

Focus on photonics, spectroscopy, and spectrometry **FREE**

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Physics Today **73** (7), 58–59 (2020);

<https://doi.org/10.1063/PT.3.4528>



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Lasers for biomedical and quantum technologies

Hübner Photonics has expanded its Cobolt 06-01 series of plug-and-play modulated lasers. The series now features 12 additional wavelengths covering the 405–975 nm range and higher powers on several existing wavelengths: 405 nm with 365 mW, 445 nm with 400 mW, 457 nm with 400 mW, and 515 nm with 150 mW. The wide spectral coverage, compact form factor, direct modulation capability, and true “off” during modulation make the lasers suitable for laboratory and research applications in the life sciences and quantum technologies. All Cobolt 06-01 series lasers are manufactured using proprietary HTCure technology, which, according to the company, provides high reliability and a high level of immunity to varying environmental conditions. **Hübner Photonics Inc.**, 2635 N 1st St, Ste 228, San Jose, CA 95124, www.hubner-photonics.com



Reflective spectrofluorometer

Horiba Scientific has unveiled the fourth generation of its Fluorolog modular spectrofluorometer. The Fluorolog-QM is a lens-free, reflective spectrofluorometer that provides sharp focus at all wavelengths from the deep UV (180 nm) to the near-IR (5500 nm). Using the company's first standard deviation (FSD) method, it delivers high sensitivity at a 32000:1 signal-to-noise ratio for the Raman band of water. (FSD denotes the difference of peak signal minus background signal, divided by the square root of the background signal.) For optimal stray light rejection, it offers the industry's longest focal length at 350 mm for single monochromators and 700 mm for double monochromators. The Fluorolog-QM delivers steady-state, spectral, and time-resolved photoluminescence from 180 nm to 5500 nm. Combined with up to four light sources, up to six detector options, and sample handling accessories, it can be enhanced to suit a broad range of luminescence research applications. **Horiba Scientific**, 20 Knightsbridge Rd, Piscataway, NJ 08854, www.horiba.com

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Compact, aberration-free spectrograph



Teledyne Princeton Instruments has added a new aberration-free imaging spectrograph to its IsoPlane spectrograph portfolio. The IsoPlane 81, formerly FERGIE, features an advanced, proprietary spectrograph design integrated with a deeply cooled, research-grade CCD camera. The new model has been improved to further reduce readout noise, increase scanning speed, and create easier access to gratings. External updates enhance the system's ruggedness. According to the company, the IsoPlane 81 provides superior resolution and signal-to-noise ratio compared with cameras that have much larger footprints and focal lengths. Accessories focused on Raman spectroscopy and Raman microscopy include a dedicated module for fast, accurate microspectroscopy, light sources for calibration, and various prealigned cubes for configuring experiments. **Teledyne Princeton Instruments**, 3660 Quakerbridge Rd, Trenton, NJ 08619, www.princetoninstruments.com

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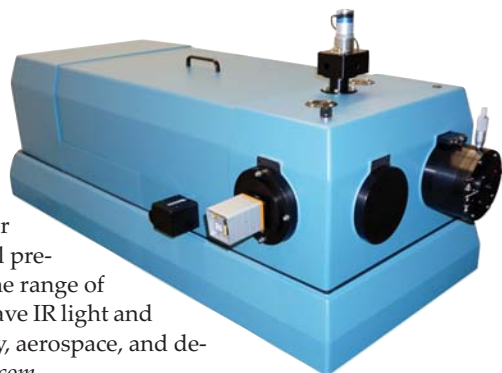
Laser-cavity-tuning amplifier

Vescent Photonics has introduced its SLICE-DHV high-voltage amplifier for piezoelectric control of laser tuning mirrors and cavity length stretching. According to the company, it offers high-bandwidth control over high-voltage-driven piezoelectric transducers while maintaining extremely low noise. Depending on the capacitance of the load, bandwidths greater than 500 kHz are possible over a control range of ± 10 V superposed on a bias voltage of 0–200 V. The resulting fast control over the cavity length of a frequency comb oscillator supports repetition-rate matching for dual-comb spectroscopy or a tight lock on f_{opt} to operate the comb as a frequency ruler. A high-gain mode allows easy control over the full 0–200 V output range. The bias plus fast servo-control mode can be used to lock external cavity laser diodes and frequency combs that are lead zirconate titanate tuned. To be more economical and leave a smaller footprint, each SLICE-DHV offers two independently operating channels. **Vescent Photonics LLC**, 14998 W 6th Ave, Ste 700, Golden, CO 80401, www.vescent.com



High-resolution IR-imaging spectrometers

McPherson has announced that it has made its dispersive spectrometers easier to use in the IR. Ample, accessible space and a mechanically robust platform for mounting IR arrays now permit devices such as uncooled microbolometer arrays to be readily coupled to the exit focal plane. A bolometer array IR digital camera mounted on a 1-m-focal-length McPherson spectrometer can sort 50 IR bands simultaneously. For more sensitive spectral imaging applications, larger IR cameras with thermoelectric or cryogenic cooling can be adapted with optical precision to the McPherson spectrometer. The new sensor compatibility expands the range of wavelengths in which the company's spectrometers can detect mid- and long-wave IR light and increases utility for spectroscopy and imaging applications in chemistry, biology, aerospace, and defense. **McPherson Inc**, 7A Stuart Rd, Chelmsford, MA 01824, <https://mcphersoninc.com>



Nanoscale FTIR spectroscopy system

According to Bruker, its nanoIR3-s Broadband is the most advanced nanoscale Fourier-transform IR spectroscopy system currently available. It combines two techniques: scatter-



ing-type scanning near-field optical microscopy and advanced IR laser technology. Using a broadband light source based on a novel femtosecond laser with a distributed optical parametric oscillator feedback, the system provides nanoscale imaging and spectroscopy over the 2.5–15 μm (4000–670 cm^{-1}) spectral range. The source allows for switching its linewidth for imaging or spectroscopy. The nanoIR3-s Broadband is suitable for advanced research on organic and inorganic materials and for nanoscale optical imaging of 2D materials, including plasmonic and nanophotonic processes and structures. **Bruker Corporation**, 40 Manning Rd, Billerica, MA 01821, www.bruker.com

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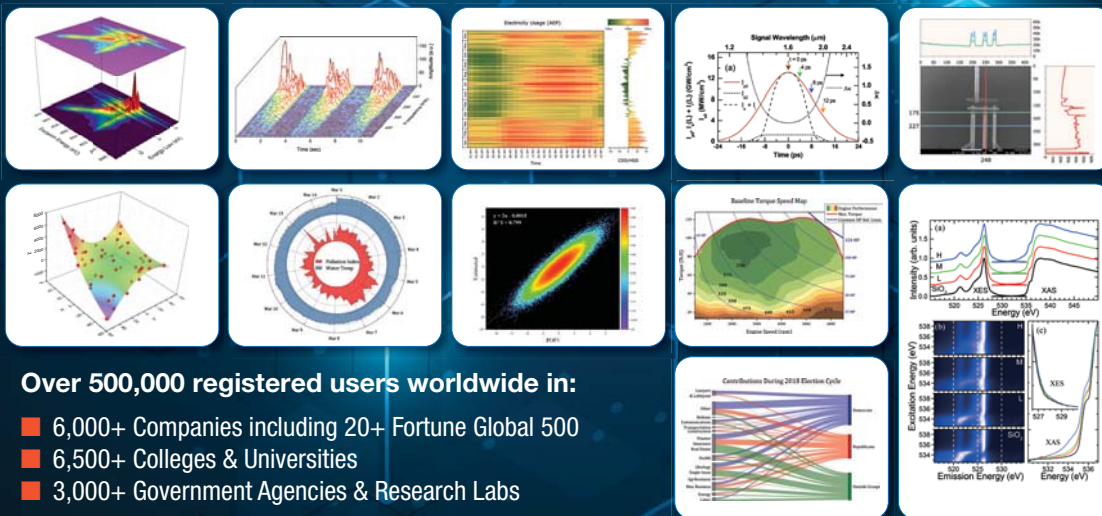


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