

ProductNews

AMC100 – New Motion Controller Enhances Power and Usability



attocube announced its new controller AMC100, which is available for all Industrial Line temperature positioners. The new hardware features higher peak currents

to improve the performance of the positioners. It is available in an open-loop version or with integrated feedback loop for optoelectronic /NUM(+)-sensors. The new control unit offers Ethernet connectivity and a redesigned GUI, which allows for intuitive and easy operation of unlimited number of controllers in a single window.

attocube systems AG
www.attocube.com

New Thermo Scientific Prisma SEM Combines Performance and Versatility



The newly released Thermo Scientific Prisma SEM platform incorporates an extensive selection of detectors, *in situ* stages, automation packages, and its environmental mode to make it one of the most complete offerings on the market. It can be configured as a lean “point-and-shoot” solution for industrial customers or augmented with an array of specialized imaging and analysis options for the researcher. It lets customers buy confidently, knowing they have an optimal solution for their needs.

Thermo Fisher Scientific Inc.
www.thermofisher.com

JAI Introduces New Go Series Polarization Camera



JAI has added a new model to its Go Series of small and versatile machine vision cameras. The GO-5100MP-USB is built around Sony's IMX250MZR polarized CMOS image sensor, offering 5.1 megapixels of total resolution and an innovative 4-way polarized filter design creating a range of

possibilities for imaging and analysis of objects. The camera features a full resolution of 2464×2056 pixels with a $2/3$ " optical format and pixel sizes of $3.45 \mu\text{m} \times 3.45 \mu\text{m}$.

JAI Inc.
www.jai.com

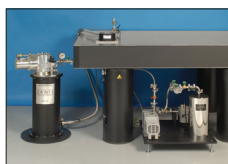
Magnetically Levitated Turbopumps



The Pfeiffer Vacuum HiPace M high-performance magnetically levitated turbopumps have high pumping speeds (300 l/s, 700 l/s, and 800 l/s), have high gas throughput, and achieve high compression ratios for all gases. These pumps are optimized to run in all mounting orientations with a low vibration signature and quiet operation. An advanced rotor design provides unlimited rotor service life, out of balance compensation, and dependable operation. They are maintenance-free and oil-free.

Pfeiffer Vacuum, Inc
www.pfeiffer-vacuum.com

Recirculating Gas Cooler



Existing liquid-helium-cooled microscopy cryostats can be converted to cryogen-free operation with the addition of an external cryocooler, the Janis Recirculating Gas Cryocooler (RGC4). Instead of using liquid helium from a storage vessel, the RGC4 delivers a stream of 4°K helium to the microscopy cryostat. This combination provides positional stability to <10 nm and is suitable for micro-PL, micro-Raman, and other vibration-sensitive techniques.

Janis Research Company, LLC
www.janis.com/RecirculatingCryocooler_MicroscopyToday.aspx

HyperFlux™ PRO Plus

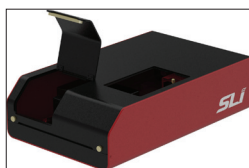


Tornado's HyperFlux™ PRO Plus is a complete Raman spectroscopy system including a proprietary HTVS-enabled spectrometer, a high-quality stabilized laser, multiple laser safety interlocks, temperature monitoring and dynamic re-calibration, and automated system health monitoring and

fault detection. The PRO Plus is a powerful and easy-to-use instrument that delivers better Raman sensitivity and provides 10× improvement in spectrometer throughput/signal strength, 3× to 6× improvement in SNR, 10× to 30× faster measurement, and lower laser power operation.

Tornado Spectral Systems
tornado-spectral.com

FWS Fluorimeters



A new product of FWS Fluorimeters is now offered by Spectrolight. The FWS Fluorimeter integrates a tungsten halogen lamp, Mighty Light, with an award-winning Flexible Wavelength Selector to provide a high-power, tunable monochromatic beam for excitation. The key product

advantages are high excitation power using Spectrolight's TwinFilm™ Technology, low dark noise and stray light using high-speed CCD, and fast acquisition of spectrum using Spectrolight's new software interface.

Spectrolight, Inc.
www.spectrolightinc.com/product-category/fluorimeter

Bunton Instrument Introduces RetroBOT – Motorized XYZ for Upright Optical Microscopes



RetroBOT components are 3D-printed, and the conventional XYZ stepper motors are connected to the Bunton Arduino controller that comes with each system. A demo is available on YouTube channel “TheMICROBG.” This is a good hardware solution for image stitching and z-stacking. It can be used with small-format or large-format digital cameras (DSLR). It is shown here with the USA-made InFocus that replaces the trinocular

tube, viewing oculars, and expensive camera couplers. RetroBOT developer kits are now available.

Bunton Instrument Co., Inc.
www.buntngr.com

Bruker Introduces FluidFM on the BioScope Resolve BioAFM



Bruker announced the launch of **FluidFM**[®] on the BioScope Resolve[®] AFM. For the first time, cell biology researchers can combine the femtoliters-scale fluid control and injection capability of Cytosurge's FluidFM technology with the force control, resolution, and speed that is only available with Bruker's PeakForce Tapping[®] technology. The combined product opens the door to a whole range of novel single-cell investigations, including colloidal probe spectroscopy, single-cell injection, and single-bacteria adhesion studies.

Bruker Nano Surfaces Division
www.bruker.com/bioafm

Bluebox Optics Launches a New Modular LED Light Source Ideally Suited for Fluorescence Microscopy



With up to seven LED channels, the *niji* delivers powerful, multi-wavelength excitation from UV to Far Red. The *niji* allows users to start with one LED only—with its modular mainframe up to six more LEDs can be added at a later time, offering additional excitation center wavelengths, excitation bands, and output power options as and when

they are needed.

Blueboxoptics
www.blueboxoptics.com

EDAX Launches New Velocity[™] EBSD Camera



EDAX, Inc. launched its new Velocity[™] EBSD camera, which offers high-speed EBSD mapping with the highest indexing performance on real-world materials. Powered by a CMOS sensor, the

Velocity[™] EBSD camera combines indexing speeds greater than 3,000 indexed points per second. At these speeds, the Velocity[™] uses 120 × 120-pixel EBSD patterns for improved band detection. This image resolution, combined with proven EDAX triplet indexing routines, provides orientation precision values of less than 0.1°.

AMETEK EDAX
www.edax.com/velocity

New, Deep-Cooled, Ultra-Large-Format SOPHIA[®] CCD Cameras



Princeton Instruments announced the deep-cooled, ultra-large-format SOPHIA 4096B cameras. Engineered for applications ranging from astronomy to fluorescence imaging, these back-illuminated CCD cameras are an excellent addition to Princeton Instruments' popular SOPHIA product line. Also available immediately are deep-cooled SOPHIA 2048B cameras, which deliver high performance for an extensive set of low-light imaging applications such as astronomy, *in vivo* imaging, and semiconductor failure analysis.

Princeton Instruments
www.princetoninstruments.com

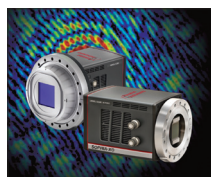
New Back-Illuminated pco.panda 4.2 bi from the Pioneers in sCMOS Technology



PCO is introducing its latest camera innovation: pco.panda 4.2 bi (back-illuminated), a state-of-the-art sCMOS camera. It features the same compact 65 × 65 × 65 mm dimensions of the renowned pco.panda 4.2. PCO's new back-illuminated sensor provides outstanding quantum efficiency up to 95%. These attributes, among others, make the pco.panda 4.2 bi camera of specific interest for microscopy and life science applications.

PCO AG
www.pco.de/scmos-cameras/pcopanda-42-bi

Introducing High-Speed, Ultra-Low-Noise SOPHIA-XO Cameras for Soft X-Ray Applications



Princeton Instruments announced the SOPHIA-XO camera platform, specially designed for scientific applications such as VUV/EUV/XUV imaging, X-ray diffraction, X-ray microscopy, X-ray holography, X-ray spectroscopy, and X-ray plasma. The new SOPHIA-XO cameras use back-illuminated CCDs for direct detection of the widest range of VUV and X-rays (~5 eV to 30 keV). These new XO camera models are extensions of Princeton Instruments' popular SOPHIA[®] product line.

Princeton Instruments
www.princetoninstruments.com

Modular Lab Furniture Systems Designed to Meet Space and Budget Needs



UniLine Furniture offerings include base cabinets, wall cabinets, countertops, sinks, fixtures, base-tables, mobile work stations, specialty storage cabinets, and peg boards. Our UniLine Casework Groupings are designed to incorporate our most popular casework styles in a

complete package. Our services can also include a complete turnkey installation to ensure the one-source quality standards that you expect and deserve.

HEMCO Corporation
www.HEMCOcorp.com/labfurn.html

JAI Introduces High-Speed 4K Prism Color Line Scan Camera



JAI has introduced a new 3-CMOS prism color line scan camera in its Sweep+ Series camera family. The new SW-4000T-MCL features three custom CMOS line sensors with 4K resolution mounted on a high-grade optical prism assembly

that precisely splits the incoming light into red, green, and blue wavebands. The new camera provides 24-bit non-interpolated RGB output at up to 67.7 kHz, more than four times faster than any previous 4K prism color line scan camera.

JAI Inc.
www.jai.com