



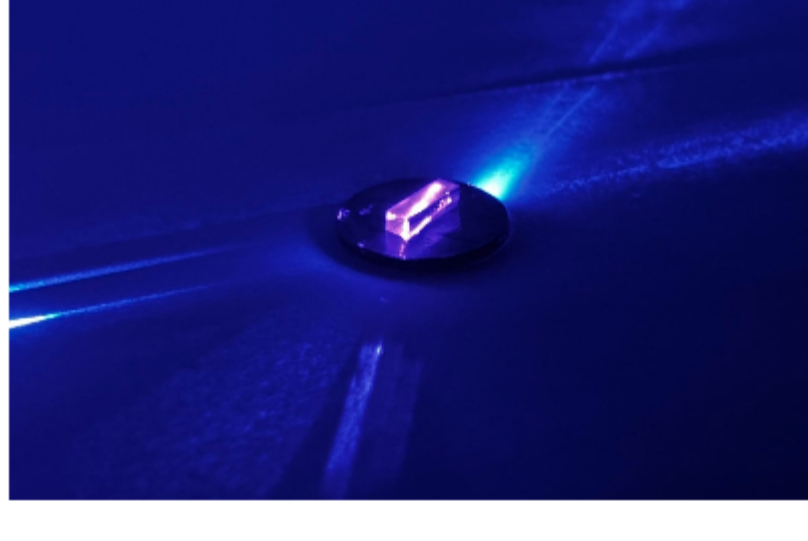
Weekly News



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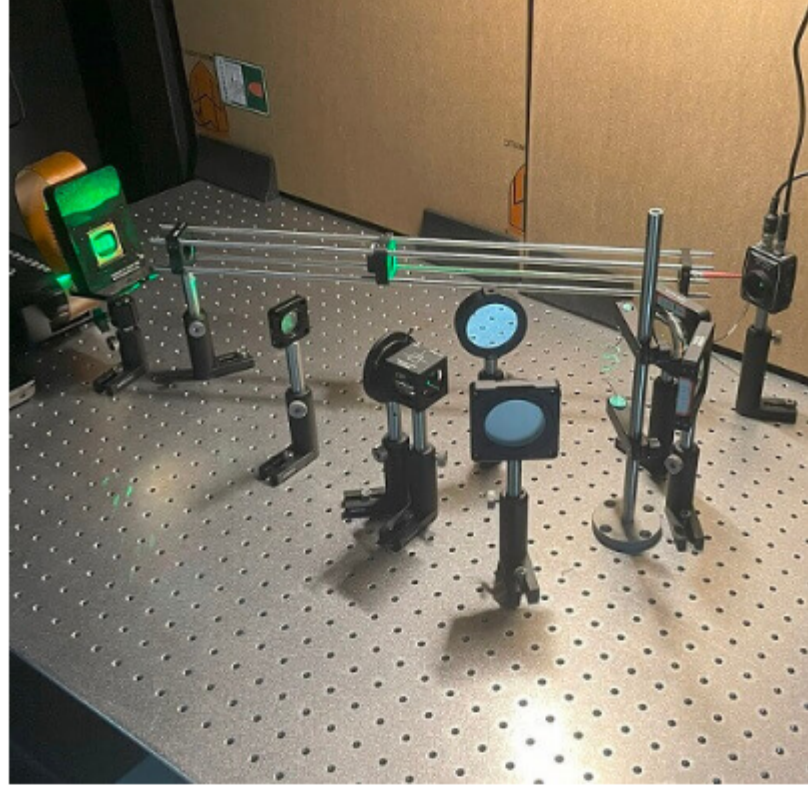


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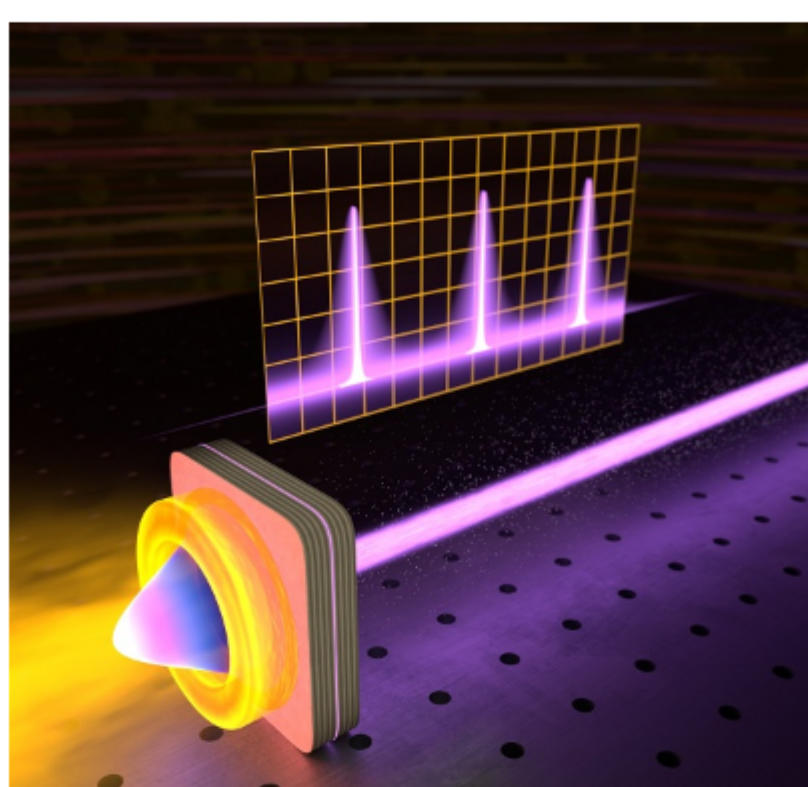
### Spectroscopy Breakthrough May Rewrite Nature's Constants

Led by Eric Hudson, a professor of physics and astronomy at University of California, Los Angeles, a research team has successfully raised the energy state of an atomic nucleus using a laser. The work paves the way for advancements in a broad range of topics, from deep space navigation to understanding longstanding questions in physics. [Read Article](#)



### 3D Method Tracks Fast-Moving Objects

A team of researchers from Tsinghua University have developed a new 3D method that can be used to track fast-moving objects at high speeds. The real-time tracking approach, which is based on single-pixel imaging, could be used to improve autonomous driving, industrial inspection, and security surveillance systems. [Read Article](#)



### Low-Power Lasers Exhibit Narrow Linewidth Needed for Quantum Computing

Using a commercial scanning Fabry-Pérot interferometer, researchers at FLEET, the Australian Research Council's Center of Excellence in Future Low-Energy Electronics Technologies, investigated the energy and linewidth of exciton-polariton lasers in the single-mode regime. The researchers demonstrated that, contrary to previous assumptions, the exciton-polariton laser can maintain an ultra-narrow linewidth of 56 MHz, or 0.24 microelectronvolts — 10x smaller than previously thought. [Read Article](#)



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## More News

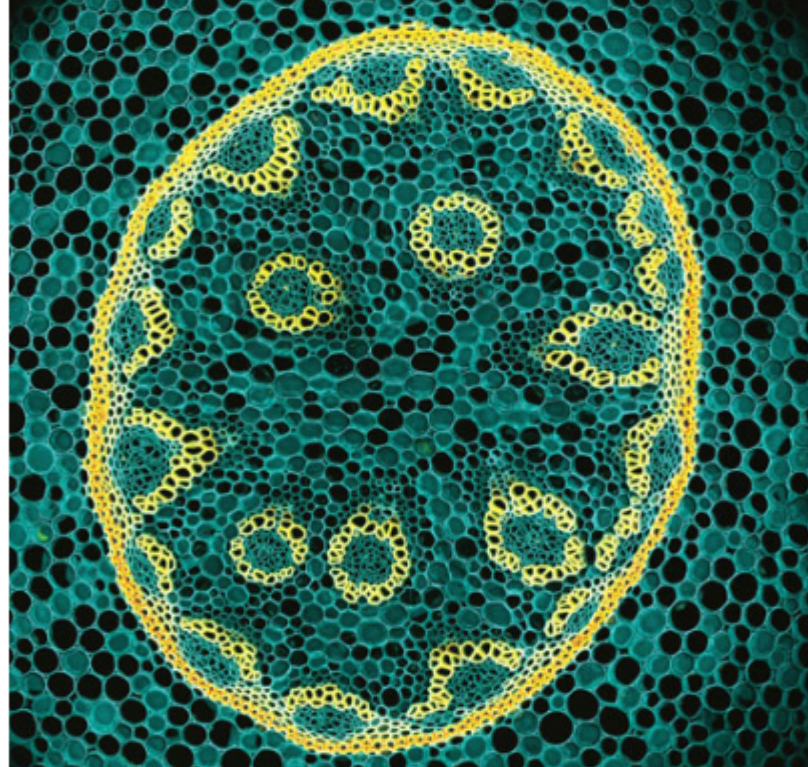
[Lens Made with Hybrid Glass Enables Responsive Micro-Optical Devices](#)

[Computational Microscopy Method Removes Distortions and Guesswork](#)

[EU-Funded Project Developing NIR Spectrograph "On-A-Chip"](#)

[PhotonDelta Expands to U.S. with California Office](#)

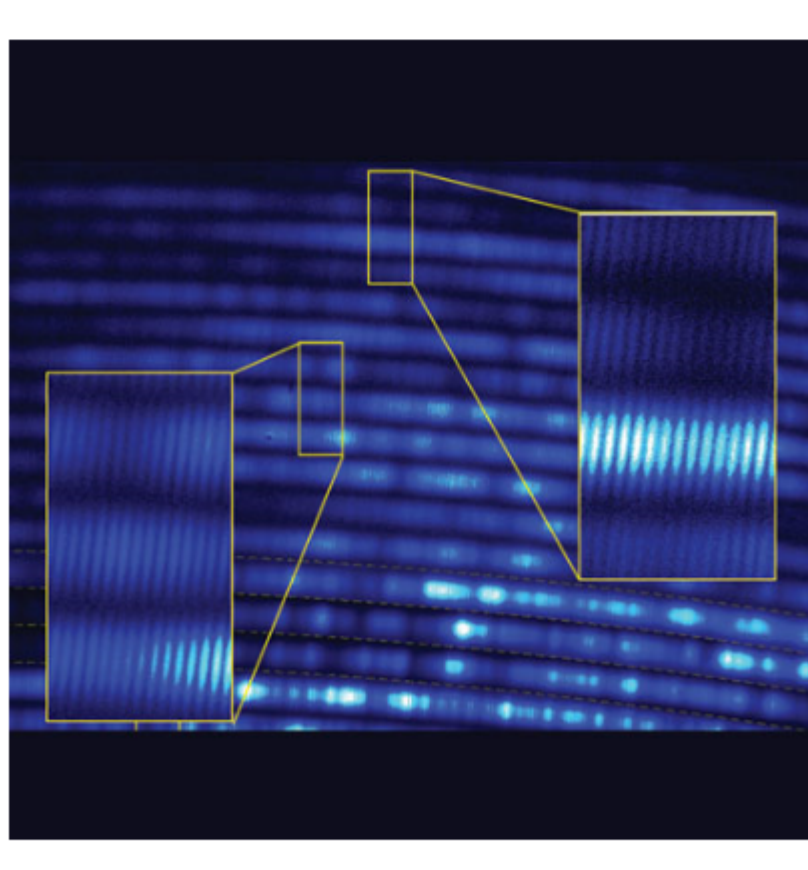
## Latest Webinars



### Beam Steering with Galvos: Common Configurations and Their Uses

**Wed, Jul 24, 2024 1:00 PM - 2:00 PM EDT**  
Galvanometer scanning systems are highly configurable tools for steering laser beams and are used in applications including microscopy, lidar, and the laser processing of materials. Choosing the correct configuration for a particular application requires the consideration of a wide range of factors. In this webinar, Carol Borsa from Thorlabs compares commonly available configurations and discusses the merits of each. She provides key insights to specifications on data sheets, and guides users to suitable solutions. This presentation also covers basic integration steps and requirements, as well as helpful tools for finding the limits of a system. Participants will gain insights into best practices when choosing a system and will have the opportunity to learn ways to use other available equipment to

integrate confidently. Presented by Thorlabs.

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### Measuring Starlight with an Ultrafast Laser: Astrocomb Development for the Extremely Large Telescope

**Tue, Aug 6, 2024 10:00 AM - 11:00 AM EDT**  
In this webinar, Yuk Shan Cheng of Heriot-Watt University explores the important role of the Extremely Large Telescope's (ELT) ANDES spectrograph and its need for a high-precision frequency comb calibrator in order to pursue exciting ventures. She focuses on the development of astrocombs, which are laser frequency comb systems that can provide thousands of stable, atomically referenceable, and evenly spaced calibration lines. Despite their demonstrated success in labs and various telescopes worldwide, integrating astrocombs into modern telescope facilities presents challenges, including aligning their mode spacings with the spectrograph's resolving power and achieving broad spectral coverage, particularly in the UV-blue/green wave band. This presentation covers the approaches to these challenges, recent implementation at the Southern African Large Telescope, and advancements in astrocomb technology at Heriot-Watt University, including the development of the first continuous UV-blue/green astrocomb.

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