

## New And/Or Interesting at PITTCON '98

As is our custom, and for the hopeful interest of readers who were not able to attend PITTCON '98, we have attempted as follows to summarize microscopy products which were presented.

● **Digital Instruments (DI)** featured the enhanced Dimension™ 3100 Scanning Probe Microscope (SPM), which now includes an X-Y stage that provides substantially better bi-directional repeatability and speed, as well as improved trackball response. In addition, the illuminator is now computer-controlled for easier focusing and zooming for optical location of features for high-resolution scanning. Video image capture capability is also included as well as more efficient packaging for easier installation and reduced overall footprint. DI also announced the availability of the industry's first tip evaluation system for SPM/AFM. Available for all NanoScope® Dimension™ and MultiMode™ SPM/AFMs, the package determines whether the tip meets a selected tip sharpness criterion or should be replaced. The package includes the proprietary tip evaluation software, as well as a roughness standard which is scanned as part of the evaluation. Based on the analysis, the software presents a worst-case tip sharpness in numerical and graphical form, including displaying an image of the tip itself. Digital Instrument: (805)967-1400, Fax: (805)967-7717, eMail: info@di.com

● **EDAX Inc.** was proud to introduce the new EAGLE  $\mu$ -Probe, an X-ray microbeam XRF elemental analyzer. The EAGLE combines the latest in X-ray capillary optics with the Sapphire performance of EDAX Si(Li) X-ray detection and analysis systems into a table top analyzer, to carry out the widest variety of applications possible. The Eagle's sophisticated capillary optics concentrates the X-ray beam to spot sizes of 100  $\mu$ m or less, facilitated by two CCD-Video cameras (10x & 100x), EDAX system control software and a large sample chamber. The user may analyze ~ 30  $\mu$ m to 250 mm samples (liquids, powder, solids and thin films) in a variety of ways. Looking at a sample is as easy as point & click or a more detailed automated analysis, elemental linescan or map can be implemented. EDAX also featured REMAC, a remote access package for service, application support and trouble-shooting. REMAC allows EDAX product support to take remote control of the EDAX analyzer from their office locations and run through the software to evaluate performance. REMAC allows the user to maximize uptime to it's fullest. EDAX Inc.: 201)529-4880, Fax: (201)529-3156

● **Edge Scientific Instrument Company**, the innovators of direct-view 3D microscopes attended the conference for the third year. This year Edge showed their newest product, a Multiple Oblique Lighting Accessory. This accessory replaces the existing on-axis light source on a microscope, with four controllable beams of light. The separate beams of light illuminate the specimen at angles creating high resolution left and right images of the same view. The result at the eyepieces is a stunning 3D image. Multiple Oblique Illumination was originally available only with Edge transmitted light research microscopes. With this new accessory, Multiple Oblique Illumination is now possible with routine reflected light microscopes. Applications include specimens that benefit from improved contrast, resolution, depth of field and where spatial information is important. Edge Scientific Instrument Company: (800)597-3343

● As the leading supplier of Backscattered Electron Detectors, **ETP-USA** had on display the new Series 5 Robinson Backscattered Electron Detector for Scanning Electron Microscopes. Now with over 60% greater signal, and 40% improvement in signal-to-noise, the Robinson Detector is unequalled. Also on display was the IR-Chamberview Imaging system with outstanding depth of focus and even illumination. ETP-USA also introduced their new Picture in Picture Infrared Chamberview System which is controlled via Windows 95 on the SEM PC. ETP-USA, (510)449-8534, Fax: (510)449-

8996, eMail: sue@etp-usa.com

● **HNU Systems** introduced a new EDXRF analyzer: The Model XR-1000T, a compact, table-top model ideal for mobile or analytical laboratories with limited bench space. HNU offers a choice of detectors with the new system; Liquid nitrogen-cooled, high resolution, 165 eV Si(Li) detector or the new Peltier-cooled electronic Si(Pin) detector with 220 eV resolution. Features include: easy-to-use Windows®-based XRF software for both qualitative and quantitative analysis, an automated 10 position sample tray and simultaneous analysis from sodium to uranium. HNU Systems, (617)964-6690, Fax: (617)965-5812

● **IXRF Systems, Inc.** demonstrated their new "Digital Pulse Processor" on the LEO 438VP SEM. IXRF Systems provides complete EDS/Imaging systems (including detector) with most all of the features of larger, and much more expensive, systems. IXRF Systems, Inc., (282)286-6485, Fax: (281)286-2660

● **JEOL USA Inc.** had on display its new JSM-5600 PC SEM. This instrument, which is produced in both standard and low vacuum models as the JSM-5600 and JSM-5600LV, was designed from the ground up as a PC SEM. This means that it can be controlled completely and efficiently from only the keyboard and mouse. Keeping in mind the wide variety of preferences for controlling various aspects of an SEM, an optional knobset for multitasking and fine control has also been included. The user chooses his preferred method of control. Another strong point of this instrument is the extensive menu system that was designed with the traditional microscopist in mind. JEOL USA, Inc.: (978)535-5900, Fax: (978)536-2205, eMail: eod@jeol.com

● **KeveX** has introduced Sigma<sup>GOLD</sup>, their NEW ALL DIGITAL Microanalyzer. KeveX has also recently introduced QUANTIFIER, our NEW detector series, providing higher performance due to a new crystal/FET pairing process. The linearity, resolution and throughput have been improved, providing greater light element sensitivity and enhanced performance as resolution is maintained during high throughput spectral acquisitions. Sigma<sup>GOLD</sup> also offers a complete approach in the new suite of software tools available with this microanalyzer. The latest software automation tools in Digital Multipoint Analysis (DMA Pro) and Automated Image Analysis (AIA<sup>2</sup>), have significantly enhanced the Sigma<sup>GOLD</sup> Microanalyzer. These capabilities provide ease of use and increased throughput for a wide range of applications. Enhancements in software, coupled with the improvements in the detector and processing electronics, make the Sigma<sup>GOLD</sup> Microanalyzer a powerful microanalysis tool. KeveX: ((805)295-0019, Fax: (805)295-0419.

● **LEO Electron Microscopy, Inc.** showed the latest in their range of variable pressure SEMs, the LEO 438VP. This new model offers the familiar benefits of the LEO 435VP - turbo-pumped vacuum system, Windows '95™ interface, and large 4" x 5" specimen stage fully motorized in all 5 axis, all fitted as standard items - combined with additional Z height for tall or thick specimens. The maximum sample height including the sample holder is almost 3" at 72 mm. The LEO 438VP is ideal for customers who use SEMs in automotive or forensic applications, or anywhere large, irregular, and unprepared specimens are investigated. LEO Electron Microscopy, Inc: (914)747-7796, Fax: (914)681-7443

● **NORAN Instruments** announces its new PC-based VANTAGE™ Digital Microanalysis Systems. The VANTAGE product line utilizes Windows NT 4.0, taking advantage of the operating system's multitasking, reliability, networking, data security and protection features. VANTAGE is offered with a choice of three models, including a high-speed spectral acquisition system called the VANTAGE DS (Digital Spectral), which is integrated with the PULSTAR™ digital pulse

processor. The VANTAGE DI (Digital Imaging) and VANTAGE DI+ (Advanced Digital Imaging) systems extend the DS model with digital imaging capability and advanced image processing. VANTAGE Viewer Information Stations are available for any model to allow sharing of spectra, images, and linescans on peer-to-peer networks. For customers that prefer the powerful Unix operating environment, NORAN Instruments continues to offer the popular VOYAGER™ Microanalysis System. Both the VANTAGE and VOYAGER systems are compatible with the entire line of NORAN Instruments' EDS and WDS x-ray detectors. NORAN Instruments, Inc.: (608)831-6511, Fax: (608)836-7224

● **NSA/Hitachi** presented the Quartz PCI, a powerful image management system designed specifically for microscopists. It acquires high quality, high resolution images from SEM, TEM, optical microscopes, scanners, digital still cameras and NTSC images. Once images have been acquired they can be archived, processed, analyzed, annotated, transmitted via network, included in word processors and even replayed back to the microscope's CRT camera. PCI operates on either Windows 95 or Windows NT 4.0. PCI's database is fully network-aware and supports virtually all types of removable media, including CD-ROMS. NSA/Hitachi: (800)227-8877, Fax: (650)961-0368

● **Oxford Instruments** announced a new PC platform for its ISIS product line, comprising of a new Hewlett Packard Kayak XU-6/ 266 MHz Pentium II mini-tower. This is offered with an optional flat screen LCD monitor with perfect sharp focus and bright colors. This new flicker free monitor is ideal for cramped labs, and since it doesn't generate a significant field can be placed right next to an FE column. Featured live was a Link ISIS/WDX600 integrated ED/WD system which allows for simultaneous x-ray acquisition and combined analysis in a single window. Also live was the new improved XGT-2000W, x-ray analytical microscope. New features including software control for the x-ray generator tube, a color CCD TV camera and full quantitative analysis using standards or standardless. Phase mapping software using principal component analysis is also now available on this instrument. Oxford Instruments Microanalysis Group, (978)369-9933, Fax: (978)369-8287, eMail: mag-info@oxford.usa.com

● **Princeton Gamma-Tech** presented their platform independent IMIX family of X-ray Microanalysis Systems. IMIX provides today's microscopist a comprehensive suite of analytical tools that make it easier to acquire and analyze data in less time. Among these is PGT's Position-Tagged Spectrometry, where in one simple, near frame-rate collection, you have all the X-ray data you will ever need. Also on display was the IMAGIST® family of Image Analysis and Processing systems. As well as being a platform independent system, the IMAGIST also offers the new Crossed Fiber Analysis Module. Using rule based image processing, one can evaluate an image containing poorly dispersed fibers, straight or curved, and separate each fiber from all of the others. Thus allowing the Advanced Feature Analysis Module to accurately measure the length and diameter of the fibers. Princeton Gamma-Tech: (609)924-7310, Fax: (609)924-1729

● **Pittcon '98** provided wide exposure for **RJ Lee Instruments Limited**, a company that originated as a user of microanalysis instrumentation and has begun its fourth year as the manufacturer of the PERSONAL SEM®. Conferees were shown this "automated microscopy" tool that integrates application-specific software with a PC-based scanning electron microscope. One option, Automated Feature Analysis™, was demonstrated to show how companies can save on labor-intensive, routine microanalysis, such as examining wear debris. Conferees who admitted they have older SEMs came to consider their next purchase for their labs. Some commented they may retrofit their existing spectrometers with RJ Lee Instruments' PERSONAL EDX™ which provides 20,000:1 peak-to-background measurement statistics just like the PERSONAL SEM with its integrated EDS X-ray analysis tool. The company shared the

booth with RJ Lee Solutions, an emerging LIMS provider which is a new division of RJ Lee Group Inc. Providing LIMS products since 1993, RJ Lee Solutions now offers a new image management software product (TIMS). The RLIMS-Plus and SIRS (a Sampling, Inventory & Routing Software system) products are integrated with a wide variety of technical services for innovative laboratory automation. RJ Lee Instruments Limited: (724)744-0100, Fax: (724)744-0506

- **Spectra-Tech** introduced many new infrared accessories and software. Their latest sampling technology innovations were:
    - Avatar™ "Smart" Accessories - Easy, Reliable, and "Smart" Tools for Infrared Analysis
    - Mid-IR Fiber Optic Probes - High Sensitivity, Remote Sampling Reflection Probes.
    - Dedicated Analyzers - Soot in diesel oil, TPH/TOG, Coating Thickness Gauge
    - Thunderdome HATR - Universal Sampling Accessory has a New Liquid Holder
    - New Grazing Angle Objective - can be used in conjunction with Spectra-Tech FT-IR microscopes to analyze ultra-thin coatings, films, or molecular monolayers on various substrates.
    - Purged Collector - Diffuse Reflection Accessory
    - InspectIR Plus™ - a unique, Video Imaging FT-IR microscope, now with transmission measurement capability
    - Full line of Infrared Microscope Objectives - 15X, 32X, ATR (Attenuated Total Reflectance) Objective and Grazing Angle Objective.
    - Baseline Accessories - Economical HATR, Diffuse and Specular Reflectance accessories that simplify the FT-IR analysis of liquids, pastes, gels, films, and powders
- Spectra-Tech Inc.: (203)926-8998, Fax: (203)926-8909

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