

## ProductNews

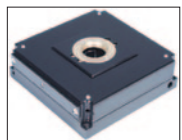
### Volpi Introduces LED Light Source: intraLED 3



The success of an image processing application depends on the quality of the lighting system selected. The most important factors are having both a luminous flux that is as high as possible and very good homogeneity values. To comprehensively meet these requirements Volpi is introducing the intraLED 3 LED light source. This economical and compact lighting system has a service life of 50,000 hours and a light intensity of over 500 lumens.

VOLPI USA  
www.volpiusa.com

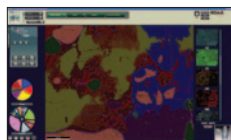
### Lens Positioning in 3D with Sub-Nanometer Precision



Mad City Labs, Inc. announces the introduction of the Nano-F3D lens nanopositioning system. The Nano-F3D is designed to position an objective lens in 3 dimensions with sub-nanometer accuracy and repeatability. With a travel range of 100  $\mu\text{m}$  in each axis, the Nano-F3D is suitable for 4Pi microscopy as well as other imaging and inspection applications. The Nano-F3D features integrated PicoQ<sup>®</sup> sensors with closed loop control, giving the user picometer precision and ultra-high stability.

Mad City Labs, Inc.  
www.madcitylabs.com

### EDAX Introduces Team™ EDS 2.0 Analysis System



EDAX Inc. introduces the TEAM™ Energy Dispersive Spectroscopy (EDS) 2.0 Analysis System. The TEAM™ EDS 2.0 Analysis System includes enhancements that streamline analysis and reporting workflow, boosting user productivity, reducing analysis time, and minimizing potential for errors. A new dynamic review feature allows users to easily compare and review multiple maps simultaneously. Analytical processing capabilities also have been improved with new Quant maps and a histogram tool to extract spectra from the area of interest.

EDAX, a division of AMETEK, Inc.  
www.edax.com

### Nikon Metrology, Inc. Introduces SMZ-745 Stereoscopic Microscope



The airtight, anti-electrostatic, and anti-mold design of the microscope prevents samples from being damaged by electrostatic discharge, dust, and water. The microscope is optimized with the Greenough optical system, allowing it to reach a zoom ratio up to 7.5 times. The magnification ranges from 3.35 $\times$  to 330 $\times$  when combined with the auxiliary objective lens and eyepiece. It also has a total reflection prism, which results in bright, high-contrast images with a working distance up to 115 millimeters.

Nikon Metrology, Inc.  
www.nikonmetrology.com

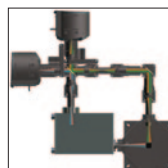
### Carltext: Imaging Solutions for Every Application



Carltext is a leading North American distributor of measurement and control products. Carltext has been appointed the distributor for BestScope International Ltd, a well-known and respected supplier in the field of microscopy and scientific instrumentation. BestScope microscopes and cameras provides the best price/feature ratio in the industry! Carltext now offers this diverse selection of products.

Carltext, Inc.  
www.carltext.com

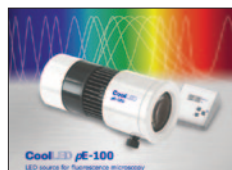
### TILL Photonics' iMIC 42 Offers a Four-Camera Solution Using Only Two Cameras



The iMIC 42 has a dual-camera module that switches between TILL's Andromeda spinning disk and the epi/TIRF optical path of the iMIC digital microscope in 300 ms with the help of a motorized slider. The iMIC 42 also replaces the widefield bypass of other spinning disk units with fast motorized filter wheels in front of the cameras that allow further selection of the emission light.

TILL Photonics  
www.till-photonics.com/news

### Wide-Area Illumination by LED



CoolLED has expanded its range of LED products by introducing a new unit that has been designed to create wide areas of intense flat and homogeneous light. Performance and intensity are achieved using the company's cooled-array LED technology. Typical applications range from UV curing for manufacturing processes to *in-vivo* illumination for the life sciences. With an incredibly long lifetime, LEDs save money and provide illumination that does not fade like a conventional lamp during its lifetime.

CoolLED Ltd.  
www.CoolLED.com

### JEOL JEM-2800 High-Throughput TEM



The new JEOL JEM-2800 next-generation TEM achieves fast nano-area analysis through automation and high-speed specimen exchange. This easy-to-use, multi-purpose TEM performs high resolution TEM and STEM imaging, EDS, EELS, critical dimension, tomography, and *in situ* observation without use of a fluorescent screen. A large solid angle EDS with SDD achieves superior analytical capability. Automatic adjustment of focus, astigmatism, contrast, and brightness and an automated on-screen operating guide make the JEM-2800 a high-throughput, user-friendly TEM.

JEOL USA  
www.jeolusa.com

### Colorimetry and Intensity Mapping of Large Displays with Microscopic Spatial Resolution—A Novel Solution from CRAIC Technologies



CRAIC Technologies, introduces the 20/20 XL™ UV-visible-NIR microspectrophotometer. The 20/20 XL™ microspectrophotometer is designed to non-destructively analyze microscopic features of very large displays by being capable of incorporating large-scale sample handling. With a spectral range from the deep ultraviolet to the near infrared, analysis of samples can be done by absorbance, reflectance, luminescence, and fluorescence with unparalleled speed and accuracy.

CRAIC Technologies, Inc.  
www.microspectra.com

### Prior Scientific Introduces the Z Axis Motorized Stage



The new Z Axis Motorized Stage offers a wide range of positioning solutions for a variety of applications. Many configurable options are available from a motorized linear axis to a full three-axis stage system. This flexibility is ideal for the requirements of customized solutions, particularly for OEM applications. The Z Axis Motorized Stage complements the accuracy and repeatability expected from Prior positioning systems and is capable of supporting any of Prior Scientific's upright range of stages.

Prior Scientific, Inc.  
www.prior.com

### XEI Scientific Announces SoftClean for Specimen Cleaning



XEI announces their SoftClean™ specimen-cleaning chamber to be used with the Evactron De-Contaminator for electron microscopy. The SoftClean/Evactron De-Contaminator combination is not a "plasma cleaner" in the usual sense. Samples are cleaned by a downstream RF plasma process that breaks down hydrocarbons into CO<sub>2</sub>, CO, and H<sub>2</sub>O. Unlike plasma cleaners that sputter with energetic ion species and can damage specimens, the delicate downstream process chemically ashes hydrocarbons and pumps them free of the chamber.

XEI Scientific, Inc.  
www.evactron.com

### Olympus Introduces BX63® Motorized Research Microscope with Fully Customizable Workspace, Automated X,Y,Z



Olympus introduced the BX63 motorized upright advanced research microscope with fully automated control. The new microscope system enables users to design their own personalized workspace and workflow for comfort, accuracy, and efficiency. It features a sleek touch-panel control that works like a tablet computer, offering fingertip control of both stage position and focus, along with other automated features and accessories. The BX63 system is designed for use with Olympus UIS2 optics.

Olympus America Inc.  
www.olympusamerica.com/BXresearch

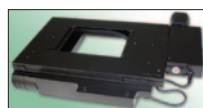
### Thermo Fisher Scientific Unveils Breakthrough Research Method for the Detection and Absolute Quantification of Metabolites using GC-MS/MS-MRM Technology



Thermo Fisher Scientific Inc. announced an innovative new method for the detection and absolute quantification of metabolites based on the Thermo Scientific TSQ Quantum XLS in multiple reaction mode (MRM). Using this advanced triple-stage quadrupole GC-MS/MS-MRM technology, scientists are now able to conduct both discovery phase analysis and selective identification and quantification analysis with a single instrument.

Thermo Fisher Scientific Inc.  
www.thermoscientific.com/biometa

### Introducing the New H117P2NN Flat Top Motorized Microscope Stage from Prior Scientific



Prior introduced the H117P2NN flat top stage for the Nikon Ti series of inverted microscopes. Although the H117P2NN is ideal for all high-precision biomedical and materials science scanning operations, specific attention was given to designing the H117P2NN to assist the researcher who is doing prolonged live cell studies. The newest version of Prior's H117P2NN stage maximizes access to the nosepiece for correction collar adjustment.

Prior Scientific, Inc.  
www.prior.com

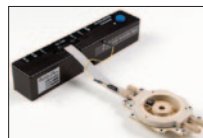
### Prior Scientific Introduces the H160ZFP Foot Pedal Remote Focus Control Systems



Prior Scientific's H160ZFP Foot Pedal Remote Focus Control Systems provides a cost-effective remote focusing solution for a wide variety of applications. The H160ZFP Foot Pedal Systems include a control box with on/off switch, speed control, drive motor, foot pedals, and focus sleeve, which are compatible with new or existing microscopes employing coaxial coarse and fine focus. The H160ZFP was designed with improved ergonomics and allow for hands-free operation.

Prior Scientific, Inc.  
www.prior.com

### Asylum Research Introduces Electrochemistry Cell for MFP-3D™ Atomic Force Microscopes



Asylum Research announced the new Electrochemistry Cell (EC Cell) for its MFP-3D™ AFMs. The EC Cell is a versatile platform for electrochemical experiments combined with AFM imaging. The EC Cell accommodates samples (working electrodes) of various sizes including metal cylinders, flat conducting samples, and even conducting thin films on insulating substrates, and it enables studies of deposition, oxidation, corrosion, and mass transfer of metals and other materials.

Asylum Research  
www.AsylumResearch.com

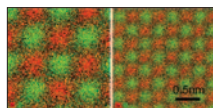
### Xradia Unveils 3D X-ray Microscope with Industry's Largest Working Distance at Highest Resolution



Xradia announced the VersaXRM-500, a new 3D X-ray imaging solution advancing industry and science with a versatile combination of resolution and contrast, and sample flexibility at large working distances. Featuring true submicron spatial resolution at millimeters to inches from the source, the VersaXRM-500 supports high resolution at large working distances suitable for *in situ* study using environmental chambers or load cells, as well as non-destructive 4D study (over time) under varying environmental conditions.

Xradia  
www.xradia.com

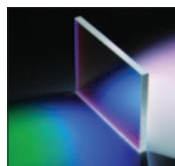
### FEI Extends ChemiSTEM Technology to Enable Atomic-level Spectroscopy



FEI Company announced that it is extending its ChemiSTEM™ Technology to enable, for the first time, atomic-level energy dispersive X-ray (EDX) spectroscopy across the periodic table. The combination of increased current in an atomic-sized probe by Cs-correction and the increase in X-ray detection sensitivity and beam current of the ChemiSTEM Technology allows results to be obtained within minutes.

FEI Company  
www.fei.com

### New Semrock UV VersaChrome® Tunable Bandpass Filter



Semrock has expanded the lineup of its VersaChrome® tunable bandpass filter family to seven filters. The new TBP01-380/16-25×36 VersaChrome filter offers wavelength tunability over the near UV wavelengths by adjusting the angle of incidence with essentially no change in spectral performance. This new filter, along with the just-added TBP01-800/12-25×36, expands VersaChrome coverage outside the visible spectrum to include near-IR and near-UV wavelengths. The current complete set covers wavelengths from 340–800 nm.

Semrock, Inc.  
www.semrock

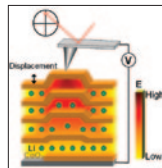
### 6-Axis Parallel Positioner: Versatile Miniature Hexapod for Precision Motion Control



PI (Physik Instrumente) L.P., a leading manufacturer of precision parallel kinematics motion control systems, has released a new miniature hexapod. Two versions for standard conditions and for vacuum applications are available. The new M-811 miniature Hexapod measures only 130 mm in diameter and 115 mm in height. Despite its small size, it can handle loads to 5 kg (11 lbs) and position them in all six degrees of freedom with submicrometer precision.

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

### Asylum Research Introduces Electrochemical Strain Microscopy for Energy Storage Research



The new Electrochemical Strain Microscopy (ESM) imaging technique for Asylum's Cypher™ and MFP-3D™ AFMs is an innovative scanning probe microscopy technique for probing electrochemical reactivity and ionic flows in solids on the sub-ten-nanometer level. ESM is the first technique that measures ionic currents directly, mapping electrochemical phenomena on the nanoscale. The capability is invaluable for a broad range of applications for energy generation and storage ranging from batteries to fuel cells.

Asylum Research  
www.asylumresearch.com

### Hoefer Inc. MacroVue™ UV-25 Variable Intensity Transilluminator



The NEW MacroVue™ UV-25 Variable Intensity Transilluminator can now be adjusted from 0 to 9,000  $\mu\text{W}/\text{cm}^2$  covering a larger range of preparative and analytical applications. The six 8 watt, 302 nm lamps ensure uniform illumination of the 21 × 26 cm viewing area. A hinged clear UV safety cover minimizes personnel exposure to UV rays from the lamps. Optional shortwave 8 watt, 254 nm lamps are available to change illumination from 302 nm to 254 nm.

Hoefer, Inc.  
www.hoeferinc.com

### New SEM Large-Specimen Sputter Coater from Electron Microscopy Sciences



EMS launched the EMS300 series of sputter coaters, ideally suited for sputtering a single large-diameter specimen up to 200 mm. The EMS300 is available in three formats: the EMS300R T is a low-cost rotary-pumped coater for noble metals, the EMS300T T is a turbomolecular-pumped platform ideal for both oxidising and non-oxidising metals, and the EMS300T D is a dual-head system that will sequentially deposit two different metals without the need to break vacuum.

Electron Microscopy Sciences  
www.emsdiasum.com

### High-Resolution Mapping of Color and Intensity of Micro-Displays with CRAIC Technologies 308 FPD™ Microscope Spectrophotometers

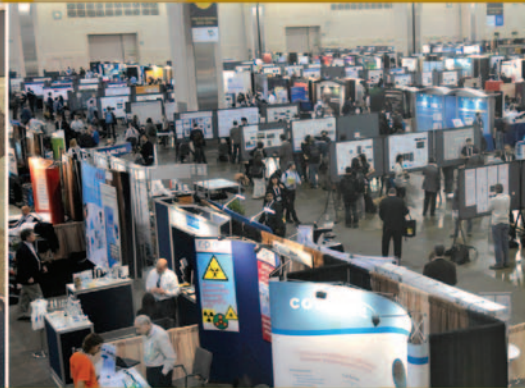


Micro-displays feature ever-smaller components. Component geometries have shrunk so much that standard metrology tools have difficulty accurately measuring color and intensity variations with the degree of spatial resolution required. Enter the 308 FPD™ microscope spectrophotometer from CRAIC Technologies. The 308 FPD™ is designed to measure and compare the spectral output, intensity, and color consistency of each microscopic pixel of even the smallest micro-displays.

CRAIC Technologies, Inc.  
www.microspectra.com

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- **Working Group: Imaging Cellular Structure across Scales**  
*John Briggs*, European Molecular Biology Laboratory, Heidelberg, Germany  
*Melike Lakadamyali*, Institute of Photonic Sciences (IFCO), Spain
- **New Imaging Workshop:** More information coming soon...
- **Technology Trends and More:** Attend microscopy tutorials, showcases highlighting imaging advances by experts.



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