

NEW AND INTERESTING AT PITTCON 2005

10 fold; this opens up analysis avenues for coating measurements and thin film analysis. When used inside the SEM, XRF applications stand to perform more efficiently than that of traditional tabletop methods due to tighter source-sample-detector geometries as well as higher vacuum. When used in combination with EDX/EDS tools, the analyst will benefit from quality low energy/light element analysis via the electron beam as well as the greatly enhanced capa-

bility of XRF at the heavier end of the spectrum. The XRF additions may come packaged with IXRF's latest EDX/EDS tools or may be coupled with any existing EDX/EDS system. Virtually any scope may accommodate the addition depending on port availability. This product is exclusively offered by IXRF SYSTEMS, INC.; it is the first and only of its kind.

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The Cooke Corporation introduces a **high performance 12-bit CCD camera**, specifically designed for OEM applications, integrates the latest advancements in CCD and electronics technologies. At the heart of the camera is an FPGA processor allowing for sophisticated control and accurate timing of the CCD and associated electronics. In addition, a proprietary offset control algorithm has been developed which provides very high offset stability, regardless of ambient temperature or signal changes ensuring accurate and repeatable quantitative data over long periods of time. The pco.1300oem's most unique feature is its flexibility for customization to fit any OEM user application. ROI, binning, cooling, as well as other features of the camera can be selected and optimized to accommodate the application. Camera features excellent resolution (1344x1024 pixel), 12-bit dynamic range, exposure time 5 μ s to 1 hour, internal frame buffer for continuous image capture (64MB min), excellent low noise of 8e - rms @ 10MHz, selectable regulated cooling to -30°C vs. ambient, standard interface IEEE1394a, optimal offset stability and control (2 1 count). Ideal for HCS (High Content Screening), Cellular Imaging, Microarray Imaging, Hyperspectral Imaging, Fluorescence/Chemiluminescence Detection and Confocal Microscopy. Tel: 248 276 8820, info@cookecorp.com, www.cookecorp.com.

Princeton Gamma-Tech Spirit upgrade package gives new life to older SEMs. Are you ready to upgrade to digital performance, but don't have the budget for a new SEM? With PGT's Spirit Upgrade package you'll get state-of-the-art imaging and EDS without replacing your scope or detector. While analysis and capture electronics have made huge advances over the last 15 -20 years, basic column and chamber design have changed little. You can take advantage of this by replacing only the control and imaging electronics - and give your older instrument a performance boost that rivals many of today's instruments. By adding a Spirit system to your SEM, you'll get: Digital Scan Generation, rapid viewing, recording, and storage - no more film! High Speed Image Acquisition - up to 4096 resolution. Frame Averaging and Frame Integration (Frame Summing) increases resolution while decreasing noise. PGT report generator automatically generates reports in Microsoft Word™. Analysis routines for Particle Size, Area Fraction, etc. Spirit software reads your SEM parameters and stores them with the image - eV, magnification, position, etc. Visit our website at www.pgt.com, email us at sales@pgt.com, or call us at (609) 924-7310.

Photometrics, a division of Roper Scientific, Inc., is pleased to **announce the acquisition of the assets of Optical Insights, LLC**. Photometrics (www.photomet.com) is the world's premier designer and manufacturer of high-performance CCD and EMCCD cameras for the life sciences. Optical Insights (www.optical-insights.com) is a leading innovator in the design, development, and manufacture of complex optical systems for a variety of spectral and polarization imaging applications. The ability to view individual spectral or polarization components of light generated from fluorescent samples in biological research is a natural extension of the quantitative light-detection technologies currently offered in this

market space. Rather than simply detecting the amount of light present in the course of a life sciences experiment, spectral and/or polarization information significantly enhances photometric data, thus improving the usefulness of the detected light. For more information, please contact: Patrick Lordi, 520.889.9933, vp.sales@photomet.com.

Thermo Electron Corporation has significantly enhanced its **OMNIC™ Atlys™ 7.2 imaging software** for infrared and Raman microspectroscopy and imaging with the ability to analyze quantitative information from video and chemical images. This updated software tool is targeted at mid- to high-end researchers, microscopists and chemists in R&D, clinical pathology, forensics, drug discovery, QA/QC and failure analysis laboratories. The OMNIC Atlys 7.2 software now provides a complete imaging solution for infrared and Raman microscopes with the addition of content analysis of both video and chemical images for particle dimensions and advanced image statistics. Images can also be reproduced through the added ability to pull information from the software's history, allowing users to easily recreate an image from raw data and processing steps. Spectral statistics allow users to group spectra and perform advanced statistics, as well as employing Principal Component Analysis to minimize the spectral contribution of undesired features while improving the signal to noise and the spatial resolution of the overall set of data. The OMNIC Atlys 7.2 software automates the collection of spatially resolved spectra from Thermo's infrared and Raman microspectroscopy and imaging instruments including the imaging microscope, Nicolet™ Continuum™ XL, which combines white light microscopy with advanced imaging. Vivid false-color images are created that allow chemical heterogeneity to be readily visualized and compared to visual features. Please call +1 800-532-4752, e-mail analyze@thermo.com or visit www.thermo.com/spectroscopy.

Wyatt Technology announced at Pittcon 2005 that its revolutionary **HPLC software system - ASTRA V** - now interfaces with Waters' Empower chromatography data software system. By incorporating ASTRA V capabilities with Waters' Empower software, Wyatt now offers the ultimate ease-of-use in chromatography data management. The use of light scattering technologies in regulated industries is also now facilitated with the 21 CFR Part-11 compliant ASTRA software. The ASTRA V software complements Wyatt's multi-angle light scattering detectors to make absolute molecular weight determinations a desirable alternative to traditional liquid chromatography methods. For more information on Wyatt Technology's new product innovations and services, please visit www.wyatt.com or e-mail info@wyatt.com.

Pacific Nanotechnology, Inc. announces **WIMS, the web based image management system** for microscopists the world over. There is an ever-increasing need for organizing, storing and distributing microscope images. On a routine basis, microscopes may generate hundreds of digital images in a single day. Image sizes may range from a few kilobytes to several megabytes. The Web Image Management System (WIMS) offer a powerful solution. With this software package, all of the information relating to images is stored in a relational database on a web site. The

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WIMS software package resides on a web site and has an address that may be reached with any computer having a web browser and Internet access. Images and information about them are uploaded to the website with a WIMS transfer utility. Once uploaded, the images and the information are displayed in database format. Any user with access to the WIMS database may access the images with a download transfer utility. Please email Paul West at pwest@pacificnanotech.com or Jezz Leckenby at jezz@ims-europe.net.

Media Cybernetics Inc. announces the release of the **IO-Pro Plug-in Module**. With IO-Pro, Image-Pro Plus software users no longer need to piece together various devices for output control and analog acquisition. IO-Pro can be used to obtain additional contextual data from their imaging experiments. IO-Pro Enables Image-Pro Plus Users to Control: Analog and digital outputs for external equipment control, Analog inputs for measuring the status of experimental variables such as temperature and fluid flow Digital inputs for controlling sample triggers, such as foot pedals. The IO-Pro kit includes a miniLAB™ 1008 USB device from Measurement Computing™ and IO-Pro installation software. Unlike most other input/output controllers available in the imaging market, IO-Pro offers added flexibility in that it can be used with any device supported by the measurement Computing Universal Library. Contact Kathy Hrach, Phone: 301-495-3305 x260, khrach@mediacy.com, www.mediacy.com.

HREM Research Inc. has introduced “**IWFR for DigitalMicrograph**,” image processing software for high resolution electron microscopy (HREM). IWFR stands for Iterative Wave Function Reconstruction. The method iteratively reconstructs the wave function at the specimen exit surface from a through-focal series of HREM images (a set of image intensities measured in different planes) and was developed by the group of Assoc. Prof. Les Allen at the University of Melbourne. Using the reconstructed wave function, optical aberrations, e.g. spherical aberration, can be corrected. Therefore, IWFR is a Cs corrector implemented by means of software. It is noteworthy that IWFR can be used with typically five images. The use of further images enhances the robustness of the algorithm in the presence of noise. The IWFR method also corrects for known spatial and temporal incoherence in the microscope. IWFR is fully integrated into DigitalMicrograph, image acquisition and processing software developed by Gatan Inc. (Pleasanton, CA, USA). For more information, visit <http://www.hremreserch.com> or contact support@hremreserch.com.

Buehler, Ltd. proudly introduces the new **PowerPro™ series of grinder-polishers!** These products provide a powerful preparation system for quick and accurate sample preparation. The PowerPro™ series is the first tabletop machine to prepare specimens using the Zaxis™ Macro Material Removal System, a unique system that enables an operator to remove material from specimens by desired depth. A powerful 2 H.P. base motor and a large 10” or 12” diameter platen allows up to ten specimens to be simultaneously prepared. Programmable with up to ten custom steps, or use one of the 25 pre-programmed Buehler Sum-Met™ preparation methods. The heavy-duty mineral cast base gives the durability of natural granite and is corrosion proof, non-conductive and chemically inert. Other features include a LCD screen with backlighting, soft touch pad controls, dual or variable platen speed up to 400 r.p.m., platen cooling capability, and a 2-year warranty. For more information, contact Buehler, Ltd., 41 Waukegan Road, Lake Bluff, IL 60044.

Oxford Instruments plc announced that it has agreed to **acquire HKL Technology A/S (HKL)**, a leading manufacturer of Electron Back-Scatter Diffraction (EBSD) systems, based in Hobro, Denmark. HKL will become part of the Oxford Instruments Analytical (OIA) business. EBSD is used to produce a microstructural analysis of a material. This informa-

tion can be used to predict the properties such as corrosion behaviour, creep, fatigue life, cracking and failure mechanism. It is used in a wide variety of industries - aerospace, automotive, defence, semiconductors, power plants, and chemical plants. HKL Technology A/S clarifies the position regarding the advanced EBSD system Channel5. Channel5 will be renamed HKL Channel5 and they will continue to assist their current partners in selling and supporting the system. It is the intention to continue working with all existing partners to further strengthen Oxford Instruments' share of the EBSD market and all partners have confirmed their on-going support. Oxford Instruments will be offering the choice of HKL Channel5 and their existing INCACrystal, part of their INCA microanalysis system. In time, it is envisaged that a merged HKL/INCA product will be introduced, but until then it is stressed that HKL EBSD systems will continue to be developed and supported. Enquiries: Oxford Instruments plc, 01865 884667, Nigel Keen, Chairman.

FEI Company released the newest member of its **Nova(TM) family of SEM and DualBeam(TM) systems, the Nova NanoSEM**. It is the world's first low-vacuum, field emission scanning electron microscope (FEG-SEM) solution for ultra-high resolution characterization of charging and/or contaminating samples such as organic materials, substrates, porous materials, plastics and polymers. This newest system joins FEI's growing line of market-leading tools that are enabling nanoscale research, development and manufacturing in a diverse range of markets and applications. The Nova NanoSEM brings new capabilities to researchers and developers working with non-conductive and contaminating nanoscale materials. FEI's Helix detector technology, introduced with the Nova NanoSEM, combines magnetic immersion lens and low-vacuum SEM technologies for the first time in the history of field emission scanning electron microscopy. The combined effect delivers ultra-high resolution, low-vacuum characterization capabilities in an environment that suppresses charge build-up on non-conductive materials. The unique technology incorporated in the Nova NanoSEM also suppresses electron-beam induced contamination resulting from previous sample processing steps.

FEI announced its **new scanning/transmission electron microscope (S/TEM), the Titan(TM) 80-300**, dedicated to corrected microscopy. The new (S)TEM system is the world's most advanced commercially-available microscope, yielding atomic-scale imaging with resolution below 0.7 Angstrom. The Titan announcement comes just one year after FEI became the first developer and manufacturer of commercial electron microscopes to achieve sub-Angstrom resolution on FEI's market-leading Tecnai(TM) microscope using a monochromator and an aberration corrector. Until now, aberration correction technologies in electron microscopes have been treated as accessory components for (S)TEM systems that were not truly optimized for this type of advanced technology. Thus, the integration of these types of correctors for breaking the next resolution barrier and for high usability has been met with limited success. The all-new Titan 80-300 is designed as a dedicated and highly-upgradeable aberration-corrected system that will enable corrector and monochromator technology to enter into mainstream nanotechnology research and industrial markets. The Titan (S)TEM system features unparalleled overall stability to break the 1-Angstrom barrier. Results from FEI's Nanoport in The Netherlands deliver Titan TEM information limits below 0.7 Angstrom and STEM resolution just below 1.0 Angstrom, without the addition of aberration corrector upgrades -- an achievement that has never before been demonstrated on a commercial tool. Corrector upgrades can be added for higher resolution, extending the point resolution down to the information limit for accurate interpretation of atomic structures. Contact Dan Zenka, APR, Corporate Communications of FEI Company, +1-503-726-2695, or dzenka@feico.com.

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NanoWorld Holding AG announced that it has **acquired 100 % of Bulgarian based Innovative Solutions Bulgaria Ltd.** (ISB) with its AFM Probes division BudgetSensors™ on April 1, 2005. "NanoWorld Holding AG with its brands NanoWorld™ and NANOSENSORS™ was already prominently represented in the high quality segment of the market for probes for Atomic Force Microscopes (AFM). Now with ISB and its budget-friendly brand BudgetSensors,™ we get access to the lower price segment of the AFM probes market which is by far the fastest growing segment in this field", said Manfred Detterbeck, CEO of NanoWorld Holding AG. "The acquisition is also expected to result in greater efficiency and in a significantly increased overall market share." added Detterbeck. www.nanoworldholding.com.

Leica Microsystems launches an exciting **new promotional campaign** entitled "Designed with You in Mind". The new campaign communicates the unique features of Leica's full line of specimen preparation products that uniquely benefit individual users in their daily work. Process Smartly! simplifies tissue processing with the Leica ASP300's intuitively smart, automated features and easy-to-use software as the focus, with more concepts to unfold throughout the year. Leica Microsystems is a leading global designer and producer of innovative high-tech precision optics systems for the analysis of microstructures. It is one of the market leaders in each of its five business areas Microscopy, Imaging Systems, Specimen Preparation, Medical Equipment and Semiconductor Equipment. The company manufactures a broad range of products for numerous applications, which require either microscopic visual presentation, measurement, analysis or electron-beam lithography. The company offers system solutions in the areas of Life Science including biotechnology and medicine, as well as the science of raw materials, industrial quality assurance and the semiconductor industry. For more information contact: Molly Lundberg, Phone 847/405-0123 email: news@leica-microsystems.com, Website: www.leica-microsystems.com.

Adobe Systems Incorporated announced **Adobe(r) Photoshop(r) CS2**, a major upgrade to the professional industry standard for digital image editing and creation. Available as a stand-alone software application or as a key component of Adobe Creative Suite(r) 2. Photoshop CS2 software brings a new level of power, precision and control to the digital photography experience and to the overall creative process. Photoshop CS2 integrates a new set of intuitive tools, including an enhanced Spot Healing Brush, for handling common photographic problems such as blemishes, red-eye, noise, blurring and lens distortion. Smart Objects allow users to scale and transform images and vector illustrations without losing image quality - as well as create linked duplicates of embedded graphics - so that a single edit updates across multiple iterations. Photoshop CS2 users will test the limits of creativity with new tools like Vanishing Point and Image Warping. Vanishing Point cuts tedious graphic and photo retouching tasks by allowing users to clone, paint and transform image objects while retaining visual perspective. Reinventing workflows such as product packaging development, Image Warping makes it easy to fold, stretch, pull, twist and wrap an image into shape by selecting an on-demand preset or dragging custom control points. Adobe Photoshop CS2 for Mac OS X version 10.2.8 through 10.3.8, Microsoft(r) Windows(r) 2000 with Service Pack 4 or Windows XP with Service Pack 1 or 2, will begin shipping in May to customers in the United States and Canada, and will be available through Adobe Authorized Resellers and the Adobe Store at www.adobe.com/store International versions are expected to begin shipping in late May and early June. Adobe Photoshop CS2 will be available for an estimated street price of US\$599 and licensed users of any previous version of Photoshop can upgrade for US\$149. For more detailed information about new features, upgrade policies and pricing, please visit: www.adobe.com/photoshop.

Adobe Photoshop CS2 is also available as part of Adobe Creative Suite 2.

The **TM-6710CL**, a Camera Link version of **JAI PULNiX's** popular TM-6710 machine vision camera, features non-interlace, quad-speed, 120 fps video at full VGA resolution, and utilizes a 1/2" Kodak KAI-0330D CCD for high image quality (648 (h) x 484 (v)). The camera has simultaneous analog and digital video output. The full-frame electronic shutter with asynchronous reset permits shutter speeds ranging from 1/60 to 1/32,000 sec. The Camera Link digital interface allows easy connection to other equipment, as well as software control for gain, A/D/ ref., shutter, and mode selection. The large 9µm square pixels provide the light sensitivity needed for high-speed image capture and provide a precise geometry for superior definition in any orientation.

The **CV-M7+** from JAI A-S, a digital 2/3" color megapixel progressive scan CCD machine vision camera, is a versatile workhorse with a solid track record in the industry. This camera has an excellent set of features and capabilities that make it an outstanding choice for a wide range of machine vision applications. Featuring a Sony ICX285AQ imager, the CV-M7+ boasts 1392 (h) x 1040 (v) resolution, 6.45 µm square pixels, and extended IR sensitivity. Based on 10-bit A/D technology via Camera Link, the CV-M7+ utilizes proprietary sample-and-hold and correlated double sampling (CDS) techniques to achieve double-speed readout without trade-offs in dynamic range or image fidelity. An LVDS version is also available, with 8-bit video output. Both versions output the full frame at 24 fps.

JAI's **CV-M71** compact 1/2" digital progressive scan RGB color machine vision camera, an indirect replacement of the popular CV-M70, features all of the attributes that made that model so successful, with the addition of an improved digital interface as well as power and trigger LEDs on the rear panel. Based on the latest Bayer CCD, the CV-M71 features a Sony ICX415AQ imager with 782 (h) x 582 (v) 8.3µm square pixels. The camera is capable of a range of speeds, from 1/60 to 1/300,000 second. Edge pre-select, pulse width, RCT trigger modes, programmable exposure, auto shutter and smear-less readout add to the CV-M71's impressive list of features. Auto iris lens video output, auto shutter and AGC allow a wider light range. Setup is by Windows NT/2000/XP software via RS-232C or Camera Link. The CV-M71 is especially well suited for color inspection, especially in such fields as food and agriculture, and in printing-verification applications. For more information, please contact: Ken Zinsli, (800) 445 5444.

Advanced Analysis Technologies, Inc. (AAT), dedicated to the design, manufacturing, repair and performance upgrades of high resolution X-Ray detectors, is growing and expanding its services. AAT is headquartered in Jacksonville, FL, and now with its recent acquisition by RJ Lee Group, Inc. has parallel facilities in Pittsburgh, PA and Silicon Valley, CA. The Company offers FREE detector evaluations, including instructions that you can follow to do your own evaluation and subsequent testing at our facilities. To insure that your detector remains at its highest performance levels, AAT offers detector service contracts at reasonable prices. AAT repairs or upgrades detectors from any manufacturer, and builds state-of-the-art detectors with the AAT brand that companies and universities alike are increasingly recognizing as the symbol of excellence. Please contact us for more information regarding service contract qualification, details and pricing. Phone: 866-646-3069, Email: info@advancedanalysistech.com, Website: www.advancedanalysistech.com.