

The **JEOL, USA ORION Control System** Upgrade, boosts the functionality of analog and DOS-based SEMs with new computer hardware and software that allow rapid digital image acquisition and control, frame averaging, and frame integration. Users of older model JEOL SEMs who may still be recording images on film can now produce high quality digital images, email image files, and generate reports. Depending on the model and configuration, the SEM can be upgraded to the most basic image acquisition level or can be reconfigured to also allow electron column and specimen stage control. The upgrade, developed at JEOL USA at the company's Peabody, Massachusetts headquarters, consists of a Windows XPTM equipped PC configured with software that acquires high-speed averaged images as well as slow-scan images for storage and recall. Based on the same software as JEOL's most current field emission SEMs, ORION allows fine focusing within the application, image annotation, and image storage in BMP, JPEG, or TIFF formats. JEOL USA, Inc., 978-535-5900 / www.jeol.com

C&L Instruments, Inc. announces the introduction of **High Index SF11 Coverslips** for through the lens TIRF microscopy. The index is 1.785 at 589nm. Standard size coverslips are 25mm in diameter and 0.14mm thickness. Other sizes available. These coverslips are ideal for use with the Vacu-Cell™ line of miniature perfusion chambers. See www.fluorescence.com for details.

Leica Microsystems Inc. has released the first commercial **4Pi fluorescence microscope system, the Leica TCS 4Pi**, which uses a special phase- and wavefront-corrected, double objective imaging system linked to a confocal scanner to enable a 4 to 7-fold increased axial resolution over confocal and two-photon microscopy. Even in live specimens, axial sections of ~100nm are obtained. The system maintains all of the advantages of fast scanning, Acousto Optical Beam Splitting (AOBS*) and Spectral Detection of the Leica TCS SP2 AOBS* for routine operation. Contact: Pam Jandura, www.leica-microsystems.com, phone: 847/405-7062

NanoInk, Inc. announces two enhancements to its **NSCRIPTOR DPNWriter system**: passive multi-probe arrays, and Inkwell arrays for coating the probes with molecular ink. Both product upgrades serve to expand the utility of Dip Pen Nanolithography™ by allowing the user to write multiple patterns simultaneously. The new probe arrays are "passive" in that all probes in the array move in unison in X, Y, and Z directions, while scanning and writing. Multi-probe technology represents a powerful scaling-up of the DPN™ process, and takes the NSCRIPTOR product line from that of a single-pen DPNWriter to a higher-throughput system. For more information, please visit www.nanoink.net.

The **Kurt J. Lesker Company PVD 75** is a versatile, value engineered, vacuum deposition tool which can be configured to suit a variety of thin film deposition applications. Standard features include: a front loading box chamber, turbomolecular pump package, integrated touch screen control, and a fully enclosed "zero" cleanroom footprint when flush wall mounted. Source flange options include magnetron sputtering, electron beam evaporation, thermal evaporation and low temperature evaporation furnaces (OLEDs). To ensure product reliability, the PVD 75 is manufactured using proven process modules. Prices start below \$50,000 with lead times typically less than 6 weeks.

The **Kurt J. Lesker Company** also proudly announces an agreement with **ULVAC KIKO** as exclusive North American distributor for their line of rotary vane, diaphragm and scroll pumps. Two Stage, oil-sealed vane pumps with pumping speeds from 2.1 to 8.5 cfm are offered. Single and multiple stage diaphragm pumps include capacities to 15.2 cfm, with ultimate vacuums as low as 7.5 torr. Scroll pumps with

capacities from 3.8 to 21.2 cfm will also be warehoused. All warranty and non-warranty service will be performed in our factory authorized service center in Pittsburgh, PA. Contact us at: 800-245-1656, Web: www.lesker.com, David Collins.

The **Cooke Corporation SensiCamQE, High Performance Cooled Digital CCD Camera** now offers enhanced quantum efficiency in the visible and NIR regions. The combination of SensiCamQE's high pixel resolution (1376 x 1040), low system noise (4e), high quantum efficiency (65%), 12-bit dynamic range and fast frame rates, makes it an ideal choice for low light level quantitative imaging. The SensiCamQE camera easily connects to an optical microscope or lens via an adjustable C-mount. A perfect fit for life-sciences applications, the SensiCamQE is ideal for low light level imaging applications such as Fluorescence Microscopy, Live and Fixed Cell Imaging, Ion Imaging, Red and NIR Fluorescence Imaging, Semiconductor Inspection, Spectroscopy, Hyperspectral Imaging and Bioluminescence. COOKE Corporation, Tel. (248) 276-8820 Email info@cookecorp.com <http://www.cookecorp.com>.

The **JAI PULNiX, Inc. Cam2Net Adapter** works with all JAI and PULNiX Camera Link cameras (base configuration). It is fully compatible with Gigabit Ethernet. It has high-speed point-to-point connection at up to 1Gbps, while requiring less than 1% CPU usage. It features simple and cost-effective multi-camera configurations, and permits 100-meter cable distance without additional hubs or switches. The Cam2Net transmits over standard Cat-5e copper cables and has a 16MB frame buffer for zero packet loss. Small and lightweight, it includes general-purpose input/outputs for local control/trigger. Camera configuration can be accomplished via Camera Link serial control. Cam2Net requires either a GigE interface on a host motherboard or a GigE interface card. For less demanding applications in which Gigabit transfer is not required, a standard 10/100 Ethernet card and driver may be used. An extensive software developer's kit (SDK) is included.

The **JAI PULNiX TM-102-15 1" CCD Digital Camera** is one of the core products in JAI PULNiX's line of AccuPiXEL digital cameras. Based on a high-quality Kodak KAI 1010 CCD sensor, this camera's large 9 μM x 9 μM pixels offer both light sensitivity and excellent dynamic range. The TM-1020-15 is a miniature, high-resolution progressive scan CCD camera with 1008 x 1018 pixel resolution. The interline transfer CCD provides full vertical and horizontal resolution with electronic shutter speeds up to 1/16,000 sec. It features full asynchronous reset with external pulse width exposure control. Incorporating PULNiX's patented look-up table (LUT) provides fast 10-bit to 8-bit pre-processing for effective image feature enhancement. This allows the user to maximize the full dynamic range of the CCD by externally selectable knee slopes. The camera has both digital and analog outputs for interfacing with frame grabbers. It is available in both monochrome and color formats, and can be ordered with LVDS (RS-644) or Camera Link outputs. All camera-control functions are externally controlled via a user-friendly graphical interface (GUI) provided by PULNiX.

The **PULNiX JAI CV-A1, an affordable 1.4-Megapixel (1392 H x 1040 V) CCD camera**, features small size, analog output, and set-up via RS-232C. The CV-A1's analog output makes it a good choice for the large existing analog market, as well as placing fewer restrictions on cable length and complexity, and allowing smaller-diameter cable to be used. The camera itself measures just 29mm (1.14")H x 44mm (1.73")W x 66mm (2.6")L, features a ½" progressive scan CCD, and operates at 16 frames per second. For more information, contact: Ken Zinsli, JAI PULNiX, Inc. 1-408 747 0300

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Eastman Kodak Company is making it easier for scientists to capture crystal clear digital images through microscopes. With the new **KODAK KAI-2020M Image Sensor**, scientists will be able to better analyze and extract information from objects under the extreme lighting conditions often encountered in new drug discovery, cellular biology, or medical research applications. The KAI-2020M, a 2 million pixel interline transfer charge coupled device (CCD) image sensor, allows scientists to capture clear images with high dynamic range when using either bright field (bright light) or fluorescence (low light) microscopy. The combination of high spatial resolution and low noise performance in the KAI-2020M results in an image sensor with excellent sensitivity and high dynamic range. By leveraging this new sensor in cameras designed for microscopy, scientists can now capture high quality images under extreme lighting conditions for more accurate analysis and specimen documentation. For specific ordering information and lead times, please contact Image Sensor Solutions, Eastman Kodak Company at (585) 722-4385 or by email at imagers@kodak.com. For more information on Kodak's image sensor product line, visit www.kodak.com/go/imagers.

Thermo Electron Corporation announces the release of a host of significant **extensions to its leading eRecordManager Laboratory Data Management System (LDMS)**, including conversion capability for data formats from Agilent instrumentation and legacy Hewlett-Packard Chromatography Data Systems. eRecordManager helps customers to capture, store and index large volumes of laboratory instrument data. Along with the original data, the content of each stored record is converted into XML to preserve its scientific meaning and allow better research collaboration and knowledge management. This latest release, eRecordManager GAML Converter Update 2004 R1, adds support and enhancements for numerous data formats.

The **Nicolet™ Antaris™ FT-near infrared (FT-NIR)** analyzer by Thermo Electron Corporation offers a ready-made solution for process engineers and application scientists in the pharmaceutical industry wishing to implement Process Analytical Technologies (PAT). Benefiting from a single analyzer platform connecting drug development and pharmaceutical manufacturing, the instrument eliminates the need for laboratory testing results, and the uncertainty of inexact, recipe-based manufacturing processes. Widely used for incoming materials inspection and final product testing in over 60 pharmaceutical companies, the Nicolet Antaris FT-NIR platform now enables pharmaceutical manufacturers to replace laboratory testing queues with real-time monitoring of critical manufacturing parameters. All Nicolet Antaris analyzers are built upon a common platform with methods that can easily be transferred from system to system without recalibration, thereby greatly reducing implementation costs and validation efforts. Comprising a quality system making cGMP compliant use inherent, the platform has been designed to operate in severe conditions, with minimal operator training or unmanned operation.

Thermo Electron Releases **OMNIC 7.0 Professional Software Suite for FT-IR and Raman Spectrometers** New features of the OMNIC 7.0 software package include improved spectral annotations with automatic audit trails, one-at-a-time search overlay, Y-axis roll and zoom, live collect y-axis limit settings, and the possibility to quickly e-mail spectra from the software. Users therefore gain improved access to their spectral data to make collection, processing, and reporting of data easier. Additional improvements such as a live spectrum "freeze" function, the ability to set automatic blanking of regions to enhance the viewing of areas of interest, and set sample and background scans independently help keep the award-winning OMNIC software at the

cutting edge of spectral analysis software. The OMNIC Professional Software Suite is fully compatible with Thermo's latest Nicolet FT-IR series spectrometers, including integrated support for Thermo's ETC EverGlo IR source, new IR filter, screen and polarizer wheels, and remote sampling via fiber optic probe. For more information about Thermo Electron's new products, please call +1 800-532-4752 or e-mail analyze@thermo.com.

Carl Zeiss has introduced a new **Axiovert 40 inverted microscope**, designed to bring uncompromisingly brilliant images to routine observations where large quantities of samples must be screened quickly and cost-effectively. The new instrument is ideal for cell and molecular biology laboratories, universities and pharmaceutical companies that until now have had to compromise on resolution in their routine examinations, particularly with thick cell specimens. Axiovert 40 offers three contrasting techniques in one objective: brightfield, phase contrast and PlasDIC, the first interference contrasting technique specifically tailored to routine applications. The real benefit of this technology is that it eliminates the interference caused by plastic vessels, enabling direct observations of living cells in situ. The result is rapid visualization of needle-sharp contrast across entire specimens, even thick cell areas. Additionally, a new 3-position Push&Click reflector mount is available for fluorescent examinations, further reducing stray light and enhancing operating convenience. Another plus for high-throughput lab work is a sliding condenser that allows the user to easily adapt the microscope for large and small containers. The eyepieces can be quickly adjusted to two viewing heights, giving extra comfort for users and digital imaging easily captured through the convenient front-mounted camera port. There are two models in the flexible, high-performance Axiovert 40 family: Axiovert 40 C and Axiovert 40 CFL. Both models achieve their bright illumination from a 35-Watt halogen lamp with a lifetime of over 800 hours. For more information contact Carl Zeiss MicroImaging, Inc., 800-233-2343, www.zeiss.com/materials, or email at micro@zeiss.com.

Asylum Research announces the "AFM in Biology" training class. The class will be held August 11-13 at Asylum Research in Santa Barbara, CA. This comprehensive class, taught by Dr. Irene Revenko, and is open to all AFM scientists that wish to expand their AFM knowledge as it pertains to life science applications. The three day training class will be tailored to the participants attending and will include lectures and hands-on equipment on the following topics: Interested participants may contact Asylum Research at 805. 685. 7077, or view the class information on the web at www.AsylumResearch.com.

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