ProductNews

Olympus 3D Microscope Used to Recover Data from Damaged Optical Media

The fields of information technology and digital forensics have encountered situations where stored digital information media have been damaged. Based on the exploration of confocal microscopy as a means of recovering data from damaged optical media, the OLYMPUS LEXT OLS4000 3D laser scanning confocal microscope is now being used to retrieve such information. The new laser confocal microscope system is designed to deliver nanometer-level imaging, accurate 3D measurement, and surface roughness analysis.

Olympus Corporation
http://olympus-ims.com

ELMIC and Phenom-World Announce Delphi: A Fully Integrated Tabletop Fluorescence and Electron Microscope

DELMIC produces high-performance, user-friendly integrated microscopy solutions, while Phenom-World is a leading producer of electron microscopes. Delphi is a complete solution that makes it possible to do fast correlative microscopy with unique overlay precision. The system is easy to use for both light and electron microscopists, making correlation intuitive and fully automated. Delphi offers a cost-efficient package that does not require experienced microscopy skills to image and interpret data.

DELMIC BV and Phenom-World BV
www.delphimicroscope.com and www.phenom-world.com

Leica Microsystems Introduces the Inverted Microscope Leica DMi8

Life scientists can custom-configure the Leica DMi8 inverted microscope now and upgrade it in the future for applications ranging from basic imaging to advanced fluorescence microscopy. The Leica DMi8 is equipped with an additional incident illumination port, which facilitates the integration of light sources and laser systems for advanced applications. The closed-loop focus drive with an accuracy of 20 nm for the 12 mm travel range enables researchers to investigate large specimens with high precision.

Leica Microsystems
www.leica-microsystems.com

STED Add-on for the MicroTime 200

PicoQuant has released a STED (stimulated emission depletion) add-on for the time-resolved confocal microscope platform MicroTime 200. This extension allows super-resolution imaging with an optical resolution below 50 nm. The add-on is based on the easy-STED principle, which ensures perfect alignment and shape of both excitation and STED laser. Time-gates can be applied to all measured data, enabling gated STED, which leads to an enhanced resolution in images and a reduced observation volume for FCS.

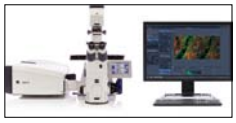
PicoQuant GmbH
www.picoquant.com

Vitua® Streamlined TEM Sample Preparation for the Life Sciences

The Denton Vacuum Vitua® system provides a fully characterized, automated process that resolves many of the problems inherent with traditional organic molecule imaging, while eliminating the guesswork and trial-and-error associated with high-resolution rotary shadow casting. Designed, built, and supported by Denton Vacuum, manufacturer of thin-film microscopy sample preparation, Vitua streamlines TEM sample preparation and opens up this technique for wider use in organic molecule imaging.

Denton Vacuum, LLC
www.dentonvacuum.com/products/vitua

New Confocal Technology Enables Enhanced Super-resolution Microscopy



A classic confocal microscope illuminates one spot on the sample to detect the emitted fluorescence signal. With Airyscan, ZEISS introduces a new concept. Instead of detecting signals with a single point detector, a multichannel area detector with 32 elements collects all the light from an Airy disk simultaneously. Each detector element functions as a single, very small pinhole. Knowing the beam path and the spatial distribution of each Airy disk enables very light-efficient imaging.

Carl Zeiss AG
www.zeiss.com

Bruker Launches the First Guaranteed AFM TERS Solution

Bruker today announced the launch of the new-generation Innova-IRIS, the first guaranteed Tip-Enhanced Raman Spectroscopy (TERS) system specifically designed to accelerate the adoption and time-to-publish of nano-Raman spectroscopy research. The new system combines Bruker-exclusive, high-contrast tuning-fork-based TERS probes with high-performance AFM and nano-Raman spectroscopy capabilities to provide a consistently high TERS signal enhancement and the highest spectral sensitivity for interrogating the most challenging samples.

Bruker Corporation
www.bruker.com

Olympus Adds New Features to Stream Micro-Imaging Software

A new micro-imaging software system that turns Olympus industrial microscopes into high-performance analysis tools, OLYMPUS Stream allows users to seamlessly acquire, process, and measure images. With this release, Olympus adds an array of new advancements to Stream's capabilities, further enhancing workflow and allowing flexible system operation. Among Stream 1.9.2's functional enhancements are a new separator filter designed to better separate objects and reconstruct boundaries up to 10 times faster than the previous filter.

Olympus Corporation
http://olympus-ims.com

New, High-Speed EMCCD Cameras Provide Exceptional Low-Light Imaging Performance

Princeton Instruments announced the immediate availability of the ProEM®-HS line of high-speed EMCCD cameras with patented eXcelon®3 technology for low-light imaging and spectroscopy applications. This advanced back-illuminated EMCCD technology offers a combination of high quantum efficiency (>95% QE), best fringe suppression in the near infrared, and single-photon sensitivity. Enabled by its rapid (20 MHz) ADC readout capability and 300 nsec/row vertical shift speed, the new ProEM-HS:512BX3 model delivers > 60 full frames per second.

Princeton Instruments
www.princetoninstruments.com

TECHSPEC® Silver Series Telecentric Measuring Lenses Offer Convenient In-line Illumination Options

Edmund Optics® now offers its TECHSPEC® Silver Series Telecentric Measuring Lenses, in 0.5×, 0.75× and 2.0× primary magnifications with in-line illumination. These lenses feature a compact, cost-effective solution for a wide variety of measurement and gauging applications. The addition of an in-line illumination port to our popular TECHSPEC Silver Series Telecentric Lenses makes these lenses ideal for the inspection of specular and semi-specular parts, which are often found in electronics and semiconductor manufacturing.

Edmund Optics
www.edmundoptics.com

JAI introduces New Sweep Series of Monochrome Line Scan Cameras

JAI launched a new series of industrial monochrome line scan cameras under the family name Sweep. The new cameras combine high scan rates with extra-large high-sensitivity pixels requiring less scene light than conventional line scan cameras to produce quality images. The first two models in the Sweep series (SW-2000M-CL-80 and SW-2000M-CL-65) both feature 2048-pixel resolution and 20 µm×20 µm pixels, and they deliver scans rates up to 80,000 lines/second.

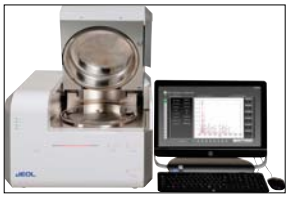
JAI Inc.
www.jai.com

Vision Research Updates v-Series Line of 1-Megapixel Ultrahigh-Speed Digital Cameras

Vision Research's new Phantom v2011, v1611, and v1211 cameras now have almost 30% more light sensitivity, provide better image quality, and have more lighting flexibility than their predecessors. All ultrahigh-speed Phantom cameras now have sensitivity as high as ISO 6400 (daylight) for color images and ISO 32,000 for monochrome images. The improved ISO gives consumers the option to use a faster shutter speed, which can reduce motion blur and result in clearer images.

Vision Research, Inc.
www.visionresearch.com.

JEOL Announces New EDXRF for a Wide Range of Sample Types



JEOL has introduced a smart solution for high-sensitivity elemental analysis in a new benchtop EDXRF spectrometer. The JSX-1000S ElementEye analyzes major to trace components on most sample types—solids, powders, and liquids—with little or no sample preparation. The ElementEye complements SEM, EPMA, NMR, and mass spectrometry analyses, providing high-sensitivity qualitative and quantitative analysis results in minutes. A thin-film Fabry-Perot method is optional for non-destructive measurement of film thickness.

JEOL USA Inc.
www.jeolusa.com

Correlative Raman Imaging and Scanning Electron (RISE) Microscopy

RISE Microscopy combines the advantages of both imaging techniques. In this way ultra-structural surface information is linked to data regarding the sample's molecular compounds. To switch between the different measuring techniques, the sample is automatically transferred and re-positioned. The acquired results can be correlated and the images overlaid. Confocal Raman imaging reveals if a carbon atom belongs to diamond, graphite, and graphene. Furthermore the spatial distribution of a sample's components can be imaged.

TESCAN USA
www.tescan.com

Sharp Precision at a Broad Range of Distances

With the most depth of field and field of view available from a video lens, the Aven Macro Series Zoom 7000 is designed for large field-of-view applications, such as quality assurance and biomedical imaging. This macro-zoom video inspection system includes a double-arm boom stand that is ideal for inspection applications where magnification adjustment and the ability to move across a specimen is important. Magnification ranges 3.7× to 61.9×.

Aven, Inc
http://www.aventools.com

Olympus Releases New STM7 Measuring Microscope

Olympus Corporation announced the launch of the new STM7 measuring microscope, an industrial microscope system designed for highly accurate measurement of machined parts, semiconductors, electronic components, and other processed industrial materials. When used with STM7-BSW measurement support software and an Olympus microscope digital camera, the STM7 can perform accurate measurements of highly complex shapes while keeping system operation extremely simple. Measurement results can then be easily exported to Excel, facilitating fast, simple report generation.

Olympus Corporation
olympus-ims.com/en/metrology/stm