

## ProductNews

### 3i Super Resolution Spinning Disk Confocal with CSU-W1 SoRa



The CSU-W1 SoRa is an easy-to-use super-resolution microscopy solution using dual Nipkow disks with microlenses on the illuminating and pinhole disks. Resulting raw images have a 1.4× resolution improvement and with deconvolution can achieve twice the resolution of raw spinning disk data. It offers a maximum speed of 200 fps, low photodamage compared to other super-resolution methods, and no limitation on dyes or fluors. The SoRa is available for new systems and upgrades.

3i Inc.

[www.intelligent-imaging.com/spinning-disk-confocal](http://www.intelligent-imaging.com/spinning-disk-confocal)

### New Hitachi Tabletop Sample Holders and Accessories

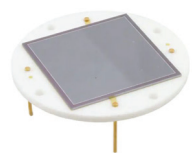


Rave Scientific offers a special collection of sample holders and sample stubs compatible with the Hitachi TM3030-plus, TM3030, TM3000, and TM1000 table top SEMs. Our collection of holders and stubs will increase productivity and allow examination of a multitude of samples.

Rave Scientific

[www.ravescientific.com](http://www.ravescientific.com)

### Opto Diode Introduces a Large Square Photodiode for Radiation Detection

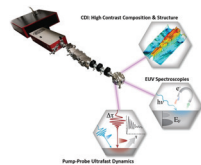


The AXUV576C is a large square photodiode with a 576.5 mm<sup>2</sup> active area that is specially designed for electron and radiation detection. The new device is part of Opto Diode's family of radiation detectors and offers electron detection to 200 eV. The square active area is configured on a round 4-pin package, with 2 anode pins and 2 cathode pins for added connection versatility.

Opto Diode

<https://optodiode.com>

### KMLabs Installs First Phase of imec's EUV Quantum Microscope

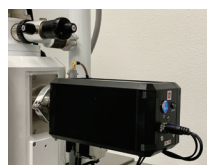


Based on tabletop high harmonic generation (HHG) of extreme ultraviolet (EUV) laser radiation, KMLabs is enabling time-resolved characterization of nanoscale complex materials and processes, such as photoresist radiation chemistry, two-dimensional materials, nanostructured systems and devices, and emergent quantum materials. The main light engine of the attolab facility, Pantheon™, consists of the KMLabs RAEA™ Ti:Sapphire amplifier system driving the XUUS™ HHG source to generate light in the range of 13.5–30 nm at multi-kHz repetition rates.

KMLabs

[www.kmlabs.com](http://www.kmlabs.com)

### Element Pi Now Distributing Vacuum Sciences Plasma Cleaners



Element Pi has signed with Vacuum Sciences to sell their new PM-100 Plasma Cleaner for electron microscopy. The Vacuum Sciences system offers a compact and affordable solution for vacuum chamber plasma cleaning. Its EverLight™ plasma ignition provides dependable removal of organic and hydrocarbon contamination for EM operators. A simple GUI provides for operation and data logging. API controls for direct operation from the SEM software are currently under development with key EM manufacturers.

Element Pi

[www.elementpi.com](http://www.elementpi.com)

### One Giant Leap for Live Cells



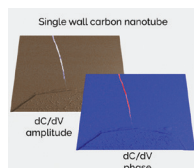
The new Incucyte® SX5 Live-Cell Analysis System builds on their market-leading design for undisturbed image acquisition and analysis to empower a new decade of scientific discovery.

Its unique patent-pending optical system allows detection of up to five fluorescence channels, and the ability to image up to three fluorescence channels at once, in a single live-cell experiment. The system introduces a new long-wavelength NIR channel and reagents designed specifically to protect cells during long studies.

Sartorius

[www.essenbioscience.com/en/products/incucyte/incucyte-sx5](http://www.essenbioscience.com/en/products/incucyte/incucyte-sx5)

### Scanning Capacitance Microscopy (SCM) is Used for Nanoelectrical Technique in Semiconductor R&D and Failure Analysis



The “capacitance” in SCM has been missing from previous generation SCM modules. Conventional SCM can only measure differential capacitance (dC/dV) and not the actual capacitance signal, which makes it more complicated to interpret. The new SCM module from Asylum Research changes that with a capacitance channel that is linearly correlated with dopant levels.

Oxford Instruments

<https://afm.oxinst.com/products>

### Olympus Introduces Next-Generation Microscopy Image Analysis with Deep Learning



The Olympus cellSens™ software's TruAI™ deep-learning technology improves image analysis capabilities from automatic segmentation of complex morphologies without hand labeling to segmentation of cells and organelles using a simple transmitted-light image. Deep-learning technology offers improved speed and efficiency by improving experiment efficiency with label-free nuclei detection, reducing phototoxicity during fluorescence imaging to support accurate data acquisition, and saving time by automating cell counting and measuring.

Olympus

[www.olympus-lifescience.com](http://www.olympus-lifescience.com)

## Fastec Imaging Releases the HS7 Full HD High-Speed Camera System



Fastec has released the new HS7 Full HD High-Speed Camera System. Designed for microfluidics and other laboratory applications, the HS7 system combines a high-speed camera with a dedicated controller that simplifies setup, streamlines integration, and optimizes workflow. Capable of

recording full high-definition (1080 p) at 2500 frames per second, the HS Series roadmap includes cameras with resolutions ranging from HD (720 p) to UHD (2160 p) and imaging rates exceeding 5 gigapixels/second.

Fastec Imaging

[www.fastecimaging.com/fastec-hs-series-cameras](http://www.fastecimaging.com/fastec-hs-series-cameras)

## Universal Sample Holder Kit



Designed for a multi-instrument environment, the Rave-Tec U2 universal SEM sample holder kit has been created to support holders for different brands of SEM and FIB systems. The holders support a wide variety of SEM samples up to 42 mm. The samples can be flat, round, block, or randomly shaped. Also included is a useful selection of SEM stub adapters, which enables using this kit on virtually any SEM.

The universal sample holder kit is fully compatible with FEI/Philips, JEOL, Hitachi, Tescan, Zeiss/LEO, and other instruments.

Rave Scientific

[www.ravescientific.com](http://www.ravescientific.com)

## MicroFlow III Class Ductless Workstation



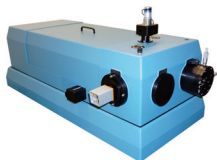
The MicroFlow III is a workstation equipped with particle pre-filter and activated carbon filtration making it ideal for fumes, odors, and non-hazardous chemical vapors. Self-contained with an integral recessed work surface to contain spills, applications include sample weighing, general chemistry involving small volumes of common chemicals, individual workstations, tissue staining and processing, gluing and drying operations, solvent cleaning of electronic

parts, soldering fumes and odors, school demonstration workstations, and containment of forensic applications.

HEMCO Corporation

[www.HEMCOcorp.com](http://www.HEMCOcorp.com)

## High-Resolution Infrared Spectral Imaging



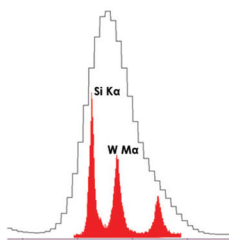
New sensor compatibility expands the range of wavelengths where McPherson spectrometers detect mid- and long-wave infrared light, increasing utility for spectroscopy and imaging applications in chemistry, biology, aerospace, and defense. McPherson dispersive

spectrometers measure and tune specific wavelengths of light using diffraction gratings selected for various applications. Grating groove density and optimum blaze wavelengths range from ultraviolet and visible wavelengths of 0.2  $\mu\text{m}$  up to 20  $\mu\text{m}$  long-wave infrared (LWIR). Gold, silver, and other optical coatings enhance performance in the IR.

McPherson Inc.

[www.McPhersonInc.com](http://www.McPhersonInc.com)

## EDAX Launches Lambda WDS Product Line



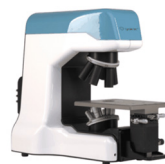
EDAX's Lambda WDS system combines WDS software with state-of-the-art spectrometers for improved accuracy and precision, providing results for a variety of materials analysis. The Lambda Plus system delivers the maximum efficiency for transmission element energies from 150 eV to 10 keV (B K-alpha to Ge K-alpha using polycapillary optics). The Lambda Super

dual optics system provides excellent efficacy for light elements, (B, C, N, and O) using high-collection, reflective, X-ray optics. The total operating range is 100 eV to 15 keV.

EDAX

[www.edax.com](http://www.edax.com)

## New Perspectives with Multimodal DHM® by Lyncée Tec



Digital holographic microscopy (DHM®) offers solutions for static and dynamic 3D characterization in material science and life science applications. When used in quantitative phase imaging (QPI) DHM offers label-free measurement of cell morphology and dry mass, two unique biomarkers for a cell's physiological state. Fluorescence adds

the specificity associated with the labeling of targeted cellular components or molecules. Minimize cell damage linked with fluorescent markers, phototoxicity, and bleaching by combining DHM with QPI.

Lyncée Tec

[www.lynceetec.com](http://www.lynceetec.com)

## Lattice LightSheet: A Microscope for High-Resolution, Fast, and Gentle 3D Live Cell Imaging



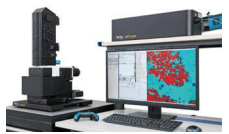
Developed by Nobel Laureate Dr. Eric Betzig, the 3i Lattice LightSheet microscope can image biological systems spanning four orders of magnitude in space and time. The system generates an optical

lattice to create an ultra-thin light sheet to image biological samples over long periods of time and with very fine resolution. This allows for 4D living cell imaging where experiments may run for hours or even days.

3i Inc.

[www.intelligent-imaging.com/lattice](http://www.intelligent-imaging.com/lattice)

## WITec Reveals the New Generation alpha300 *apyron* – Automated Raman Imaging Microscope with AutoBeam™ Technology



WITec GmbH establishes the next level of automation and user-friendliness with the introduction of the new alpha300 *apyron*. AutoBeam technology unlocks the full potential of WITec's industry-leading alpha300

series with new optical, analytical, and remote operation capabilities marking the furthest advance yet in speed, sensitivity, and resolution. The alpha300 *apyron* can self-align and self-calibrate reducing experimental workload by requiring less user input, enhancing reproducibility, and eliminating potential errors.

WITec

[www.witec.de](http://www.witec.de)