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ProductNews

Compact Closed-Loop Motion Controller Provides Nanometer Resolution for Miniature Piezo Motor Micrometers

PI announced a new compact closed-loop motion controller. The E-871.1A1N digital servo controller is specifically designed for inertia-motor-based opto-mechanical actuators (piezo ratchet drives) that are widely used in the semiconductor, laser, and photonics industry for fine-tuning of complex systems. The miniature actuators are often employed as "set-and-forget" mechanisms with an option to remotely make adjustments, where manual micrometer screws would necessitate a system shutdown to allow for corrections.

PI (Physik Instrumente)
www.pi-usa.us

Olympus Launches LEXT OLS5000 Laser Confocal Scanning Microscope

The new Olympus LEXT® OLS5000 3D laser confocal scanning microscope features 4K scanning technology and optics designed specifically for the OLS5000 microscope. This combination of technology and optics enables the detection of near-perpendicular features and small steps at close to nano-scale. An expansion frame and a dedicated, long working distance lens perform precise measurements on samples up to 210 mm in height and concavities up to 25 mm deep—even those with uneven surface cracks.

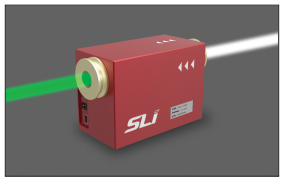
Olympus Corporation
www.olympus-ims.com

Basler PowerPack for Microscopy Enhanced for Fluorescence Imaging

Basler offers two cameras that are particularly suitable for fluorescence imaging: the Microscopy ace 2.3 MP Mono offers a resolution of 2.3 MP combined with high sensitivity thanks to its large pixel size. The Microscopy ace 5.1 MP Mono scores with an ideal balance between high resolution, large pixel size, and low noise level. An important factor in fluorescence applications is the use of low light emissions to reduce the risk of photo bleaching the sample.

Basler AG
www.baslerweb.com

Revolutionary Monochromator Replacement Features Full Automation



Spectrolight's Auto series that features computer control of center wavelength, bandwidth, and wavelength scanning. The FWS is a wavelength filtering device that combines the precision tunability and adjustable bandwidth of a traditional monochromator with the circular uniform aperture of a bandpass filter. Several models of FWS Auto are available with tuning ranges to cover the visible spectrum, each with FWHM bandwidth adjustable from 2 nm to around 20 nm and apertures of up to 10 mm diameter.

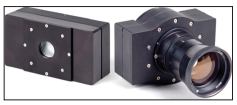
Spectrolight, Inc.
www.spectrolightinc.com

New Mirage™ IR Microscope

Anasys Instrument announced the Mirage™ IR Microscope. Mirage achieves sub-micron spatial resolution infrared (IR) imaging and spectroscopy, with a spatial resolution improvement of over 20×. Mirage works on the principle of photothermal IR spectroscopy (PTIR) providing transmission quality FTIR spectra, even in reflection mode. The new Mirage IR microscope overcomes the IR diffraction limit by combining a pulsed tunable laser with a proprietary optical technique measuring photothermal response of the sample in a fast, easy-to-use manner.

Anasys Instruments
www.anasysinstruments.com/mirage

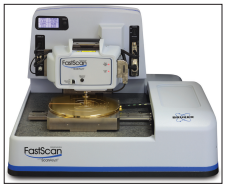
Photon-Counting Camera LINCam Now Available from PicoQuant



PicoQuant announced the LINCam, a photon-counting camera manufactured by Photonscore. The LINCam is a single-photon-counting device working in the time domain that provides position data. Pairing the LINCam with pulsed light sources allows turning any conventional fluorescence microscope into a powerful, scanning-free, time-resolved imaging instrument. The heart of the LINCam is a position-sensitive, microchannel-plate-based detector assembly coupled to a data acquisition system with high time resolution.

PicoQuant
www.picoquant.com

Bruker Introduces NanoMechanics Lab for Dimension AFMs



Bruker has released the NanoMechanics Lab™, a suite of force-mapping modes that enable Dimension FastScan® and Icon® AFM systems to perform quantitative nanoscale characterization, extending from soft hydrogels and polymers to stiff metals and ceramics. The NanoMechanics Lab encompasses a broad range of nanoscale AFM measurement techniques, including the well-established Force Volume mode, as well as the new high-accuracy PeakForce QNM, FASTForce Volume, and FASTForce Volume Contact Resonance modes.

Bruker Corporation
www.bruker.com

KURO™ 2048B: 4-Megapixel, Back-Illuminated, Scientific CMOS Camera from Princeton Instruments

Princeton Instruments' KURO 2048B, is the newest member of the KURO family of back-illuminated, scientific CMOS (sCMOS) cameras. The KURO 2048B satisfies emerging requirements in the fields of hyperspectral imaging, astronomy, and quantum imaging. Among its many outstanding characteristics, the KURO 2048B provides a large format 2048 × 2048 sensor with generously sized 11 µm pixels. Back-side illumination enables 100% pixel fill factor and delivers CCD-like sensitivity.

Princeton Instruments
www.princetoninstruments.com

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New Multi-Technique Surface Analysis System Delivers High Sample Throughput

The Nexsa system combines the high throughput and high sensitivity of the Thermo Scientific K-Alpha+ XPS system with the multi-technique capabilities of the Thermo Scientific ESCALAB Xi+ XPS microprobe. Users of the Nexsa system can add complementary techniques, such as Raman spectroscopy, ion scattering spectroscopy, reflected electron energy loss spectroscopy, and UV photoelectron spectroscopy, to generate multiple measurements from the same point on the sample, without repositioning.

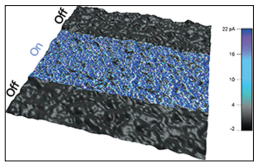
Thermo Fisher Scientific Inc.
www.thermofisher.com

Vision Engineering Displays New Non-Contact Visual Measuring Systems

Vision Engineering is offering the new Swift PRO range of non-contact visual measuring systems. Combining the latest optical and video measurement technologies, the Swift PRO is a powerful yet simply operated tool that is designed for ensuring precision and quality control across a range of industries. Previously difficult-to-view samples can be measured more accurately with Swift PRO's new HD video camera with Video Edge Detection (VED) and fully dimmable stage illumination.

Vision Engineering Ltd.
www.visioneng.us

New MFP-3D Infinity AFM Photovoltaic Option



Oxford Instruments Asylum Research announced the new Photovoltaic Option for the MFP-3D Infinity™ AFM. Together, the MFP-3D Infinity and PV Option enable high-resolution imaging and advanced electrical characterization with techniques such as conductive AFM (CAFM), electrostatic force microscopy (EFM), and Kelvin probe force microscopy (KPFM). These modes are critical for investigating photocurrent and related photoresponse, including effects caused by heterogeneous interfaces, grain boundaries, and/or phase-separated domains.

Asylum Research, an Oxford Instruments company
www.oxford-instruments.com/PVOption

Cost-Effective Basler Lenses

In addition to the Basler Original Equipment lenses with a resolution of 5 megapixels for sensors smaller than 1/2″, Basler now also offers lenses for sensors up to 2/3″. The Basler Lenses 2/3″ are suitable for sensors with a resolution of up to 2 megapixels and an excellent choice for applications where low resolutions are sufficient. The lenses are available in six different focal lengths (8, 12, 15, 25, 35, 50 mm) and can be used in the visible wavelength range of 400–700 nm.

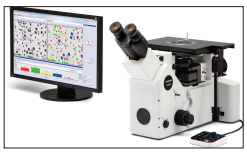
Basler AG
www.baslerweb.com

Excelitas Technologies Introduces X-Cite® FIRE for Fluorescence Microscopy

Excelitas Technologies® introduced the X-Cite® FIRE light source for fluorescence microscopy. The X-Cite FIRE offers output from 360–750 nm. Across the spectrum, X-Cite FIRE has improved LED coverage, providing a closer match to mercury arc lamp output. With a 365 nm spectral peak, X-Cite FIRE is matched perfectly with the narrow DAPI filter sets that are standard in research microscopes. At the opposite end of the spectrum, X-Cite FIRE provides 735 nm excitation for Cy7.

Excelitas Technologies® Corp.
www.excelitas.com

New Olympus GX53 Inverted Metallurgical Microscope for Faster Quality Inspections of Manufactured Metal Components



The Olympus GX53 inverted metallurgical microscope features an LED light source for ultra-long life and low power consumption. The GX53 microscope also incorporates the latest version of Olympus Stream image-analysis software for improved observation and reporting capabilities. Inverted metallurgical microscopes observe samples from underneath, enabling the user to inspect thick or heavy samples without adjusting the orientation of the sample surface.

Olympus Corporation
www.olympus-ims.com/en/microscope/gx53

Ultraviolet Laser Illumination for Photoluminescent Microspectroscopy

CRAIC Technologies' new ultraviolet lasers sources for use with the 20/30 PV™ microspectrophotometer are to be used as an excitation source for fluorescence and photoluminescence microspectroscopy. Both methods require intense light sources, and by exciting in the ultraviolet, more materials can be caused to emit photons via a luminescent process. The UV laser output is focused onto a microscopic sample area, and the light that is emitted from that area is collected and measured by the 20/30 PV™ microspectrophotometer.

CRAIC Technologies, Inc.
www.microspectra.com

New BLAZE™ Spectroscopy Cameras Offer New Levels of Performance

Princeton Instruments introduced ultra-high-performance BLAZE cameras for spectroscopy. Featuring new sensors, BLAZE cameras provide the highest NIR quantum efficiency (QE), fastest spectral rates, and deepest thermoelectric cooling capabilities available. Applications for these next-generation CCD cameras include Raman spectroscopy, photoluminescence, nanoparticle research, carbon nanotube studies, pump-probe experiments, fluorescence, and micro-spectroscopy. New BLAZE LD-Sensors are exclusive, deep-depletion devices designed for high sensitivity and extremely low dark current, making them ideal for low-light applications.

Princeton Instruments
www.princetoninstruments.com