

NEW PRODUCTS

Focus on lasers, imaging, microscopy, and photonics

The descriptions of the new products listed in this section are based on information supplied to us by the manufacturers. PHYSICS TODAY can assume no responsibility for their accuracy. For more information about a particular product, visit the website at the end of its description. Please send all new product submissions to ptpub@aip.org.

Andreas Mandelis



Multilaser PID controller

Bristol Instruments has announced its MLC series proportional-integral-derivative (PID) controller that can electronically regulate the frequency output of multiple lasers. When combined with a laser-

wavelength meter, such as the company's new 872 series high-resolution meter, and a fiber-optic switch, the system provides a complete laser-frequency stabilization system. With a frequency resolution as high as 200 kHz, it's capable of detecting and stabilizing minute frequency deviations of up to eight lasers. The PID controller is suitable for use by scientists and engineers involved in experiments that require regulation of laser frequency, such as laser cooling and trapping. **Bristol Instruments Inc**, 770 Canning Pkwy, Victor, NY 14564, www.bristol-inst.com

Lasers for quantum technology

Hübner Photonics has brought to market a range of lasers for quantum technology applications. The Cobolt Qu-T series offers tunable and lockable single-frequency CW emission in the 650–950 nm range with a high level of flexibility in the center wavelength and a perfect TEM₀₀ beam. The compact lasers operate at wavelengths of 707, 780, and 813 nm. Each emission wavelength can be coarsely tuned gap-free over several nanometers and locked to an external reference by using a fast piezo control. Along with its low-intensity noise, the coarse tunability of greater than 4 nm, narrow mode-hop-free tuning of greater than 5 GHz, narrow linewidth of less than 100 kHz, and output powers of 500 mW make the Cobolt Qu-T series suitable for quantum experiments based on atomic transitions and generation of entangled photon pairs through spontaneous parametric down-conversion. **Hübner Photonics Inc**, 2635 N First St, Ste 202, San Jose, CA 95134, <https://hubner-photonics.com>



External-cavity diode laser

DRS Daylight Solutions, part of Leonardo DRS, has unveiled a new member of its PureLight family: the Stretto high-precision, tunable, external-cavity diode laser. Because it covers wavelengths from the UV to the near-IR, the Stretto is suitable for users who need to scale quantum experiments or integrate systems without redesigning them. It offers a wavelength range from 369 to 1800 nm, with ultranarrow linewidth and options for free space and fiber-coupled outputs. It features mode-hop-free tuning greater than 50 GHz, and it achieves a free-running linewidth of less than 500 kHz (typically 100 kHz) and closed-loop linewidths of less than 1 kHz. The compact laser's hermetically sealed design and resistance to temperature, pressure, shock, and vibration fluctuations make it suitable for use in extreme conditions, including humid, dusty, and vacuum-compatible environments. The Stretto can be used in quantum sensors, clocks, and computing systems; optical ion and atomic traps; and ionic spectroscopy. **DRS Daylight Solutions Inc**, 16465 Via Esprillo, San Diego, CA 92127, www.daylightsolutions.com



Femtosecond fiber lasers

Toptica has launched its FemtoFiber ultra series of femtosecond fiber lasers designed for multiphoton microscopy, two-photon lithography, and semiconductor inspection. The series delivers high average power, precision and consistency, and temporal and spatial beam quality, along with femtosecond pulses in a compact, rugged package designed to withstand the demands of advanced imaging and microfabrication.

Available with 780, 920, and 1050 nm wavelengths, the series offers watt-level power with integrated dispersion precompensation, acousto-optic modulator power control, plug-and-play installation, and OEM integrability via remote control. Robust fiber-laser technology ensures longevity; consistent, high-quality output; low power consumption; and minimal maintenance. **Toptica Photonics Inc**, 1120 Pittsford Victor Rd, Pittsford, NY 14534, www.toptica.com

NEW PRODUCTS



Single-photon counting microscopy

PicoQuant has introduced the PDA-23 Detection Module, which offers confocal time-resolved monitoring with a single-photon avalanche diode array. It is an addition to its Luminosa, a single-photon counting microscope that is used to study dynamic structural biology, cellular mechanisms and environments, and plant development and structure. The PDA-23 Detection Module enhances the spatial resolution, contrast, and functional imaging capabilities of time-resolved confocal fluorescence microscopy. It can combine the increased resolution and contrast of image scanning microscopy with the functional information of fluorescence lifetime imaging microscopy. The PDA-23 Detection Module is customizable and can be

seamlessly integrated. *PicoQuant, Rudower Chaussee 29, 12489 Berlin, Germany, www.picoquant.com*

AFM for nanoscale imaging and analysis

Park Systems tailored its Park FX200 AFM to offer precision and reliability in atomic force microscopy on 200 mm samples. Its advanced mechanical structure ensures a lower noise floor, minimal thermal drift, and high stability. Faster Z-servo performance and an improved high-power sample view enhance operational efficiency and imaging capabilities. Features such as automatic probe recognition and probe exchange, laser-beam alignment, and macro-optics for full sample view simplify the user experience and maximize productivity. With optical autofocus, navigation, and sequential measurements at multiple coordinates, combined with automated AFM-scan parameter settings and data analysis, the FX200 streamlines complex operations, making it suitable for both research and industrial applications. *Park Systems Inc, 3040 Olcott St, Santa Clara, CA 95054, <https://parksystems.com>*



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TENURE-TRACK FACULTY POSITIONS IN PARTICLE PHYSICS AND COSMOLOGY

The Department of Physics invites applications for several tenure-track faculty positions at the Assistant Professor level in experimental and theoretical physics. The target areas of the search are **Theoretical High Energy Physics and Cosmology**, **Non-accelerator-based Experimental Particle Physics** and **Observational Cosmology**. Applicants must possess a PhD degree in physics or a related field. The successful candidates should have a strong track record of research. Candidates with an interdisciplinary backgrounds are especially encouraged to apply. Appointments at the rank of Associate Professor or above will be considered for candidates with exceptional records of research excellence and academic leadership. In addition to pursuing a vibrant research program, appointees are expected to engage in effective teaching at the undergraduate and graduate levels.

The current faculty in the particle physics and cosmology group at The Hong Kong University of Science and Technology include Professor Andrew Cohen, Professor Tao Liu, Professor Kam-Biu Luk, Professor Kirill Prokofiev and Professor Yi Wang. The department is expanding its effort in this area by hiring additional new faculty in theory and experiment. Further information about the Department can be found at <http://physics.ust.hk>.

The starting salary will be highly competitive and commensurate with qualifications and experience. Fringe benefits including medical and dental benefits, annual leave and housing benefits will be provided where applicable. The initial appointment prior to tenure will normally be on three-year contract terms. A gratuity will be payable upon successful completion of a contract.

Application Procedure: Applicants should submit their applications along with CV, cover letter, complete publication list, research statement, teaching statement, and three reference letters.

Separate applications should be submitted online for each position below:

High Energy Theory and Cosmology (PHYS1017H):

<https://academicjobsonline.org/ajo/jobs/16291>

Particle Physics Experiment (PHYS1017P):

<https://academicjobsonline.org/ajo/jobs/16292>

Observational Cosmology (PHYS1017C):

<https://academicjobsonline.org/ajo/jobs/16293>

Screening of applications begins immediately, and will continue until the positions are filled.