

## ProductNews

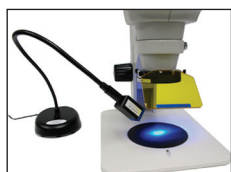
### FEI Introduces the New Tecnai Femto Ultrafast Electron Microscope



Tecnai™ Femto ultrafast electron microscope (UEM) enables scientists to explore ultrafast events and processes that occur at the atomic and molecular spatial scale over time spans measured in femtoseconds ( $10^{-15}$  seconds). These include such fundamental processes as the absorption of light energy and its transformation into heat or mechanical changes (photoactuation) and the crystallization or recrystallization of materials—including large biological molecules for structural analysis.

FEI Company  
[www.fei.com/tecnai-femto](http://www.fei.com/tecnai-femto)

### NIGHTSEA Model SFA Propels Expansion of Economical Fluorescence



The novel NIGHTSEA Model SFA adds fluorescence capability to a laboratory stereo microscope. Applications range from routine stereo imaging, simple sorting, and fluorescence-assisted dissection to exciting new demonstrations and lab exercises for the classroom. The SFA system is modular, offering

four interchangeable excitation/emission combinations designed to meet a wide range of fluorescence requirements. Excitation wavelengths include violet, royal blue, cyan, and green. A white light head is now also available.

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

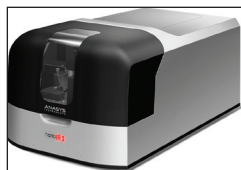
### Aven HDMI Color Camera Offers Measurement Ease with Built-In Software



A sophisticated new HDMI camera with measurement software and an SD card allows precise quality-control inspections on shop floors without a computer. By eliminating outside software or a laptop for image processing, the Aven HDMI Color Camera for microscopes reduces workbench space, avoids program installation or updating, and removes compatibility concerns. Engineers, inspectors, and research technicians just need a monitor, because the camera's HDMI port allows a direct link.

Aven, Inc.  
[www.aventools.com/sales-info.html](http://www.aventools.com/sales-info.html)

### Anasys Instruments Unveils the nanoIR2



Anasys Instruments announced the nanoIR2™, a second-generation AFM-based IR spectroscopy platform. A key breakthrough is the ability of the nanoIR2 to operate with topside illumination, eliminating the prior need to prepare samples on a ZnSe prism and enabling measurements on a much

more diverse set of samples. Additionally, the nanoIR2 provides the new resonance-enhanced mode that significantly increases the sensitivity of the technique and enables AFM-IR measurements on samples of sub-20 nm thickness.

Anasys Instruments Corporation  
[www.anasysinstruments.com](http://www.anasysinstruments.com)

### New Super-Resolution System for 3D Localization Microscopy



Leica launched the Leica SR GSD 3D, a widefield system that not only offers 2D, but now also 3D super-resolution imaging of molecules and cellular structures. Based on Ground State Depletion, the widefield fluorescence microscope attains resolutions of down to 20 nm in the lateral and 50 nm in the axial direction. The Leica SR GSD 3D also scores with its unique precision for localizing single molecules, its system stability, and its optical performance.

Leica Microsystems  
[www.leica-microsystems.com](http://www.leica-microsystems.com)

### Andor Technology Launches Two New Cameras



The iKon-L HF fibre optic camera provides the highest QE (95 percent) back-illuminated sensor, a single directly bonded FOP and a unique spring-loading “Soft Dock” mount, and is ideally suited for high spatial resolution imaging of low-flux signals. The Zyla 4.2 Scientific CMOS (sCMOS) camera offers the highest QE available from sCMOS technology, coupled with extremely low read noise and 100 fps frame rate, the Zyla 4.2 is ideal for applications that demand speed and sensitivity.

Andor Technology plc  
[www.andor.com/ikonl-hf](http://www.andor.com/ikonl-hf)

### Combined Confocal and Atomic Force Microscope with Ultimate Stability



The attoCSFM combines a confocal microscope for optical detection with a cantilever-based atomic force microscope, serving as an ideal platform for cutting-edge experiments such as optically detected magnetic resonance, for example, in nitrogen-vacancy (NV) color-center based nano-magnetometry. The instrument provides up to 10 degrees of freedom to precisely co-align AFM tip, sample, and confocal objective while minimizing any mutual drifts between those parts to less than 5 nm per hour.

attocube systems AG  
[www.attocube.com](http://www.attocube.com)

### ibidi Heating System with New Gas Incubation



ibidi announces the release of a new Gas Incubation System for CO<sub>2</sub> and O<sub>2</sub>. The recently upgraded system allows for various experimental conditions including hypoxia and hyperoxia. The low-cost system for live cell imaging is easy to install and can be used on all inverted microscopes, providing full incubator conditions (temperature, CO<sub>2</sub>, and humidity). The system is suitable for all ibidi-Slides, ibidi-Dishes, multi-well plates, and non-ibidi formats.

ibidi, LLC  
[www.ibidiusa.com](http://www.ibidiusa.com)

### QImaging Launched the New optiMOS Scientific CMOS (sCMOS) Camera for Fluorescence Microscopy



An alternative to traditional CCD cameras, optiMOS captures fast cellular dynamic events across a larger field of view without compromising sensitivity. The features include 2.1 megapixels at 100 Frames Per Second (FPS) compared to 1.4-megapixel at 10 FPS for the typical CCD camera, achieves 45 percent larger field of view than standard 1.4-megapixel fluorescence CCD cameras, and lower electronic noise enables high frame rates without compromising sensitivity.

QImaging  
www.QImaging.com

### FEI Announces New ExSolve High-Throughput TEM Sample Preparation Workflow



ExSolve™, an automated, high-throughput sample preparation workflow for transmission electron microscopy (TEM) analysis. The ExSolve wafer TEM prep (WTP) dramatically reduces the cost and increases the speed of sample preparation, providing semiconductor and data storage manufacturers with quick and easy access to the data they need to verify and monitor process performance. ExSolve can prepare site-specific TEM lamella, sampling many sites per wafer in a fully automated process inside the fab.

FEI Company  
www.fei.com/exsolve

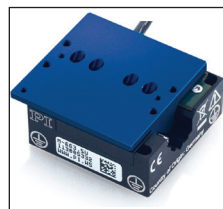
### The Universal LED Light Source



CoolLED Ltd. announces the launch of its new pE-4000 LED source. This new product sets the standard as the universal light source for fluorescence microscopy. It operates either as a simple white light source mercury and metal halide replacement or as an advanced, fully controllable, excitation source. At the center of the pE-4000, CoolLED's novel, patent-pending wavelength grouping concept allows more power and lower cost, whilst achieving compatibility with all single- and multi-band filter sets.

CoolLED Ltd.  
www.coolled.com

### Miniature Positioning Stage Driven by Ceramic Motor



Precision positioning specialist PI (Physik Instrumente) released a more affordable version of the M-663 piezo motor positioning stage for new applications where speed, repeatability, and compact dimensions are critical but nanometer resolution is not required. In the size of a matchbox, it integrates a high-speed ceramic linear

motor, a precision guiding system, and an optical linear encoder. The self-locking motor provides stability, reduces heat, is non-magnetic, and is vacuum-compatible.

Physik Instrumente  
www.physikinstrumente.com

### Diatome PP3010T Cryo-SEM Preparation System



The PP3010T is a highly automated, easy to use, column-mounted, gas-cooled cryo preparation system suitable for most makes and models of SEMs, FE-SEMs, and FIB/SEMs. The PP3010T has all the facilities needed to rapidly freeze, process, and transfer specimens. The cryo preparation chamber is turbomolecular-pumped and includes tools for cold fracturing, controlled sublimation, and specimen coating. The specimen can then be transferred onto a highly stable SEM cold stage for observation.

Diatome U.S.  
www.emsdiasum.com

### "Two-in-One" Transilluminator Provides Both Ultraviolet and White Light Illumination



The advanced Spectroline® Bi-O-Vision™ Series transilluminators feature two workstations, producing both 312 nm ultraviolet and white light. The TD-1000R model offers fixed-intensity, whereas the TVD-1000R model offers variable-intensity control of either UV or white light. These units are continuously adjustable from 100% down to 50%. This enables life science researchers to select medium wavelength ultraviolet or white light illumination to view fluorescent gels or visible blots.

Spectroline, Corp.  
www.spectroline.com

### Olympus Debuts Functional Brain Mapping and High-Speed Physiology Multiphoton System



The Olympus FluoView® FVMPE-RS, a dedicated multiphoton microscope system, enables high-precision, ultra-fast scanning and stimulation, allowing researchers to see deep within specimens, take measurements at the highest speeds, and capture images even when working under the most demanding conditions. With its high-speed and precision performance, the FVMPE-RS is designed for electrophysiology and optogenetics studies. Its design offers ready adaptability for researchers who design their own custom-built optical delivery as well.

Olympus America Inc., Scientific Equipment Group  
www.olympusamerica.com/FVMPE-RS

### Toshiba Imaging's New Ultra-Compact 1-Chip CMOS



Toshiba Imaging Systems Division announced the release of the second in a series of HD remote-head cameras. The new IK-HR3H is a feature-rich, 1-chip CMOS, 2.1-megapixel video camera that provides optimal color accuracy and advanced noise-reduction technology via a 1/3-inch, 1080p

high-definition sensor. The ultra-small remote head (only 1.08 in. × 1.08 in. × 1.3 in.), delivers up to 900 TV lines of resolution and features high sensitivity and wide dynamic range.

Toshiba America Information Systems, Inc.  
www.toshibacameras.com