

The **LC-SEM**, manufactured by **VisiTec**, has the largest chamber in the world at eight cubic meters and can examine specimens measuring up to 1-m in diameter by 1-m tall and weighing as much as 300-kg. This microscope provides high resolution images at magnifications from 10x to 200,000x, while using a column that moves on a four-axis positioning system around the sample. Now large components can be examined without cutting a small section for the conventional SEM. The LC-SEM is equipped with backscattered electron imaging, energy dispersive x-ray spectrometry (EDS), electron backscatter diffraction (EBSD), and Fourier-transform infrared spectrometry (FT-IR). The instrument's variable-pressure mode adds yet another degree of freedom that enables engineers and scientists to perform critical surface characterization studies of both conductive and non-conductive samples. The **MIRA LC-SEM** is available in North America exclusively from Qualitest. For further information, please visit www.WorldofTest.com/mira.htm, or call toll-free 1-877-884-TEST (8378).

Bruker AXS today said that its **ESPRIT Software Suite** for their **QUANTAX** series X-Ray Microanalysis systems now includes features that allow remote instrument operation, as well as multiple user access. Utilizing client/server architecture, Bruker AXS' ESPRIT LAN allows users to remotely control data acquisition, system settings, and data analysis. Ideal for classrooms, clean rooms, resource sharing, or isolating hazardous or sensitive processes, its remote EDS operation is fast and secure. When used in conjunction with the company's ESPRIT User application, the innovative system provides multiple user access complete with password protected private data areas and user profiles. Evaluation methods and libraries can be made either public or private, and an unlimited number of users can access the evaluation software over the company LAN, eliminating the need for separate user licenses. By allowing users to analyze data at remote workstations or at their desks, Bruker AXS has freed up the microscope and EDS system for other users. Contact: Bruker AXS Microanalysis, Don Becker, Tel: 609.771.4473, Email: don.becker@bruker-axs.com

ALIS Corporation today announced that it is unveiling the **'LookingGlass LG-2' helium ion microscope** at the Microscopy & Microanalysis 2006 conference. This new breed of microscope is expected to provide never-before-seen, ultra-high resolution and material contrast, exceeding that of even the best, high-resolution scanning electron microscopes (SEMs). The ALIS scanning ion microscope uses a beam of helium ions as the imaging particles. Since ions can be focused into a smaller probe size and do not scatter in the sample nearly as much as electrons, the ALIS system can generate higher resolution images with more material contrast. See the ALIS helium ion microscope at booth #832. Additional information regarding the Microscopy & Microanalysis Conference is available at: <http://mm2006.microscopy.org/>.

Carl Zeiss SMT and the **California Institute for Telecommunications and Information Technology** (Calit2) conducted an inauguration of the new **"Carl Zeiss Center of Excellence"** for applications development and demonstration in advanced nanoresearch, nanocharacterization and nanostructuring. Three systems have been installed: a ZEISS 1540 EsB CrossBeam® workstation, a combination of ZEISS' proprietary GEMINI® ultra-high resolution field emission electron beam and focused ion beam (FIB) technology, ZEISS ULTRA 55 CDS ultra-high resolution field-emission scanning electron microscope (FE-SEM) with in-column detector for back scattered electrons, and a ZEISS EVO® multi-purpose scanning electron microscope with variable chamber pressure capability, offering the ability to image cells in a representative wet environment. For more information contact Carl Zeiss SMT Inc. Beth Bressan, Phone + 914-919-1010, bressan@smt.zeiss.com or info-usa@smt.zeiss.com

e2v scientific instruments launches **SiriusSD**, a product range which will set a new standard in high performance X-ray detection. SiriusSD is an electrically cooled solid-state silicon drift detector with a new electronic design. It is directly compatible with existing systems, making it easy to integrate with and upgrade energy dispersive X-ray materials analysis equipment. The SiriusSD range includes designs for integration with scanning electron microscopes (SEM) and X-ray fluorescence (XRF) systems. The new, peltier-cooled, silicon drift detectors complement e2v's existing detector product portfolio under the Sirius brand name.

The new electronic design results in stability of peak position and resolution over a broad range of input count rates, ensuring accurate analytical results. For more information on e2v's world-class detectors for the X-ray analytical market, please visit: www.e2vsi.com



Nikon Instruments Inc., a leader in the development of advanced optical microscopy, today unveiled the **Nikon Digital Sight Series of imaging control units** and a new digital camera detector head. These new products are designed to allow researchers to keep pace with the explosive growth of digital imaging technology by providing a compatible product platform that delivers a total imaging solution to entry level as well as advanced research documentation projects. For more information visit the Nikon website at www.nikonusa.com

The **TM-6740 camera series** from **JAI PULNiX** has a new C-mount lens flange that lets users adjust back focus to improve image sharpness when using lower-cost zoom lenses or custom optics. Built on the company's easily reconfigurable dual-tap AccuPIXEL platform, these high performance cameras offer up to 200 frames per second at full resolution and generate up to 3205 frames per second in partial scan and binning modes. Monochrome and Bayer CFA color formats are available. The compact camera is available with analog and Camera Link dual-tap output or with analog and gigabit Ethernet dual-tap output. For product information, contact Ken Zinsli, JAI PULNiX, Inc. (N. and S. America), imaging@jaipulnix.com, 1 408 383 0300

Elionix and **SEMTEch Solutions** have entered into a **sales and service representative agreement to offer North American customers Elionix's well established line of nanotechnology instruments**. As part of the agreement, SEMTEch Solutions will sell Elionix highly regarded, world class, sub 10 nanometer performance Electron Beam Lithography Instruments, Elionix unique Surface Roughness Measurement and 3-D Imaging Systems, and a new line of Nanoindenters for surface hardness measurement applications. For more information on Elionix products in North America please contact: Rich Price at 978-663-9822 or by e-mail at rprice@semtechsolutions.com.

Syncroscopy is pleased to announce it has signed a **major licensing deal** with **Leica Microsystems** to allow the company to integrate Auto-Montage Pro, Syncroscopy's software for producing in-focus images of 3D specimens into the Leica Application Suite (LAS) software. For more information contact Jayne Arthur, Syncroscopy, jayne.arthur@syncroscopy.com Web site: www.syncroscopy.com or Geoff Jenkinson, Leica Microsystems Imaging Solutions Ltd, geoff.jenkinson@leica-microsystems.com Web: www.microscopy-imaging.com

Pacific Nanotechnology, Inc. announces their new generation **AFM system. The Nano-R2™** has many advanced features including dual LCD monitors, advanced image acquisition software and a new 16/32 bit controller architecture. The Nano-R2™ is compatible with all of the optional features available for the popular and well-established Nano-R,™ which offered a stage heater, environmental cell, and NanoRule+ software. The Nano-R2™ is a multipurpose scanning probe microscope for capturing images and making measurements of structures on the nanometer scale. It has been optimized for both novice and expert users through having two versions of image acquisition software, X'pert™ and EZMode™. Purchase of the Nano-R2™ provides the user with a complete package for AFM imaging. Users may choose between the conventional Light Lever AFM-scanner and the advanced Crystal Force Microscope scanner. The LL-AFM is best suited to the visualization of nanostructures and making mode measurements while the CFM is ideal for routine topographic and metrology measurements. Visit <http://www.pacificnanotech.com/nano-r2.html> and learn more about this latest development from PNI. Visit www.pacificnano.com to learn more about PNI's philosophy, products and services.

Olympus Micro-Imaging is introducing a new line of integrated deep ultra-violet and infrared wavelength wafer inspection systems. Operating at wavelengths up to 1200 nm, **Olympus's new IR inspection technology** is ideal for high resolution imaging through silicon, GaAs, and other materials that can transmit at these wavelengths. Olympus Micro-Imaging is also introducing its new **Deep Ultra Violet (DUV)** inspection module. **Olympus's new line of DUV/IR wafer inspection systems** enables high resolution sub-surface inspection without sample destruction so that accurate, sub-surface measurements can be made with the same ease as surface measurements using visible light systems. **Olympus Micro-Imaging** is announcing a series of new measurement and inspection microscopes and imaging systems featuring the broadest spectrum of illumination, from conventional white light and near infra-red to deep ultra violet and infra-red. The **SZ and STM series of microscopes** are designed for a wide range of applications. The new STM series of measuring microscopes includes models for fast inspection of large



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samples and the high-precision STM6 which offers the most compact body in this class. These scopes feature motorized focusing, highly advanced UIS optics, and a high-rigidity body with integrated counters. For more information on Olympus Micro-Imaging's SZ and STM series of microscopes, visit www.olympusmicroimaging.com.

Andor Technology has led the way in developing low light imaging solutions over the last decade and the company's Microscopy Systems Division has recently enhanced its **Revolution range of live cell imaging systems** with a number of new offerings, each offering flexible modular architecture coupled with price performance – widefield, confocal and/or TIRF systems with activation and stimulation control. The Andor Revolution range provides a framework which combines Andor's award winning iXon EMCCD camera with the renowned Yokogawa CSU 10 and 22 units "inside". In addition it offers all parts of the solution including lasers, microscopes and accessories, all seamlessly integrated and driven by Andor IQ imaging software. For further information, visit www.andor.com

XEI Scientific Inc. is pleased to announce that **all Evactron Anti-Contaminators manufactured after 2003 can now receive factory service free of charge.** To reduce the amount of time your SEM/FIB is without benefits of the Evactron cleaning XEI will restore Evactron systems to optimum performance and install upgrades with next day return shipment. This free service also includes mechanical damage incurred if the Evactron unit has been dropped. The Customer is only asked to pay for round-trip shipping cost. Call Debbie at 650-369-0133 for a RMA, Return Materials Authorization, number to initiate free service. Notice to Zyxex® customers: Zyxex is no longer authorized to provide service to the Evactron Anti-Contaminators sold with Zyxex nano-probing unit. All Evactron system users may receive XEI Scientific factory service and applications support at no charge. The newly introduced Zyxex cleaning system is not licensed to use the XEI patents. XEI has filed suit for a preliminary injunction to prevent Zyxex from selling copies of XEI technology. XEI Scientific, 650-369-0133, www.Evactron.com

JEOL USA introduces a **new ultra-high resolution Field Emission Scanning Electron Microscope (SEM)** with advanced optics that clearly reveal intricate surface details during observation of nano structures of medical, biological, materials science, and semiconductor samples. The performance and stability of the new **JSM-7500F** allows specimens to be easily observed at magnifications up to 1,000,000 X with a resolution of 1.4 nm at an accelerating voltage of 1kV. The first SEM of its kind to demonstrate in-lens performance without associated cost or sample size restrictions, the JSM-7500F achieves 0.6nm resolution at 30kV and accommodates samples up to 200mm in diameter. The JSM-7500F features a patent-pending low angle backscatter electron detector (LABe) that dramatically reduces charging, resulting in enhanced surface detail and compositional contrast. The FE SEM's Gentle Beam (GB) mode allows spectacular image resolution at accelerating voltages down to 100V, reduces sample contamination, and suppresses charge buildup. This enables the user to extract pure surface information from the specimen. The new r-filter lets the user freely



select the energy range of detected secondary and backscattered electrons, providing four modes of image contrast: composition, topography, or a mix of the two. The JSM-7500F enables simultaneous, on-screen comparison of up to four live images from a variety of detectors, including in-lens SE, in-lens BE, below lens BE (topo, compo), and LABe. This cold-cathode field emission SEM is highly resistant to floor vibration and acoustical interferences found in cleanroom environments and less-than-ideal settings. It features a large and versatile chamber with ports for several attachments such as EDS, EBSD, STEM, CL, IR-camera, EBIC feedthrus as well as the in-lens SE and BE, below lens SE and BE, and the new LABe detectors. A dry vacuum system features a turbomolecular pump as standard. Contact: Pamela Mansfield, 978-536-2309, www.jeolusa.com

Hyphenated Systems released a new Advanced Confocal Imaging (ACI) module for its 3Dmap(tm) (Microfluidics Analysis Platform) systems that provide 3D structural metrology for developers and manufacturers of microfluidic devices. The new module provides a larger field of view and improved depth

resolution. The high-resolution measurements of size and shape provided by 3Dmap are essential in all phases of microfluidics development, from understanding fundamental physical phenomena through developing novel devices and controlling fabrication processes. Advanced confocal imaging uses a spinning disk with multiple confocal apertures to provide parallel data collection pathways for image acquisition at speeds that cannot be equaled by scanning confocal techniques-complete 3D models are available in seconds. The new optics module responds to customer demands for larger fields of view and enhanced Z-axis resolution. 3Dmap is unique in its ability to provide fast, accurate sub-micron structural characterization of all aspects of microfluidic devices; including steep slopes, rough surfaces, and subsurface features in transparent media. Contact 650-651-3000 or go to www.hyphenated-systems.com for more information.

FEI Company has been **rated by semiconductor companies around the world as one of the ten best providers of process diagnostics equipment, for the second consecutive year.** Among companies engaged in providing high-resolution scanning and transmission electron microscopy systems (SEMs/TEMs), FEI ranked #1 in 2006, according to the annual customer satisfaction survey by the industry research firm VLSI Research Inc. More information can be found on the FEI website at: www.fei.com.

Thermo Electron Corporation and **Fisher Scientific International Inc.** announced today that the boards of directors of both companies have unanimously approved a definitive agreement to **combine the two companies** in a tax-free, stock-for-stock exchange. The transforming merger will create the leading provider of laboratory products and services in the high-growth life, laboratory and health sciences industry.

JENOPTIK-Gruppe. Announces that Apple Macintosh™ Computers with PowerPC or Intel Processors. can be controlled by the new ProgRes® Mac Capture Pro Software package. ProgRes® Mac Capture Pro Software provides a simple and consistent user interface for all camera models. In the current 2.0 version, it includes the following functionalities: Very fast live imaging with zoom and image rotation capability, automatic exposure setting with overexposure monitoring and histogram view, image settings with control options in live image mode for RGB colour adaptations, shading correction, gamma, contrast, brightness and saturation, a time lapse function, and monochrome mode for all types of ProgRes® colour cameras. More information at: JENOPTIK Laser, Optik, Systeme GmbH Phone +49 3641 65-2138, Internet: www.progres-camera.com

Ambios Technology, Inc. announced today that it has acquired the assets of **Quesant Instrument Corporation.** Ambios Technology, a manufacturer of high resolution stylus and optical surface profiling systems for the academic and industrial research markets, expands its product offering with the addition of Quesants' scanning probe microscopes. For more information please contact: Tim Van Slambrouck, 831.429.4200, www.ambiosstech.com.

Ted Pella, Inc., introduces a new compact desktop automatic carbon coater for scanning electron microscopy (SEM) applications. The special equipment (SE) version of the compact **desktop 108C auto carbon coater** has a large 6" sample chamber that can accommodate either an optional rotary-tilting or a planetary-rotary-tilting stage. This will give improved control over the uniformity of the carbon coating and allows either large or multiple sample coatings. The flexible height adjustment on the chamber adds enhanced control over the carbon layer thickness. Fully automatic or fully manual control in continuous and pulse mode are incorporated in the new system. Standard features on the 108C auto/SE carbon coater are a choice of auto or manual, a feedback control loop for stabilized carbon evaporation, fast pumping speed and short cycle times. The use of high purity carbon rods gives superior carbon coating quality and avoids any debris on the surface. The stepped carbon rods also allow for multiple evaporations and a controlled amount of carbon to be deposited. The thickness of the carbon coating can be monitored to an accuracy of 0.1nm with the high resolution MTM-10 thickness monitor. Precise thickness control gives better reproducibility and improves quantitative EDX results. The new Cressington 108C auto/SE is positioned between the standard 108C auto carbon coater and 208C high vacuum turbo carbon coater. Contact Jack Vermeulen 1-530-243-2200 ext 205, Jack_vermeulen@tedpella.com or www.tedpella.com

