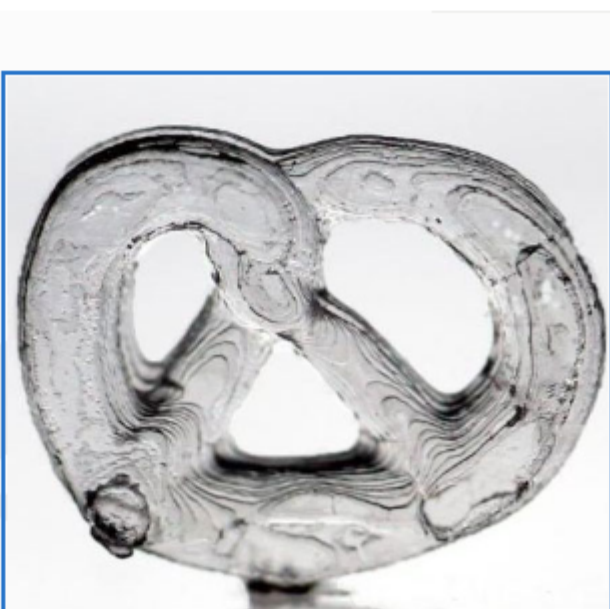


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Next Generation 3D Printing: The Emergence of Enabling Materials

Wed, Nov 15, 2017 10:00 AM - 11:00 AM EST

KIT principal investigator Bastian Rapp, Ph.D., will introduce his lab's prototype and process for enabling freeform generation of highly transparent fused silica glass components using 3D printers. Rapp will discuss potential applications for 3D printed glass, ranging from 3D printing of complex lenses for smartphone cameras and next-generation microprocessors to intricate glass panels for use in building construction. While additive manufacturing and 3D printing have seen significant improvements in processing and instrumentation, the choice of materials for use in AM and 3D printing has not increased significantly. Rapp will also discuss how the emergence of enabling materials for 3D printing could revolutionize use of this technology.



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