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3D Scans Help Automotive Industry Evaluate Data

Today's car factories are leaning toward having one production line suitable to manufacture frequent model changes and smaller volumes. This requires increased flexibility in production, more robots and a higher level of digitization.



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ASU Spectrometer to Fly on NASA Asteroid Mission

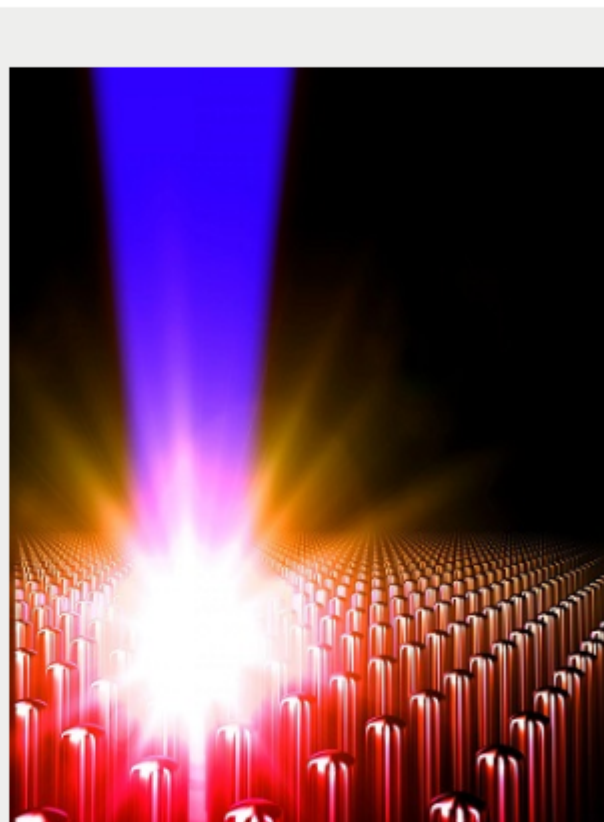
A spectrometer developed by Arizona State University will fly onboard a NASA mission to Jupiter's Trojan asteroids. The Lucy mission has been chosen under the agency's Discovery Program, a series of cost-capped exploratory missions into the solar system. Lucy will carry an ASU-designed and -developed thermal emission spectrometer which will measure surface temperatures on each asteroid the spacecraft visits.



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Compact Lasers Recreate Conditions Inside Stars

With compact lasers that use ultrashort laser pulses irradiating arrays of aligned nanowires, scientists are recreating the extreme conditions found in stars. Previously, this was only possible with large "stadium-sized" lasers, as the energy density contained in the center of a star is many billions of atmospheres, compared with the 1 atmosphere of pressure on Earth's surface.



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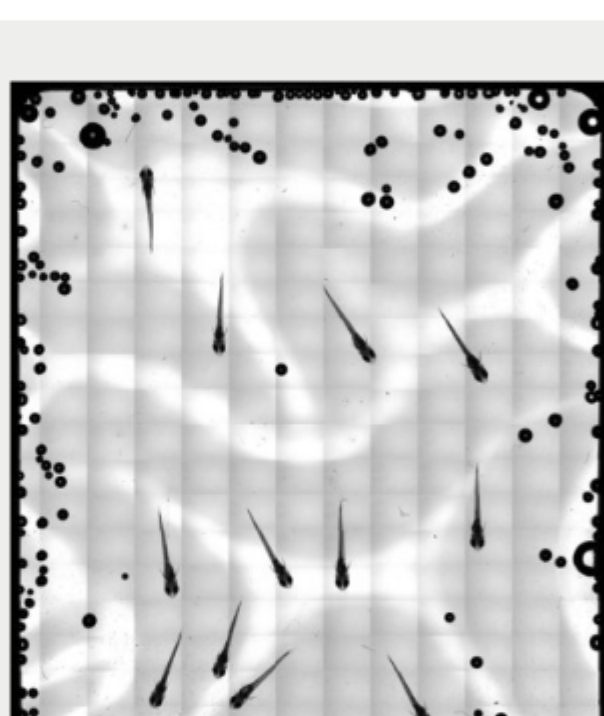
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Real-Time Imaging of Fish Aboard the ISS Helps Study Changes in Bone Structure

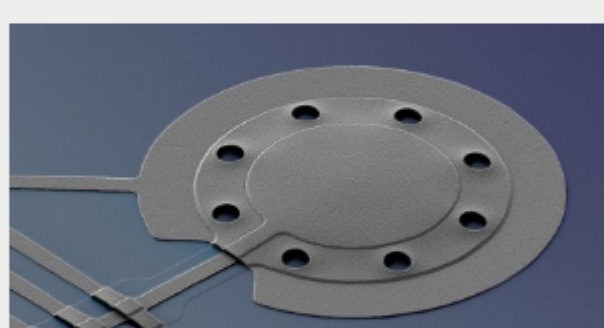
Live-imaging of medaka fish — also known as Japanese rice fish — larvae aboard the International Space Station is helping scientists study the long-term effects of microgravity on the human body. Research shows that astronauts undergo a significant drop in bone mineral density during space missions, but the precise molecular mechanisms responsible for such changes in bone structure are unclear.



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Squeezing Light Cools Microscopic Drum Below Quantum Limit

Using a special circuit to generate microwave photons stripped of intensity fluctuations, physicists at the National Institute of Standards and Technology (NIST) have cooled a mechanical object to a temperature lower than previously thought possible. The new NIST theory and experiments showed that a microscopic mechanical drum — a vibrating aluminum membrane — could be cooled to less than one-fifth of a single quantum, or packet of energy.



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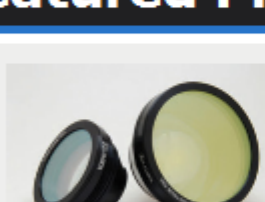
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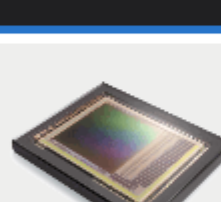


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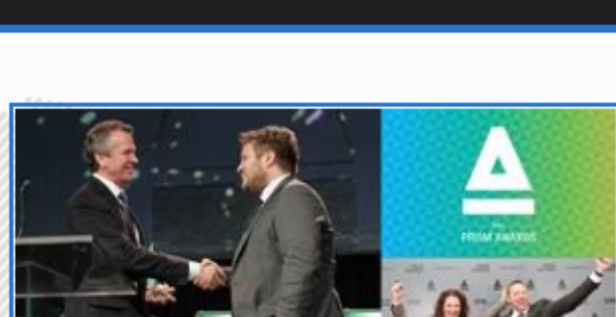
SPIE Photonics West 2017

January 28 - February 2, 2017 - The Moscone Center - San Francisco U.S.

Photonics Media Booth: 900,901

We hope to see you at Photonics West 2017, the world's largest multidisciplinary event coming to the latest technologies. This year, more than 20,000 people will focus to hear the latest research and find the latest devices and systems driving technology markets, including state-of-the-art medical technologies, the Internet of things, smart manufacturing and "Industry 4.0," autonomous vehicles, scientific research, communications, displays, and other solutions powered by photonics. Photonics West is three conferences in one: SPIE BIOS, a biophotonics, biomedical optics and imaging conference; SPIE LASE, the laser source technologies and industrial lasers and applications conference; and SPIE OPTO, the optoelectronics and photonic materials and devices conference. Gala awards ceremony honoring the 2017 winners of the Prism Awards for Photonics Innovation, sponsored by SPIE and Photonics Media, takes place on February 1.

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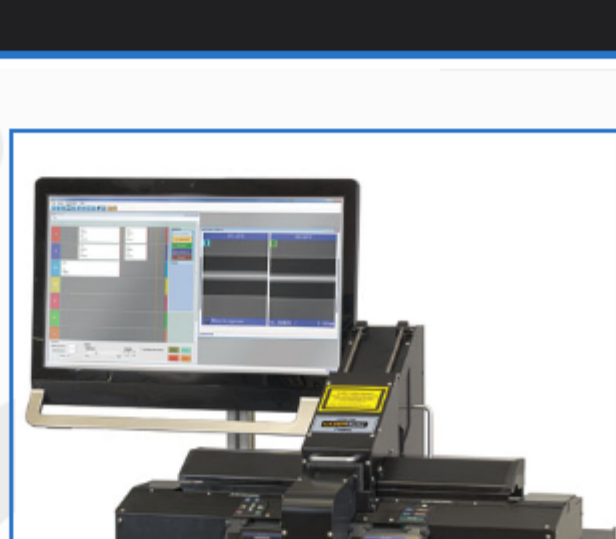
Webinars

An Overview of AFL's Fiber Processing Software for 100-Series Machines

Tue, Feb 7, 2017 1:00 PM - 2:00 PM EST

This webinar, presented by AFL, will cover the shaping, prototyping and data collection capabilities of AFL's Fiber Processing Software (FPS). Whether you are in the business of advanced fiber shaping or you are producing dozens of components a day, you can advance your skills and benefit your business by learning what AFL software can advance of doing for you. Discussion will include a demonstration of the company's new visual scripting interface, SplineScript.

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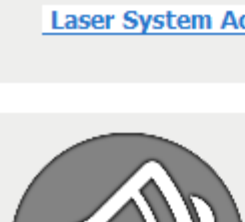
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