NEW PRODUCTS

Focus on photonics, spectroscopy, and spectrometry

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 the product description. For all new products submissions, please send to ptpub@aip.org.

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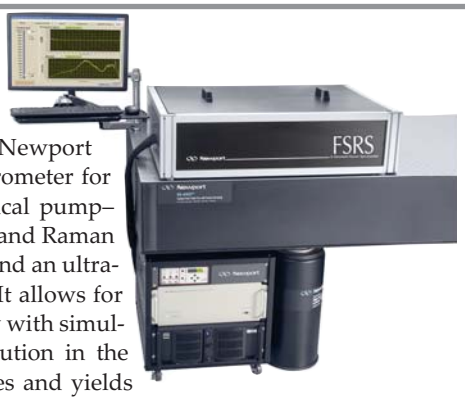
Femtosecond stimulated Raman spectrometer



MKS Instruments has launched its Newport femtosecond stimulated Raman spectrometer for scientific research. The nonlinear optical pump–probe instrument combines a narrowband Raman pump, an ultrafast broadband probe, and an ultrafast optical excitation "actinic" pulse. It allows for time-resolved vibrational spectroscopy with simultaneous high spectral and time resolution in the ground and excited states of molecules and yields spectra free from the interference of background fluorescence. Designed to work with amplified femtosecond lasers such as the Spectra-Physics Solstice Ace, the spectrometer can be reconfigured to perform transient absorption spectroscopy and to allow for selected changes such as using an external Raman pump source. ***MKS Instruments Inc**, 2 Tech Dr, Ste 201, Andover, MA 01810, www.mksinst.com*

Flat-top beam shapers

Edmund Optics' flat-top beam shapers convert collimated Gaussian input beams into collimated flat-top beams with a uniform density distribution and a flat phase front. Featuring an even intensity distribution that is stable over great distances, the converted beam is suitable for microscopy, holography, and system integration. With no internal focusing, flat-top beam shapers are appropriate for applications that require high-power lasers, such as material micromachining. The beam shapers are available with design wavelengths from 266 nm to 10 500 nm for common yttrium aluminum garnet, fiber, and carbon dioxide laser sources. Each operates over a specified wavelength range for laser tuning and can be used with multiple laser sources. ***Edmund Optics Inc**, 101 E Gloucester Pike, Barrington, NJ 08007, www.edmundoptics.com*

UV lasers for fluorescence microspectroscopy

Craic Technologies has expanded the capabilities of its 20/30 PV microspectrophotometers by adding deep-UV lasers as excitation sources for them to its laser offerings in the visible to near-IR range. The UV lasers can be used for fluorescence microspectroscopy and can be incorporated into the company's new photoluminescence package. Both methods require intense light sources, and by exciting in the UV, more materials can be induced to emit photons via a luminescent process. The UV laser output is focused onto a microscopic sample area, and the emitted light is collected and measured by the 20/30 PV microspectrophotometer. The fluorescence or photoluminescence spectra are then analyzed. ***Craic Technologies Inc**, 948 N Amelia Ave, San Dimas, CA 91773, www.microspectra.com*

Neutron imaging system

According to Photonis, its Neutronic [i] neutron imaging system provides high resolution and high detection efficiency compared with traditional scintillator-based neutron imaging systems. The system is suitable for physics research, neutron scattering, neutron tomography, and nondestructive testing applications. It uses both cold and thermal neutron imaging techniques to produce still and video images. To achieve neutron sensitivity, Neutronic [i] is equipped with a 100 × 100 mm microchannel plate from Photonis and NeuView technology from Nova Scientific. It houses a vacuum chamber, a high-voltage power supply, and a controller. The system provides short beam-time imaging to protect the items being imaged from damage and can deliver actionable images in under 2 h. ***Photonis USA Inc**, 660 Main St, Sturbridge Business Park, PO Box 1159, Sturbridge, MA 01518, www.photonis.com*

High-resolution imaging spectrograph

Princeton Instruments has added model HRS-500 to its SpectraPro HRS series. The 500 mm focal-length spectrograph and scanning monochromator has an astigmatism-corrected optical system for multichannel fiber applications. The company claims that its spectral deconvolution technology, ResXtreme, optimizes the instrument's optical performance by improving by as much as 60% the spectral resolution, peak intensities, and consistency across the 2D focal plane. Two exit ports with a full 14 × 30 mm focal plane allow for mounting and operating two array detectors. Applications include Raman spectroscopy, photoluminescence, plasma diagnostics, absorption, and microspectroscopy. ***Princeton Instruments**, 3660 Quakerbridge Rd, Trenton, NJ 08619, www.princetoninstruments.com* PT