

# This Week In PHOTONICS

PHOTONICS MEDIA



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**LightMachinery**  
Excellence in Lasers and Optics

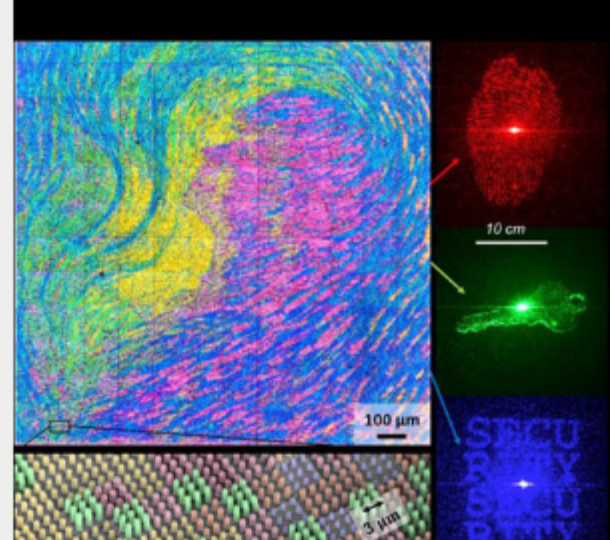


Optimized for Brillouin  
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GreenKiller pump suppression

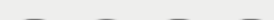
## Top Stories

### Holographic Color Prints Combine Phase and Amplitude Control of Light for Better Optical Security

A new optical anticounterfeiting device, called "holographic color prints" by its developers, provides a dual function to increase security and deter counterfeiting. The device creates images that appear as a regular color print under white light. But under red, green, or blue laser illumination, the device can project up to three different holograms.



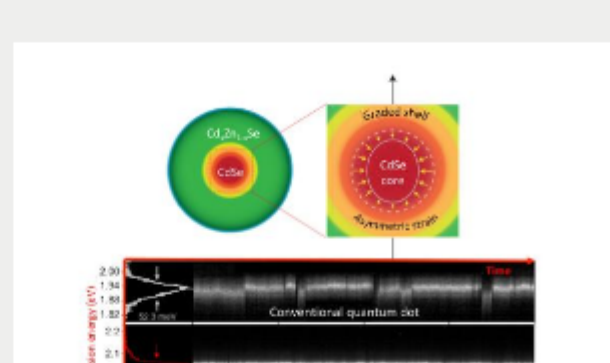
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### Strain Engineering Produces Highly Stable, Narrow Bandwidth Light From Individual QDs

New research suggests that asymmetrically strained colloidal quantum dots (QDs) can provide stable, blink-free light emission comparable to the light produced by QDs made through more complex processes.

The strained QDs were found to emit spectrally narrow light with a highly stable intensity and a nonfluctuating emission energy.

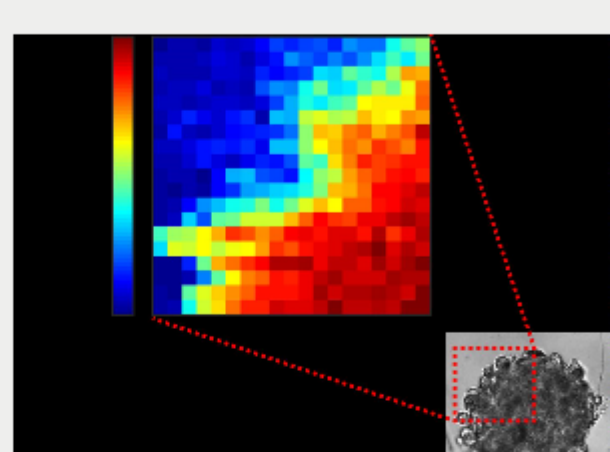


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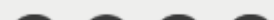


### Imaging Physical Properties of Tumors Could Be Used in Precision Medicine

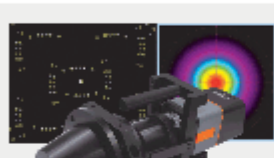
A light-scattering method that maps out the mechanical properties of a tumor's cellular structure as well as its internal fluids, revealing changes due to chemotherapy treatment, could be used to differentiate populations of malignant cells and monitor how effective an anticancer treatment is.



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## Featured Products



### Near-Infrared Intensity Lens

#### Radiant Vision Systems, Test & Measurement

The Near-Infrared (NIR) Intensity Lens solution from Radiant Vision Systems is a compact camera/lens system capable of capturing the full angular distribution of a NIR-emitting light source in a single image. Compared to goniometric solutions for light source characterization, the NIR Intensity Lens captures complete...

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### Laser Welding Photonic Devices

#### Amada Miyachi America Inc.

AMADA MIYACHI's LF range of fiber lasers are efficient, low maintenance manufacturing tools that offer precise control and a range of beam qualities which can be tuned for each specific welding application. They are particularly well suited for small component welding, like photonic device welding and electrical connections.

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### LIGHT: Introduction to Optics and Photonics, Second Edition

#### Photonics Media

Offering a comprehensive treatment of the subject as well as key applications, and employing minimal math, LIGHT: Introduction to Optics and Photonics was written with readers in mind. This textbook is for beginning students of optics and photonics in high school, community college, and university STEM courses.

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### WEBINAR | Spectroscopic Reference Data for Hot Gases

DRS Daylight Solutions  
There exists a marked lack of experimental absorption spectra for gaseous molecules at high temperatures and high pressures. Gases in these high-enthalpy thermodynamic states are present in a wide range of natural and man-made environments, such as cool stars, exoplanets, plasmas, explosions, flames, volcanoes, forest...

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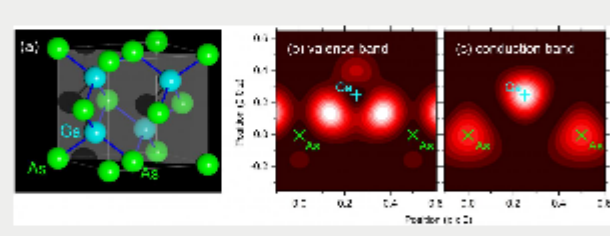
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## More News

### Directed Currents Generated at THz Frequencies Are Higher Than Current Clock Rates

Researchers generated directed electric currents at terahertz (THz) frequencies from light absorbed in semiconductor crystals. According to the researchers, this is a much higher frequency than the clock rates of current electronics.

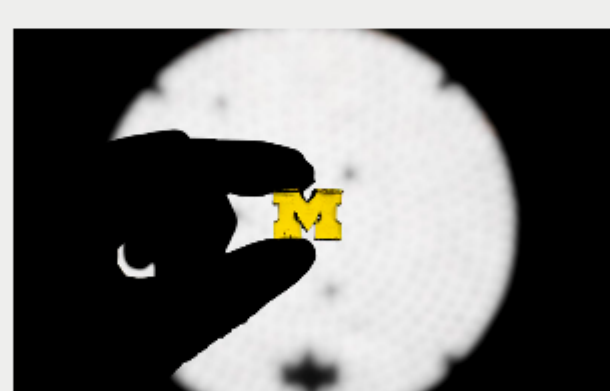


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### New Additive Manufacturing Method Uses Light to Prevent Resin From Curing Against Vat

A new approach to 3D printing uses two-color irradiation of resin formulations that contain both a photoinitiator and a photoinhibitor to perform vat-printing up to 100 times faster than conventional 3D printing processes. The new technique allows control over where the resin hardens and where it stays fluid, enabling the resin to solidify into more complex patterns.



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## More Headlines

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[Second Harmonic Generation Imaging Reveals Existence of Second Bandgap in a 2D Structure](#) [Read Article](#)

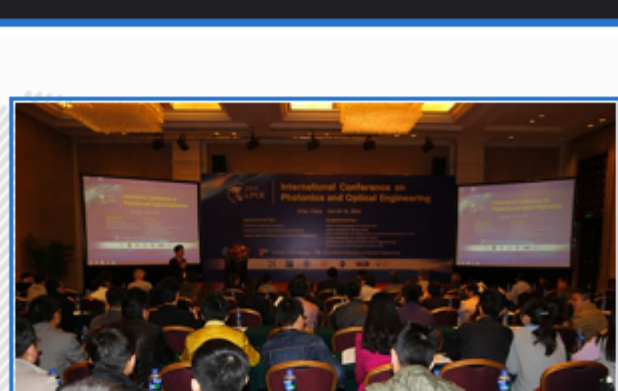
[Gravitational Lensing Magnifies Light of Quasar from Extremely Distant Space and Time](#) [Read Article](#)

## Industry Events

### International Conference on Optics, Photonics and Lasers 2019

January 24-25, 2019 - Singapore Thailand

The Optics, Photonics, and Lasers Conference 2019 will provide attendees with the opportunity to consolidate their knowledge and understanding of the latest scientific advancements in laser technology and applications. Cutting-edge technologies, applications, product announcements, and demonstrations will be discussed in conference sessions and product exhibitions. The technical program will include a plenary session with visionary speakers, technical sessions on critical technologies, a networking banquet, and an interactive poster session.



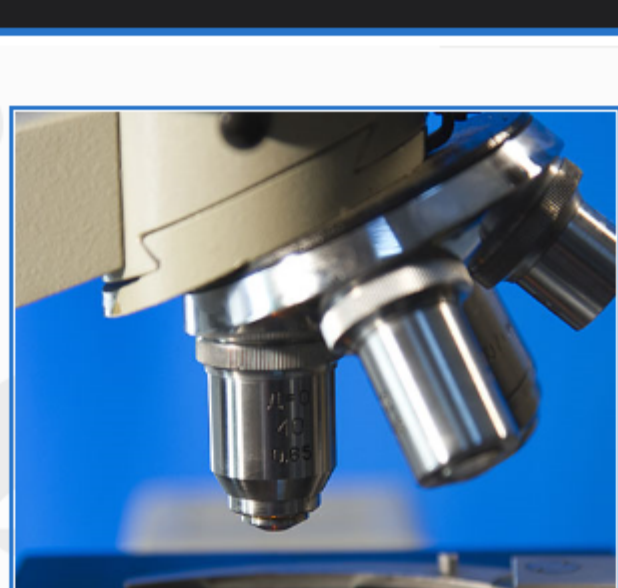
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## Webinars

### Advances in Rapid 3D Imaging of Large Tissue Samples

Thu, Jan 24, 2019 1:00 PM - 2:00 PM EST

This webinar will discuss rapid 3D, multiplexed imaging of large tissue samples, based on recent advances in light-sheet fluorescence microscopy, multiplexed molecular labeling, and optical tissue clearing. It will provide an overview of the various approaches to imaging cleared tissue and organs, along with the advantages and drawbacks of the different methodologies. It is sponsored by Applied Scientific Instrumentation Inc. (ASI), PCO TECH, Inc., and Mad City Labs, Inc.



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