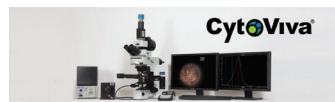


## ProductNews

### CytoViva's Enhanced Dark-field Hyperspectral Microscope



This microscope is an effective tool for investigating the targeting of vesicle carriers to cells and timed release of their drug cargo. With CytoViva's label-free imaging, it is possible to image label-free exosomes and liposomes <math><100\text{ nm}</math> in size, both among cells and in solution, distinguish vesicles with differing payloads as loaded versus empty vesicles, and conduct label-free cell tracking of vesicle-drug constructs with spectral mapping to identify vesicle function with live or fixed cells.

CytoViva, Inc.  
<https://cytoviva.com>

### element Pi Announces New Line of Vacuum Coaters for EM Sample Prep



element Pi has announced a new line of low- and high-vacuum sputter and carbon coaters for electron microscopy specialized coaters for materials science including a triple-head sputter coater, triple-source thermal evaporators, and combinations of both. The new systems come with film thickness monitoring, electronic shutters, and gas flow controls. Sample stages for tilt-rotate, glass slides, wafers, and metallurgical mounts are available, while an LCD control panel provides simple and flexible operation.

element Pi, LLC  
[www.elementpi.com](http://www.elementpi.com)

### HEMCO Corporation Ventilated Enclosures for Laboratory Environments

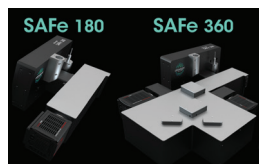


EnviroMax enclosures are designed to contain samples not able to be accommodated in a typical fume hood due to size or accessibility requirements. Single or modular enclosures are available depending on requirements. Access can be on any or all sides with accessories and various components. Lighting, worksurfaces, support tables, and cabinets are engineered with the system.

Enclosures are designed to exact size and design specifications with HEPA filtered supply air and optional positive pressure.

HEMCO Corporation  
[www.hemcocorp.com/enviro.html](http://www.hemcocorp.com/enviro.html)

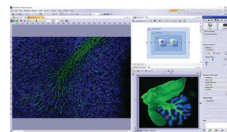
### A Single-Molecule Imaging Solution



Abbelight provides a complete imaging solution for single-molecule imaging, including our STORM buffer, the SAFE module that can adapt to any inverted microscope to perform SMLM with homogenous TIRF/HiLo/Epi illumination over a large field of view of  $150 \times 150 \mu\text{m}^2$  (vs. the usual  $50 \times 50 \mu\text{m}^2$ ), and NEO software for acquisition, real-time data processing and visualization, and image analysis (SPT, spectral demixing, clustering, etc.).

Abbelight  
[www.abbelight.com](http://www.abbelight.com)

### Next-Generation Microscopy Image Analysis with Deep-Learning Technology



Olympus cellSens imaging software improves research efficiency with accurate object detection and segmentation. Leveraging the power of deep learning, Olympus cellSens imaging software for microscopy offers significantly improved segmentation analysis, such as label-free nucleus detection and cell counting for more accurate data and efficient experiments. Features include improved label-free detection of nuclei, reduced phototoxicity during fluorescence imaging, and automated cell counting and measurements.

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

### True STEM Analysis on a Tabletop Electron Microscope



Coxem has released a retractable STEM detector for the EM-30<sup>N</sup> tabletop electron microscope with bright- and dark-field imaging modes. It is coupled with a multi-grid sample holder, taking advantage of the EM-30<sup>N</sup>'s 1–30 kV accelerating voltage range. Using lower accelerating voltages, high-contrast images from samples vulnerable to beam damage (for example, polymers and biomaterials) can be acquired. A specially designed sample holder holds up to four TEM grids to facilitate EDS analysis.

Coxem Co., Ltd.  
[www.coxem.com](http://www.coxem.com)

### Protochips' AXON: Revolutionizing the *In Situ* TEM Workflow



Protochips AXON software redefines the *in situ* experience for TEM users by putting the sample front and center throughout the experiment. The complexity of operating multiple instruments at once is overcome by integrating the TEM optics, imaging detectors, and sample holders together into a more powerful, efficient, and intuitive workflow. Experiment conditions are synchronized with images, making data analysis easier during and after the imaging session.

Protochips, Inc.  
[www.protochips.com](http://www.protochips.com)

### Rescan Confocal Microscope (RCM) Add-On



The RCM is an add-on system that transforms a current wide-field microscope into an enhanced laser-scanning confocal unit. The RCM uses the rescan technology combined with an sCMOS camera to offer super-resolution (170 nm raw, 120 nm deconvolved) and high-sensitivity (3–4× more than other confocal systems) datasets. Its simple design makes it easy to use and affordable (\$100k for full upgrade including confocal unit, laser combiner, camera and filter wheel).

Axiom Optics  
<https://axiomatics.com>

## ZEISS FIB-SEM Enhances Efficiency in Multi-Scale and Multi-Modal Workflows

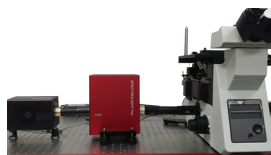


Materials and life science researchers can now experience faster accessibility to deeper regions of interest with the ZEISS Crossbeam 350/550 SEMs and ZEISS Atlas 5 package. Users benefit from improvements in speed and data quality when performing multi-scale, multi-modal studies in

additive manufacturing, electronics, battery research, biomaterials, and biological tissue investigations on resin-embedded biological specimens. The system provides faster FIB-SEM sample preparation, more accurate 3D tomography, and greater integration in data reporting.

ZEISS  
[www.zeiss.com](http://www.zeiss.com)

## New Tunable Filtering Technology for Hyperspectral Imaging by Spectrolight



A new approach to wavelength filtering technology, Spectrolight Inc.'s Flexible Wavelength Selector (FWS), can be used for hyperspectral imaging applications as seen in the following video link: <https://www.youtube.com/watch?v=pecAWSiq3Zs>. The video shows the hyperspectral imaging of BPAE cells labeled with Alexa 488 phalloidin in a setup consisting of a commercial microscope with a FWS Poly tunable filter assembled at the emission port.

watch?v=pecAWSiq3Zs. The video shows the hyperspectral imaging of BPAE cells labeled with Alexa 488 phalloidin in a setup consisting of a commercial microscope with a FWS Poly tunable filter assembled at the emission port.

Spectrolight Inc.  
[www.spectrolightinc.com](http://www.spectrolightinc.com)

## New Low-Profile FIB Grid Holder

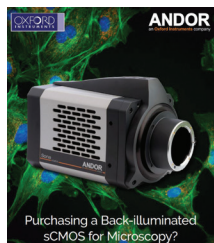


TEM sample lift-out in a FIB-SEM workstation is a challenging application. Owning the right hardware is an essential contributor to a high success rate with respect to lift-out. The new F12LP is the low-profile version of the EM-Tec F12 grid holder for 2 FIB grids. The low height

and small dimensions allow for high-tilt operation at low working distance.

Rave Scientific  
<https://ravescientific.com>

## Sona Microscopy sCMOS Camera



The new Sona sCMOS camera has been meticulously designed from the ground up to optimize performance with sensitive back-illumination, largest field of view available, enhanced mounting flexibility, superior quality and longevity, high quantitative accuracy, and fast speed mode.

Andor  
<https://andor.oxinst.com>

## ZEISS Launches the Lightsheet 7 Fluorescence Microscope



The Zeiss Lightsheet 7 can image specimens up to 2 cm in size at refractive indices between 1.33–1.58 in almost any clearing solution.

It has newly designed optics and a sample holder for mounting of large specimens, software tools for adjustment of parameters (light sheet, sample positions, zoom settings, tiles, data processing parameters), Pivot Scan technology for imaging artifact-free optical sections, and pco.edge sCMOS detectors for fast processing at low light levels.

ZEISS  
[www.zeiss.com](http://www.zeiss.com)

## BioTek's Scratch Assay Starter Kit



BioTek's Scratch Assay kit includes everything needed to implement automated kinetic cell migration and scratch wound assays in conjunction with a BioTek Lionheart™ Automated

Microscope or Cytation™ Cell Imaging Multi-Mode Reader. The kit includes an AutoScratch™ Wound Making Tool to create repeatable scratch wounds; Scratch Assay App software with protocols to automatically calculate statistics including wound width, percent confluence, and maximum healing rate; 24- and 96-well microplates; and reagents to ensure the best scratch performance and assay analysis.

BioTek Instruments, Inc.  
[www.biotek.com](http://www.biotek.com)

## Get More for Less from Excelitas

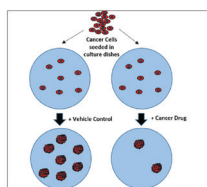


The X-Cite® mini+ is a compact high-power white-light LED source designed for fluorescence imaging applications. Two models with choice of UV wavelengths (365 nm or 385 nm) for DAPI filter sets are available and economically priced.

Improved features include LED technology to deliver more power to the sample plane than any of our previous direct-coupled systems.

Excelitas Technologies Corp.  
[www.excelitas.com](http://www.excelitas.com)

## Cytation High-Throughput Fluorescent Colony Formation Assay



The Cytation™ 5- and 7-cell imaging multi-mode readers provide automated high-throughput digital fluorescence, bright-field and phase microscopy in conjunction with plate reader optics with UV/Vus absorbance, fluorescence, and luminescence. Cytation systems are ideal for *in vitro* cellular and colony crystal violet assays, for example, cancer cells.

BioTek  
[www.biotek.com](http://www.biotek.com)