# **NEW PRODUCT NEWS**

### LONG WORKING DISTANCE MICROSCOPE



#### MACROSCOPE LWD

A unique horizontal viewing long working distance microscope that provides magnification of 7X to 27X at a distance of about 500 mm. The unit is camera and video adaptable. MACROSCOPE LWD is available at greatly discounted closeout pricing. (approximately \$1000 for basic unit and eyepiece).

For further details contact:

RF Inter-Science Company, PO Box 445, Coram, NY 11727 (516)698-4799, Fax: (516)698-4988, eMail: RFINTER@spec.net Circle Reader Inquiry #40

## XL810 SEM-Based Defect Review and Inspection Tool

# The XL810 provides significant breakthroughs relating to resolution and low voltage operation.

FEI Company introduces the XL810 Defect Review and Inspection Tool with the completely new Hexalems<sup>®</sup> electron beam column for high performance at accelerating voltages of 200 V to 30 kV. For the first time, a 200 mm DRT can obtain resolution better than 3 nm independent of beam voltage in the 1 to 30 kV range; switch directly between field-free and immersion modes for both feature location and high resolution images; and provide both pure secondary electron images for the best topographic information and backscattered images for composition contrast, both at beam voltages of 1 kV and lower. This performance, when combined with a stage broadly accepted as the most accurate five-axis stage currently available and an advanced Windows-based graphical user interface, provides yield improvement managers with a superior tool for analyzing a defect and determining its source.

To evaluate and control the manufacturing process, the superior imaging and ease of use of the system provide engineers with the ability to optimize the lithographic process in the shortest time.

#### Highest Resolution Available

The tool's 3 nm resolution capability, previously unobtainable on a 200 mm Wafer SEM DRT, makes it possible to view shrinking feature sizes and identify "killer defects." The "in-line" universal detector system with balanced field extraction gives superior down hole visibility and collection efficiency. Samples can be tilted to 60<sup>o</sup> and rotated without any influence on the resolution, while maintaining the defect in view at magnifications in excess of 20,000 X.

#### Wide Range Capability

The new column with its dual-mode operation offers the user enormous flexibility without compromise. The user can move from the field-free mode, providing large-area, low-magnification images with low distortion levels and large depth of field, to the immersion mode for the highest resolution imaging of subquarter-micron features and defects. Without losing sight of even the smallest defect, the user can change between optimum viewing parameters and optimum EDX elemental analysis parameters.

#### High Performance Stage

The high accuracy 8-inch tilt stage used in FEI's FIB 800 and DualBeam 820 FIB/SEM Workstations was upgraded to support this new level of column performance in the harsh environments of the fab. With an average accuracy of better than 1 micron within a die and support of all leading defect file formats, defects are regularly located while operating at magnifications exceeding 50,000X.

For further information, contact FEI Company: ((503)640-7500, Fax: (503)640-7509

#### Circle Reader Inquiry #43



FLUROESCENCE ILLUMINATION SYSTEM

The Polychrome II is the second generation of a rapidly tunable excitation source. The Polychrome II is comprised of a xenon light source, galvanometric scanner, blazed grating and mirror optics. The monochromatic light is coupled to specially designed epi-fluorescent condensers via a solid quartz fiber. The specially designed condensers are available for most microscopes to provide for optimal illumination. The unit delivers a bright (4-8 mw), evenly illuminated field at the objective with a bandwidth of 12- 15 nm and a homogeneity of better than 5%. The Polychrome can jump

to any wavelength between 260 and 680 nm in less than 3 ms and provides a remarkable 1.5 ms Fura jump between 340 and 380 nm. The modular design of the Polychrome II allows components to be easily added for complete imaging and photometric systems as well as uncaging flashes, D/A converters and other accessories.

For further infromation contact Applied Scientific Instrumentation, Inc. 3770 W 1st Avenue, Eugene, OR 97402

(541)485-2284, Fax: (541)484-0306, eMail: info\_asi@rain.com Circle Reader Inquiry #41

# USED EQUIPMENT FOR SALE

₽GT-IMIX System: Turnkey imaging and X-ray analysis system including 3-turret windowless detector, Sparc CPU and video printer complete - in excellent condition for \$12,000 or BO. (212)292-8000.

☎ AMRAY 1600 SEM: \$15,950 and EDAX 9100 X-ray Controller: \$4,500. Both are in good condition. MICROGENICS: (707)277-7909

MILITARY RESEARCH LAB IS CLOSING - Military contractor is selling at drastically reduced prices its Reichart Polycut S motorized sliding microtome, refrigerated and rotary microtomes, Sorvall ultramicotome, Gatan Model 600 dual ion mill. Fisher embedding center, stereo microscopes, Perkin Elmer microdensitometer and LECO sulfur analyzer. For specification sheets, call: (202)544-0836.

CLYMPUS Research Binocular Microscopes (All Demos). 1) BMAX-40 UIS Infinite Optics and HITECH SHAPE: \$4,250, 2) BH2-BHS (100 watt): \$4,850, 3) BHSP (Polarizing), 4) BHSP (Industrial), 5) PM10-AD Photomicrographic System: \$3,900 - Warranty and many options available. MICROGENICS: (707)277-7909.

TWO TEMS: 1) Phillips EM300 with goniometer and complete HNU EDS system. 2) Philips EM300RG with goniometer and complete EDAX 9800 EDS system, under current service contract. Each with many accessories - call for list. Best offer. Industrial Testing Laboratories: (314)771-7111.

Gatan Model 607/666 PEELS for Phililps microscope. \$5,000 or best offer. Contact Jim Jowe at (804)982-5646 or email: jh9s@virginia.edu

Peak Instruments System 10 Wavelength Dispersive X-ray Analysis System. Configured for B, C, O/F and S. Interfaces to ISI 100-B. Asking: \$7,500. Call John at (203)639-1338.

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