

IndustryNews

Agar Scientific and Nikalyte Partner to Release New Nanoparticle Deposition System



Agar Scientific and Nikalyte announce their partnership and introduce the NL50, a benchtop, one-touch nanoparticle deposition system suitable for any laboratory studying the applications of nanoparticles. The NL50 consistently produces a coating of nonagglomerated, ultra-pure nanoparticles in a wide choice of ultra-pure materials including Au,

Ag, Cu, Pt, Ir, Ni, Ti, and Zr.

Agar Scientific
www.agarscientific.com

Harness the Power of Nanoscopy



Olympus announced a new partnership with Abbelight, enabling delivery of multimodal

imaging solutions that expand research possibilities. Combining the stability and precision of Olympus inverted microscopes with Abbelight's barrier-breaking single-molecule localization microscopy (SMLM) technology, structures and dynamics are revealed at the nanoscale on any inverted Olympus microscope. SMLM technology offers localization precision down to $10\text{ nm} \times 10\text{ nm} \times 15\text{ nm}$ (XYZ), nearly 10 times higher resolution than standard confocal systems; a large field of view of up to $150 \times 150\ \mu\text{m}$; and simultaneous multicolor dSTORM imaging at the nanoscale.

Olympus Corp.
www.olympus-lifescience.com/en/ask-the-experts/webinars/imaging-multiple-subcellular-structures-at-the-nanometer-scale-in-3d

Announcing the New DICP-DENS Microscopy Centre



Dens believes that it is now more important than ever to expand our efforts enabling fundamental research in the fields of catalysis and sustainable energy. We have partnered with the Dalian Institute of Chemical Physics

(DICP) in China to accelerate this field and achieve results together. The establishment of the DICP-DENS *in-situ* electron microscopy technology application laboratory was celebrated with a ceremony held at DICP, with numerous speakers sharing their areas of expertise.

Dalian Institute of Chemical Physics
<http://english.dicp.cas.cn/>

New Raman Spectroscopy Literature from Renishaw



Raman spectra tend to have thermal backgrounds or fluorescence, and these characteristics can adversely affect matching when performing

spectral library searches. They may also lead to a degradation in accuracy when determining components as part of quantitative analysis. Renishaw has several new documents on Raman spectroscopy that are free for download, including Removing Backgrounds with Intelligent Fitting, Empty Modelling Method for Analyzing Large Datasets, and Masking Data to Target Only Relevant Data.

Renishaw
www.renishaw.com

Tomocube Label-Free Holotomography Microscope Opens up Advanced Platelet Research

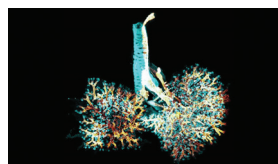


Tomocube's cutting-edge 3D quantitative phase imaging is set to play a crucial role in platelet research, according to a new paper from scientists at the

University of York (UK). Using holotomography images generated by the Tomocube HT-2H microscope, the team was able to identify and quantify clear disparities in activation status and potential functional ability in disease states of single, un-labeled, live platelets without experimental interference, such as from fixation or labeling.

Tomocube
www.tomocube.com

Miltenyi Biotec Image Contest



Miltenyi Biotec is pleased to announce the winners of the 2020 North America Microscopy Award Competition. Researchers across North America were invited to submit images and video from biological samples imaged with MACS Imaging

and Microscopy systems. Entries were judged based on biological complexity, sample quality, degree of labeling, and scientific relevance. The Grand Prize Winner was a video titled "Light sheet microscopy enables comparative analysis of branching morphogenesis in the intact developing human lung" by Soula Danopoulos.

Miltenyi Biotec
www.miltenyibiotec.com/US-en/lp/north-america-microscopy-award.html

Scientific Volume Imaging (SVI) Announces Huygens Software 20.10



A new Huygens software release has several new features, including a new user portal for Floating & Everywhere license administration; addition and management of new users; support for Airyscan 2

data; and a new Workflow Processor that shows previews of the result image during and after processing. Huygens Python scripting for manipulation of images and single-molecule localization microscopy localization tables are also available. Several minor aspects of the software have also been updated.

Scientific Volume Imaging
<https://svi.nl>

Applied Physics Technologies to Open Hillsboro Location

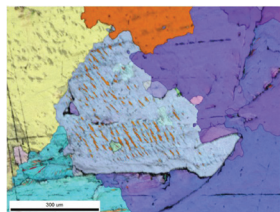


A worldwide leader in design and manufacture of precision parts for scientific research, APTECH plans

to relocate their research and development team from McMinnville to Hillsboro, Oregon. This will expand manufacturing capabilities in McMinnville and the hiring of additional staff (development engineers, lab technicians, manufacturing personnel). The new location will provide a state-of-the-art research laboratory where APTECH's R&D team works with companies across the globe to design custom electron emitter solutions to expand the potential application of thermionics.

Applied Physics Technologies (APTECH)
www.a-p-tech.com

Removing the Oxide Layer from Magnesium Alloys to Allow Successful EBSD Data Collection



The latest experiment brief from EDAX shows how the combined analytical power of EDAX and Gatan products can improve results. It highlights the Gatan PECS™ II broad beam ion mill's ability to successfully remove the oxide layer that quickly forms on magnesium alloys without introducing additional mechanical strain. The resulting specimen produces high-quality electron backscatter diffraction (EBSD) patterns, and the microstructure can be successfully analyzed with the EDAX Velocity™ Super EBSD Analysis System.

EDAX

www.edax.com/resources/experiment-briefs/removing-the-oxide-layer-from-magnesium-alloys-to-allow-successful-ebsd-data-collection

TESCAN and 3D-Micromac AG Collaborate to Increase the Efficiency of Failure Analysis Workflows



The synergy between TESCAN and 3D-Micromac has created a solid base for significant time and cost savings in failure analysis (FA) workflows compared to standard approaches. The current application reduces FA time in most cases by at least 50%, and in some applications even 95%. On average, 75% of the overall time is saved by using TESCAN's industry-proven Plasma FIB-SEMs together with 3D-Micromac's flexible laser systems microPREP™ PRO.

TESCAN

www.tescan.com

3D-Micromac AG

<https://3d-micromac.com>

ZEISS and Max Planck Florida Institute for Neuroscience (MPFI) Announce Collaborative Research Partnership



Zeiss and MPFI have formed a research collaboration partnership. Using a LSM 980 NLO next-generation confocal microscope supplied by ZEISS, MPFI will use implanted GRADIENT INDEX (GRIN) lenses in combination with the Airyscan 2 area detector for deep brain functional neuroscience research. Max Planck Florida is part of the world-renowned Max Planck Society, and the only institute of its kind located in North America. The organization's imaging core is internationally recognized as a leader in cutting-edge neuroscience microscopy.

ZEISS

www.zeiss.com/microscopy/us/local/news/2021/zeiss-mpfi.html

Park Systems Selected for Forbes Asia's Best Under A Billion List for 2020



Park Systems was selected for Forbes Asia's Best Under A Billion list spotlighting 200 top-performing publicly listed companies in the Asia-Pacific region with sales under \$1 billion. Park Systems, founded in 1997 by Dr. Sang-il Park, is a global market leader in the atomic force microscopy (AFM) industry. Park Systems holds 32 patents in AFM technology that enable unprecedented high accuracy in sub-nanometer measurements, full automation metrology, and non-contact scanning.

Park Systems

www.parksystems.com

JEOL Imaging Contest



JEOL USA awarded two Grand Prizes to winners of its 2020 Electron Microscopy Image Contest and kicked off its 2021 Image Contest at the beginning of the new year. The

annual contest showcases JEOL microscope users' artistically or esthetically pleasing images with good composition, sharp focus, and technical competency, especially in the use of accelerating voltage. The Grand Prize Transmission Electron Microscope (TEM) Image award was given to Lita Duraine, of the Baylor College of Medicine in Baylor, Texas. The Grand Prize Scanning Electron Microscope (SEM) Image award was given to Flávio Loureiro, an engineer working in the laboratories of a Vallourec Group's plant located in Brazil.

JEOL Inc.

JEOL USA Image Contest Entries & Winners

[Note: There is no website for this item.]

Temperature-Controlled Microscopy Enhances Research of Chemical Processes in Polar Ice



Researchers at the Korea Polar Research Institute (KOPRI) are using Linkam's thermal analysis instrumentation for studies of crystallization properties and chemical reactions in polar ice, providing information on the changing polar ecosystem. KOPRI is a research organization

that uses problem-solving mechanisms to increase public awareness about the role of polar regions in climate change. The laboratory uses Raman and fluorescence spectroscopy and confocal and FTIR microscopy, in combination with Linkam temperature-control stages, to study samples at temperatures below their freezing point.

Linkam

www.linkam.co.uk

Excelitas Technologies Enhances MachVis Imaging Lens Software



To simplify the tasks of vision system designers and engineers, Excelitas offers its latest version of Qioptiq imaging lens selection software, MachVis 5.2 Lens Configurator. It identifies suitable lenses and generates useful supporting documentation based on basic user-provided parameters, making it an ideal tool for a variety of machine vision, semiconductor manufacturing, electronics manufacturing, flat panel display manufacturing, quality assurance, inspection, and logistics applications.

Excelitas Technologies

www.excelitas.com

Boston Microscopes Offers Used Microscopes



Boston Microscopes provides concierge application-driven support to help determine the best microscope/camera selection for specific requirements.

They offer a wide variety of new and used equipment with competitive pricing and technical expertise. Additionally, they offer affordable servicing to ensure that current and future instruments are maintained and optimized for use. Boston Microscopes also carries stages, fluorescence illuminators, objectives, anti-vibration tables, and a wide selection of other accessories.

Boston Microscopes

www.bostonmicroscopes.com

ProductNews

NANOVEA Mechanical Tester



The Nanovea Mechanical Tester Nano Module collects data at very low loads over 1 mm of distance, making it ideal for testing soft and

flexible samples. With independent load and depth sensors, large indenter displacement does not affect readings by the load sensor. The ability to carry out low-load testing over a range of 1 mm of indenter travel makes the system unique. In comparison, a typical travel distance for a nanoscale indentation system is below 250 μm . Applications include analysis of viscoelastic properties and testing of soft flexible materials, ceramics, glass, polymers, and metals.

Nanovea
<https://nanovea.com/>

Two-Level Systems All-in-One Multimodal Microscope

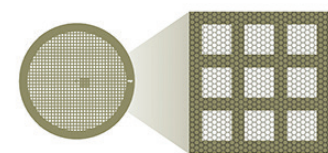


The MPX all-in-one multimodal microscope series combines single-photon, two-photon, higher harmonics, and brightfield imaging in one device. The microscope is a truly turnkey, integrated, compact, easy-to-use, maintenance-free, and easy-to-install imaging platform that offers refined multimodality. There are three standard models, and each can be upgraded with

various options and accessories to completely maximize the utility.

Two-Level Systems
www.two-levelsystems.com/multimodal-imaging

C-Flat™ Holey Carbon Grids Trial Packs

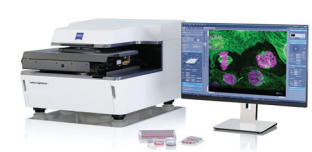


The premier holey carbon grid for cryo-transmission electron microscopy is now available in convenient trial packs. C-Flat™ holey carbon grids provide the ideal specimen support to achieve high-

resolution data in cryo-TEM, making them an ideal choice for single-particle analysis, cryo-electron tomography, and automated TEM analysis.

Electron Microscopy Sciences
www.emsdiasum.com/microscopy/products/grids/grids.aspx

ZEISS Light Sheet Microscope for Multiview Imaging



The ZEISS Lattice Lightsheet 7 provides a turnkey lattice light sheet instrument for the life science research community. The system is tailored for subcellular 3D observation of cellular processes in cells and small organisms over

extended time periods. Combined with full environmental control and an extremely stable optical setup, Lightsheet 7 allows observation of living specimens for hours or days. Lattice light sheet microscopy provides high-volume speeds with subcellular resolution and minimized light impact.

ZEISS
www.zeiss.com/microscopy

Digital Pathology Software from Augmentiqs

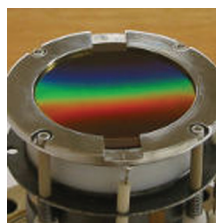


Augmentiqs is a platform for the deployment of digital pathology software applications directly from the

existing microscope. Counting Ki-67 positive cells is possible in just a single click, providing quantitative results with QuPath algorithms in seconds. The software supports Microvisioneer, enabling manual whole-slide scanning directly from the microscope. Augmentiqs real-time telepathology for remote users can be accessed via a web browser, enabling an unlimited number of participants to collaborate from any device, without having to download software.

Augmentiqs
www.augmentiqs.com

Better UV Spectral Measurements



McPherson manufactures high-performance spectrometers and purpose-built spectroscopy systems. Specializing in high-performance systems, McPherson provides state-of-the-art components and services for the soft X-ray and vacuum ultraviolet region. Optimized spectrometers for wavelengths as short as 1 nanometer and up to 20 microns, and energies from 0.05 eV up to 2 keV, are offered.

McPherson
www.mcphersoninc.com

New μ -Slide 8 Well High Slide from ibidi



ibidi's top-selling, all-in-one 8 well chamber slide has extra high individual walls to keep cross-contamination between wells as low as possible when performing high-resolution cell culture experiments.

With its thin ibidi polymer coverslip bottom, the μ -Slide 8 Well high slide allows for excellent cell adhesion onto the tissue culture-treated surface. It also has the highest optical quality and is ideally suited for a variety of microscopy techniques such as widefield fluorescence, confocal microscopy, and DIC.

ibidi
<https://ibidi.com>

EDAX Adds a New CMOS Camera



AMETEK EDAX has added a fast low-noise CMOS camera to its Velocity™ Electron Backscatter Diffraction (EBSD) Camera series. The Velocity Pro offers high-speed EBSD mapping with the highest indexing performance on real-world materials. The Velocity EBSD

Camera series now includes three cameras tailored to specific EBSD analysis applications: the Velocity Pro which collects up to 2,000 indexed points per second, Velocity Plus which collects up to 3,000 indexed points per second, and the Velocity Super which collects up to 4,500 indexed points per second.

EDAX
www.edax.com

Pfeiffer Vacuum Presents New Turbopumps



The HiPace 350 and 450 Pfeiffer Vacuum turbopumps are designed for several applications including mass spectrometry, electron microscopy, metrology, particle accelerators, and plasma physics. They offer a broad range of applications including coating, research and development, and industrial applications. Based on a hybrid bearing, a combination of ceramic ball bearings on the fore-vacuum side and permanent magnetic radial bearings on the high-vacuum side, these

HiPace turbopumps have a robust bearing design and guarantee reliability.

Pfeiffer Vacuum
www.pfeiffer-vacuum.com

Mountains® 8.2 Software Release



Mountains® 8.2 is the latest version of Digital Surf's surface imaging, analysis, and metrology software

platform for profilometry, scanning electron microscopy, atomic force microscopy, scanning probe microscopy, and spectroscopy. Mountains 8 customers can upgrade to the new version. For new customers a free trial is available.

Digital Surf
www.digitalsurf.com

Element Pi Introduces Triple-Source Thermal Evaporator



The DTT is a compact, highly flexible desktop triple-source thermal evaporator system for high-vacuum pressure deposition of multilayer thin films or alloys. The desired low-vacuum pressure is reached within minutes of sample loading for precise coating using boats, baskets, or crucibles. Customization includes adjustable chamber height,

choice of turbomolecular oil-free pumping, larger power supplies, and substrate heating and cooling. Applications include metal and dielectric films, sensor fabrication, optical, nano and microelectronic devices, and electron microscopy.

Element Pi
www.elementpi.com

Excelitas Introduces the New X-Cite NOVEM High-Power 9-Channel LED Illuminator



This new LED illuminator is ideally suited for challenging applications that require high excitation power and individual wavelength control. The NOVEM is available in four configurations featuring nine high-power switchable channels ranging from Fura-2 to IR800 (340 nm to 785 nm) for all fluorescence applications. Incorporating X-Cite's patented LaserLED Hybrid Drive®, it provides increased excitation in the 500–600 nm range, while its ultra-efficient design for thermal management means super-quiet operation, even at full capacity.

Excelitas
www.excelitas.com

JEOL Announces New Cold Field Emission Cryo-Electron Microscope



The CRYO ARM 300 II provides improvement of resolution in single particle analysis (SPA). To support the cryo-EM workflow from sample screening to image data acquisition, it is important to improve throughput for image data acquisition. In the CRYO ARM™ 300 II, precise movement of the specimen stage is combined with beam-shift performance for high-speed data acquisition. In addition, a “Koehler mode” illumination provides uniform beam illumination onto a specific sample site, enabling acquisition of more from a smaller area.

JEOL
www.jeolusa.com

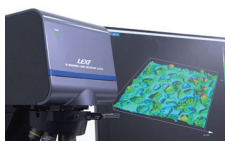
Cryo-FIB Long Operation Upgrade Kit



SubAngstrom's Long Operation Upgrade kit allows operation of a cryo-FIB for several weeks at a time. The upgrade also provides approximately 36 hours of continuous operation and up to one week of operation on a single fill, depending on the final configuration. The upgrade also provides seamless refill.

SubAngstrom
https://subangstrom.com

LEXT™ OLS5100 3D Laser Scanning Microscope: Smart Workflow, Faster Experiments

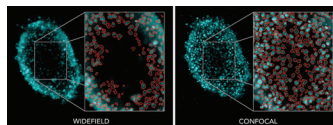


Built for fast failure analysis and material engineering experiments, the OLS5100 laser scanning microscope combines guaranteed measurement accuracy with smart tools that make the system easy to use. The new Smart Experiment Manager automates time-consuming tasks

such as creating an experiment plan, and data automatically populate the plan during acquisition. The Smart Lens Advisor also helps in choosing the right objective for an application.

Olympus
www.olympus-global.com

Cytation™ C10 Confocal Imaging Reader



BioTek's new Cytation™ C10 Confocal Imaging Reader combines automated digital confocal and widefield microscopy with conventional multi-mode microplate reading. The spinning disk confocal module provides increased resolution and optical sectioning capabilities, complementing widefield fluorescence, brightfield, and phase contrast imaging modes. The multi-mode reader has variable bandwidth monochromator-based optics for specificity and sensitivity. System control and image and data analysis are provided by BioTek's Gen5 software.

BioTek
www.biotek.com