Angstrom Science, Inc

Tel +1-805-689-0970
Email: info@angsci.com
www.angstromscience.com

Access™ Atomic Force Microscope (AFM)

APPLICATIONS: Combine AFM + Light Microscope

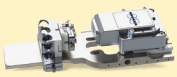
- Fits on sample stage
- All AFM techniques

FEATURES: Low Cost

- Highest Sensitivity
- Lowest noise of any AFM
- Compact Design
- Easy to use.

Bruker Nano Surfaces and Metrology

Tel: 520-741-1044, ext. 1075
Email: Productinfo@bruker.com
www.bruker.com/nano



Hysitron PI 89 SEM PicoIndenter

APPLICATIONS: In-Situ Mechanical Experiments for SEM • Targeted Nanoindentation with EBSD • Heating up to 800°C • Nanoscratch • Data-Video Correlation

FEATURES: Hysitron PI 89 leverages the advanced imaging capabilities of SEM, FIBSEM, and PFIB, making it possible to perform quantitative nanomechanical testing while simultaneously imaging.

www.bruker.com/hysitron-pi-89

Hysitron PI 95 TEM PicoIndenter

APPLICATIONS: In-Situ Mechanical Experiments for TEM • Tensile Testing of Nanowires, Films, 2D Materials • Nanoscratch, Fatigue, Electrical, Heating • Data-Video Correlation

FEATURES: The only quantitative nanomechanical testing holder for TEM, enabling compression, tension, bending, scratch, and fatigue testing with simultaneous TEM observation of deformation behavior.

www.bruker.com/nanomechanical-testing

JPK NanoWizard 4 BioScience AFM

APPLICATIONS: BioAFM • Cell and Tissue Dynamics • Time-Lapse Studies on Molecules or Cells • Correlation with Optical Microscopy

FEATURES: NanoWizard 4 combines atomic resolution and fast scanning with rates up to 100 lines/sec and a large scan range of 100μm, all in one system.

www.bruker.com/BioAFM

Vutara VXL Super-Resolution Microscope

APPLICATIONS: Video-Rate, Single-Molecule Localization • Quantitative Super-Resolution Analysis • Correlative, High-Speed Confocal Imaging • Developmental Biology • Cardiology

FEATURES: Vutara VXL's speed, imaging depth, and resolution deliver significant advantages over competing approaches, adding real-time quantitative analyses and including pair-correlation, co-location, cluster, and live-cell analysis.

www.bruker.com/vutara

Dimension XR SPM

APPLICATIONS: Quantitative Nanomechanical Analysis • Multi-Dimensional Nanoelectrical Characterization • Highest Resolution Scanning Electrochemical Imaging • Nanoscale Viscoelastic Analysis of Polymers

FEATURES: Packaged solutions for advanced, quantitative nanomechanical, nanoelectrical, and nanoelectrochemical research of materials and active nanoscale systems in air, fluid, electrical or chemically reactive environments.

www.bruker.com/DimensionXR

Anasys nanoIR3 Spectrometer

APPLICATIONS: Hyperspectral NanoIR Spectroscopy Correlated to FTIR • Nanoscale Chemical Imaging • Complementary Tapping AFM-IR and s-SNOM 2D Materials Characterization • Semiconductor Failure Analysis

FEATURES: The nanoIR3 provides IR-based chemical imaging and mapping of chemical variations of sample. Point spectroscopy capabilities enable both spectroscopy and chemical imaging with a single source.

www.bruker.com/nanoIR

Ultima 2Pplus Multiphoton Microscope

APPLICATIONS: Neuroscience • Intravital Imaging • Optogenetics • Photoactivation and Photostimulation Experiments • In Vivo Imaging

FEATURES: Ultima 2Pplus delivers an ideal combination of flexibility, resolution, imaging depth and speed, allowing simultaneous imaging, stimulation and electrophysiology protocols with greater efficiency and effectivity.

www.bruker.com/ultima

Contour X 3D Optical Profilometer

APPLICATIONS: MEMS Characterization • Precision Machined Component Metrology • Tribology and Corrosion Analysis • High-Brightness LED Measurements • Opthalmic Characterization

FEATURES: The Contour X utilizes over four decades of white light interferometric (WLI) innovation to deliver production-ready automation, measurement-angle flexibility, outstanding imaging, and proven gauge-capable surface metrology.

www.bruker.com/ContourX

Bruker Nano Analytics

Tel: 1-800-234-9729
Email: info.bna@bruker.com
www.bruker.com/nano-analysis

Electron Microscope Analyzers

PORTFOLIO: Energy-Dispersive X-ray Spectrometry (EDS) • Wavelength Dispersive X-ray Spectrometry (WDS) • Electron Backscatter Diffraction (EBSD) • Micro X-ray Fluorescence (Micro-XRF) on SEM • XFlash® Silicon Drift Detectors (SDD) for SEM and TEM

FEATURES: Bruker Nano Analytic's electron microscope analyzers QUANTAX EDS, QUANTAX WDS, QUANTAX EBSD and QUANTAX Micro-XRF on SEM offer unmatched comprehensive compositional and structural materials analysis.

www.bruker.com/nano-analysis

Bruker Optics

Tel: (978) 439-9899
Email: info.bopt.us@bruker.com
www.bruker.com/optics

LUMOS II FTIR Microscope

APPLICATIONS: Polymer Investigation • Surface Analysis • Particle Analysis • Pharmaceuticals • Life-Science • Forensics • Electronics • Automotive • Environmental

FEATURES: Incredibly fast FTIR imaging, where each pixel is composed of an entire FTIR spectrum. This results in superb spatial resolution and peak sensitivity in all measurement modes. Delivers the best performance in transmission, reflection and attenuated total reflection (ATR) measurements. Detect and immediately characterize tiny particles, product defects or tissue anomalies. Easily analyze any sample type of any origin.

www.bruker.com/LUMOS

CytoViva, Inc.

Tel: 334-737-3100
Email: info@cytoviva.com
https://cytoviva.com/

APPLICATIONS: Nano-drug delivery • Nanotoxicology • Nanomaterials Synthesis • Exosomes • Digital Pathology

FEATURES: CytoViva provides hyperspectral microscopy coupled with Enhanced Darkfield illumination to image and map nano-scale entities down to 10 nm in cells, tissue and emulsions/liquids, etc.

Deben

Tel: +44 (0) 1359 244 970 & +1 (201) 962 7222
Email: paulg@deben.co.uk
www.deben.co.uk

In-situ testing for microscopy

APPLICATIONS: • Microtest tensile and compression stages • Micro CT tensile, compression and torsion stages • STEM & BSE detectors for SEM • Centaurus scintillator CL and backscattered electron (BSE) detectors • SEM heating and cooling Peltier stages

FEATURES: Deben manufactures in-situ testing stages as well as innovative accessories for SEM, Optical, AFM, XRD and X-ray tomography.

DECTRIS Ltd.

Tel: +41 56 500 21 00
Email: info@dectris.com
www.dectris.com

QUADRO

APPLICATIONS: • Electron diffraction • 4D STEM • Strain Mapping • Ptychography • *In-situ* TEM

FEATURES: The QUADRO offers direct electron detection, region of interest feature, up to 18,000 frames/sec readout, noise-free electron counting, and the ideal DQE.

www.dectris.com/products/quadro/

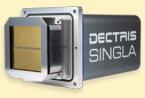
Additional products...

ELA

APPLICATIONS: • Electron Energy Loss Spectroscopy (EELS) • Elemental mapping • 4D STEM

FEATURES: The ELA detector offers 4,500 full frames/sec and can go even faster for sub-areas without compromising the sensitivity and the high dynamic range.

www.dectris.com/products/ela/



SINGLA

APPLICATIONS: • Single-particle CryoEM • Electron tomography • MicroED • Small-molecule crystallography

FEATURES: The SINGLA allows for electron counting up to 10^7 electrons/pix/sec and a continuous readout at over 2,000 frames/sec.

www.dectris.com/products/singla/

DiATOME U.S.

Tel: 215-412-8390
Email: diatome_us@hotmail.com
www.emsdiasum.com

DiATOME cryo Diamond Knives

APPLICATIONS: Available for wet or dry sectioning with a 25°, 35° or a 45° angle. Cutting edge sizes 1.5-4mm. Use for all low-temperature situations such as sectioning of cryo-protected specimens, frozen hydrated specimens, polymers, and rubber.

FEATURES: DiATOME...at the forefront of cryo innovation..

EMF, A Dynasil Company

Phone: +1-800-456-7070
Email: information@emf-corp.com
https://dysl.li/emf/microscopy

Metal-coated Microscope Test Slides

APPLICATIONS: EMF's metal-coated microscope test slides are used in corrosion testing, scanning probe and Atomic Force Microscopy (AFM), Raman spectroscopy, microarrays, cell culture, biological and clinical research, analytical chemistry, electronics fabrication, industrial testing, and academic research in schools and universities.

FEATURES: Slides are individually polished, cleaned, and inspected to maintain the highest standards. Substrates are pre-cleaned in a vacuum using an ion glow.

GOLD: 1000Å of Au coated with 50Å binder layer of either Chromium or Titanium

SILVER: Bare Ag at 1000Å

COPPER: Cu ~500Å, conforms to ASTM D2671/IPC-TM-650

ALUMINUM: Bare Al at 1000Å

EDAX

Tel: (201) 529-4880
Email: info.edax@ametek.com
https://www.edax.com

Velocity™ EBSD Camera Series

APPLICATIONS: Scanning Electron Microscopes (SEMs) • Electron Backscatter Diffraction (EBSD) • Simultaneous Energy Dispersive Spectroscopy (EDS)-EBSD Collection • Lower Symmetry, Multi-Phase, or Deformed Structures • In-situ and 3D EBSD Applications

FEATURES: Powered by a CMOS sensor, the Velocity combines fast acquisition with high sensitivity and low noise performance for optimal collection and data quality.

https://www.edax.com/velocity

Electron Microscopy Sciences

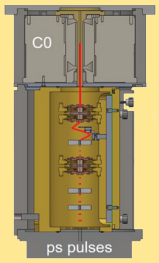
Tel: 215-412-8400
E-mail: stacie@ems-secure.com
www.emsdiasum.com

EMS-002 Cryo Workstation

The EMS-002 Cryo Workstation is a complete ultra rapid freezing system that captures rapid events and labile structures that are not seen in chemically fixed materials.

Euclid Techlabs, LLC

Tel: (301) 637-0669
Email: info@euclidtechlabs.com
www.euclidtechlabs.com



UltraFast Pulser

APPLICATIONS: • Affordable UTEM/SEM • Low Damage/Dose with Sensitive Samples • Picosecond Pump-Probe Stroboscopy • Sample Vibration Mitigation • EELS/Holography Compatibility

FEATURES: Field-retrofittable laser-free UEM pulser preserves native gun performance and offers adjustable 10ps-DC pulse width, Hz-10GHz repetition rate, and breakthrough stroboscopic/low-dose imaging rapidity.

Evactron by XEI Scientific, Inc.

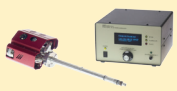
Tel: 650-369-0133
Email: sales@evactron.com
www.evactron.com

Evactron® E50 E-TC Plasma De-Contaminator

APPLICATIONS: In-situ hydrocarbon removal • SEM/FIB large chamber cleaning • TKD/EBSD sample optimization • SEM sample and TEM holder cleaning • Accurate nanostructure characterization

FEATURES: External hollow cathode 50 watt plasma source with touchpad control, fast cleaning/pump-down of large chambers, "POP" ignition at high vacuum - no venting needed.

https://evactron.com/products/



Evactron® TEM Wand

APPLICATIONS: Atomically thin 2-D materials • Nanoparticles and 1D materials • Atomic resolution imaging and chemical mapping • In-situ microscopy • Microstructure and mechanics deformation

FEATURES: Remove hydrocarbon contamination from JEOL TEM/STEM columns, 12 watt maximum power to clean sensitive objective lens surfaces, uses air to generate energy-efficient plasma.

https://evactron.com/evactron-tem-wand-plasma-de-contaminator/

Excelitas Technologies

Tel: (+1) 800-775-6786
Email: photonics@excelitas.com
https://www.excelitas.com

X-Cite® Fluorescence Illumination Solutions

Email: x-cite@excelitas.com

APPLICATIONS: • Digital Pathology or Virtual Microscopy • Fluorescence in Situ Hybridization (FISH) • Fluorescence Resonance Energy Transfer (FRET) • Live Cell Imaging • Optogenetics • Photoactivation

FEATURES: X-Cite offers innovative and reliable fluorescence illumination solutions for researchers and OEM integrators, with the high power, control and stability required for their applications.

https://www.excelitas.com/product-category/x-cite-illuminators

Additional products...

Optem® FUSION Micro-Imaging System

Email: photonics@excelitas.com

APPLICATIONS: Machine vision • Variable magnification imaging • Non-contact optical dimensional metrology •OEM integrated microscopy • Automated Optical Inspection

FEATURES: Optem Lenses feature interchangeable Mounting, Camera Tube, Optomechanical Function and Lower Magnification modules to enable users to configure their exact form, function and performance requirements.

https://www.excelitas.com/product/optem-fusion-micro-imaging-system

mag.x System 125

Email: photonics@excelitas.com

APPLICATIONS: • Technical microscopy • Flat-panel display inspection • Semiconductor inspection & processing • Widefield biomedical imaging • Micro measurement & metrology • Scientific R&D

FEATURES: The mag.x system 125 represents a new class of optical systems that enables microscope-like resolution with wide fields-of-view supporting modern high resolution sensors up to 57 mm diameter.

https://www.excelitas.com/product/magx-125-widefield-microscope-system

iFLEX Diode Lasers

Email: photonics@excelitas.com

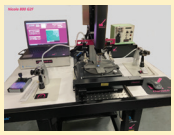
APPLICATIONS: • Confocal microscopy • Optogenetics • Flow cytometry • Test & measurement • Biomedical imaging & instrumentation

FEATURES: iFLEX Lasers deliver exceptional power stability with low amplitude noise. kineFLEX™ fiber delivery options ensure stable intensity with sub-micron positional accuracy and streamlined system integration.

https://www.excelitas.com/product-category/iflex-lasers

EXpressLO LLC

Tel: +1-321-663-3806
Email: info@EXpressLO.com
www.EXpressLO.com



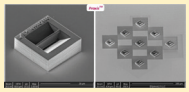
Nicola G2/G2F *ex situ* lift out and micromanipulation system

APPLICATIONS: *ex situ* lift out • micromanipulation • particles, fibers, thin films • backside or plan view manipulation • FIB/SEM/TEM specimen preparation

FEATURES: EXpressLO™ patented grids and methods allow fast, easy, and flexible manipulation of FIB lift out specimens, fibers, particles, thin films, CNTs, and more.

https://www.expresslo.com/ex-situ-lift-out-systems.html

Additional products...

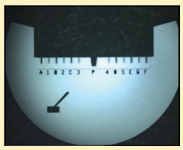


Praxis™ 3D Printed Samples

APPLICATIONS: *ex situ* lift out • *in situ* lift out • manipulation practice and training • reduce FIB costs for practice and training • access to an array of many samples

FEATURES: The patented *Praxis*™ 3D printed specimens can be used for EXLO or INLO methods, for training, practice, and educational purposes.

https://www.expresslo.com/praxis-.html



EXpressLO-Z™ Grids

APPLICATIONS: *ex situ* lift out • *in situ* lift out • reduce fluorescence • eliminate elemental overlaps • heating experiments

FEATURES: The patented *EXpressLO-Z*™ nanocrystalline diamond grids can be used for EXLO or INLO to avoid fluorescence or elemental overlaps between the grid and specimen. Available in half-grids or full 3 mm grids.

www.expresslo.com

HREM Research Inc.

Tel: (+81) 03-5213-4689
Email: support@hremresearch.com
https://www@hremresearch.com

DigitalMicrograph Plug-ins

APPLICATIONS: STEM and EELS Deconvolution; Strain Mapping from TEM/STEM images, STEM Moiré or Dark-field Holography; Noise Filters for TEM/STEM images, Scan Noise corrector, MSA for SI data; Phase Reconstruction from HRTEM, DPC or 4D-STEM, Live Electron Holography, and more.

FEATURES: Our DigitalMicrograph plug-in Suite for Quantitative Electron Microscopy will help you to obtain quantitative information that has not been accessible in the past, from your data taken from an electron microscope.

ibss Group, Inc.

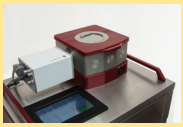
Tel: +1-650-513-1488
Email: admin@ibssgroup.com
www.ibssgroup.com

GV10x Downstream Asher

APPLICATIONS: In-situ contamination control • Long MFP plasma cleaning • FIB/SEM, SIMS, XPS, TEM, CDSEMs, Review SEMs

FEATURES: High to low power pressure (<$5e^{-3}$ Torr, $6.7e^{-3}$ mBar, $6.7e^{-1}$ Pascal), long mean free path plasma for cleaning chambers and specimens in-situ. User operation via ibss Controller and/or Windows PC

http://ibssgroup.com/products/gv10x/

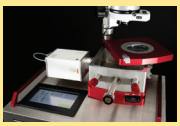


Mobile Cubic Asher

APPLICATIONS: In-situ & Ex-situ contamination control • SEM/FIB/TEM/SIMS/XPS • Sample Cleaning • Storage

FEATURES: Mobile downstream plasma cleaning center for specimen & in-situ EM cleaning, employs ibss signature GV10x Qwk-Switch source operated via touchscreen panel, fitted into one convenient enclosure.

http://ibssgroup.com/products/mca/



Chiaro

APPLICATIONS: In-situ & Ex-situ contamination control • SEM/FIB/TEM/SIMS/XPS • Sample Cleaning • TEM holder view & storage

FEATURES: View / store TEM holders using gas and liquid samples, the Chiaro performs functions of leak check, E-Chips, hydrophilize sample surfaces and plasma cleaning.

http://ibssgroup.com/products/chiaro/

International Centre for Diffraction Data

Tel: 610-325-9814
Email: info@icdd.com
www.icdd.com

Powder Diffraction File

APPLICATIONS: X-ray Powder Diffraction • Database • Software • Electron Diffraction • Education

FEATURES: The Powder Diffraction File™ (PDF®) is a collection of single-phase X-ray powder diffraction patterns for rapid phase identification designed to support automated quantitative analyses.

http://www.icdd.com/ICDD-Sales-Catalog.pdf

IXRF Systems

Tel: 512-386-6100
Email: info@ixrfsystems.com
ixrfsystems.com

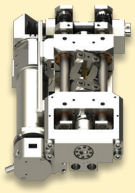
ATLAS M

APPLICATIONS: • Hyperspectral XRF microscopy • ASTM E2926 forensic glass • Semiconductors / electronics • Life sciences (botany, biology) • Archaeometry

FEATURES: ATLAS M benchtop micro-XRF spectrometer general purpose (5μm spot) energy dispersive X-ray fluorescence (EDXRF) spectrometer for measurement/mapping of elements from sodium (Na) through uranium (U).

Kammrath and Weiss

Tel: (516) 313-9742
Email: Sales@kammrathandweiss.com
https://www.kammrath-weiss.com/en/

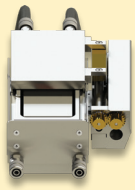


In-Situ Tensile/Compression module

APPLICATIONS: Materials Science, Mechanical Engineering, Failure Analysis, Product Development

FEATURES: Vacuum and Benchtop compatible, compact for In-Situ SEM/FIB operation, from Micro Newton to 10k Newton range with exchangeable load cells, single-axis or Bi-axial models, heating and cooling options.

https://www.kammrath-weiss.com/en/products/materials/tensile-compression.html



Transfer module

APPLICATIONS: Materials Science, Mechanical Engineering, Failure Analysis, Product Development

FEATURES: Transfer sensitive samples from glovebox to vacuum chamber, Vacuum compatible, SEM/FIB compatible, heating and cooling options

https://www.kammrath-weiss.com/en/products/materials/transfer-module.html

Mad City Labs Inc.

Tel: +1 608 298-0855
Email: sales@madcitylabs.com
www.madcitylabs.com

Nanopositioners, AFM, NSOM, Single Molecule Microscopes, Modular Microscopy

APPLICATIONS: Piezo nanopositioners for sample scanning and objective lens movement • Atomic Force Microscopy (AFM) • Near Field Scanning Optical Microscopy (NSOM) • Single Molecule Fluorescence Microscopy • MicroMirror TIRF and Super Resolution Microscopy

FEATURES: Closed loop nanopositioners with proprietary high stability PicoQ® sensors. Designed for nanoscopy and microscopy applications. Unique MicroMirror TIRF single molecule microscope. Low cost AFM and NSOM with flexible configurations.

www.madcitylabs.com

Linkam Scientific Instruments Ltd.

Tel: +44 (0) 1737 363 476
Email: info@@linkam.co.uk
www.linkam.co.uk

THMS600 Temperature Control Stage

APPLICATIONS: • Precise temperature and environmental control from -195°C to +600°C (with liquid nitrogen cooling) • Compatible with most microscopic and spectroscopic techniques • Light microscopy, including polarized/ confocal/ fluorescence microscopy • FT-IR/ Raman spectroscopy • X-Ray, SAXS/ WAXS, and other beamline techniques

FEATURES: The most versatile heating and cooling stage available. Heating rates up to 150°C/min; cooling rates to 100°C/min; better than 0.01°C temperature accuracy and resolution. Options for gas control, humidity, pressure, vacuum, and electrical measurements.

http://www.linkam.co.uk/thms600

CMS196V³ Cryo CLEM Stage

APPLICATIONS: • Self-contained cryo-correlative system for imaging vitrified samples • Avoids contamination with automated liquid nitrogen refilling and automated mapping • Grids can be mapped with high precision automated XY mapping to provide correlative information • Short start up time with high long-term stability and low drift • Compatible with Brightfield and Fluorescence microscopy

FEATURES: The CMS196V³ allows vitrified samples to be imaged with CLEM, enabling imaging and mapping of biological, chemical, and genetic processes. With integrated LED condenser for transmitted light and a self-aligning magnetic sample cassette system for up to three EM grids.

http://www.linkam.co.uk/cms196

Optical DSC450 Stage

APPLICATIONS: • DSC with image capture capability • Measure phase transition temperatures and enthalpy changes, and simultaneously image the sample via optical microscopy • Highly sensitive at low heating rates and with small samples • Provides correlative information alongside calorimetry of physical changes such as morphology, structure and color • Ideal for measuring and imaging glass transitions and melting peaks

FEATURES: The Optical DSC450 system is optimized for simultaneous high-quality image capture and calorimetry recording. With a temperature range from -150°C to +450°C (with liquid nitrogen cooling), with heating and cooling rates from 0.1°C/min to 30°C/min.

http://www.linkam.co.uk/dsc450

MFS Modular Force Stage

APPLICATIONS: • Ideal for tensile and compression testing of polymers, rubbers, composites, nanofibres and other material • Can be configured to meet the needs of many tensile, compression or bending applications • Versions available that are compatible with FT-IR and Raman microscopes and spectrometers as well as X-ray systems • Optional liquid cell module for biological or hydrogel samples • Wide range of testing grips including tensile, compression and 3-point bending

FEATURES: The MFS is a compact mechanical testing system with a modular design. Precise force control and measurement ranges from 0 to 2N up to 600N, with an optional module for temperature control from -195°C to +350°C.

http://www.linkam.co.uk/mfs

PE120 Peltier Stage

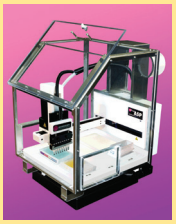
APPLICATIONS: • Precise Peltier temperature control for microscopy and spectroscopy • Ideal for biological and pharmaceutical samples • Suitable for measurements of temperature-controlled liquid crystals • Temperatures between -25°C and 120°C without liquid nitrogen • Options for XY and inverted microscope systems

FEATURES: The PE120 stage is a simple to use thermoelectrically cooled stage that accurately controls the temperature of microscope slides to +/-0.1°C from -25°C to 120°C. As a low-cost system, this stage is ideally suited to basic temperature application work.

http://www.linkam.co.uk/pe120

Microscopy Innovations

Tel: (715) 384-3292
Email: Info@microscopyinnovations.com
www.microscopyinnovations.com



ASP-1000 Automated Specimen Processor

APPLICATIONS: Biological TEM specimen prep • Serial block-face EM (3DEM) • Immunogold labeling (pre- or post-embedding) • Automated tissue processing • Customized workflows

FEATURES: ASP-1000 provides load-and-go convenience, one-touch specimen handling through resin-infiltration, batch-to-batch consistency/ reproducibility, simple set-up/clean-up, and accelerated processing (e.g., 46-minute kidney prep) for increased throughput.

https://microscopyinnovations.com/asp-1000-2/

Microtome Service Company

Tel: 315-451-1404
Email: Microtome.Svc.Co@verizon.net
http://www.microtomeserviceco.com

Microtome Sales, Service and Parts

APPLICATIONS: • Sorvall Microtomes and Ultramicrotomes • Rotory Microtome Repair • KnifeMaker Repairs • AO 820 & AO 860 Repairs • Fabricate & Modify Lab Equipment

FEATURES: Sales & Service of Sorvall, RMC, AO:820, 860 and Rotary Microtomes and GKM Knife Makers. Microtome & Lab accessories, fabrication and modifications to meet your specific needs. Microtome Rentals.

http://microtomeserviceco.com/index.php?route=information/information&information_id=7

Minitool Inc.

Tel: (408) 395-1585
Email: rschaller@minitoolinc.com
www.minitoolinc.com

Microtools and Instruments

APPLICATIONS: • Microscopy • Microbiology • Specimen Manipulation & Placement • Medical Research • Spectroscopy

FEATURES: Efficient, precise and realistically proportioned instruments in tip diameters from .025mm (.001″) to 1.0mm (.040″) are ideal for microscopists. Our line of micro-tools includes needles, gravers, chisels, knives, mirrors, probers, spatulas, hooks, scribes and microrulers. Also featured are micromanipulators, micro-sharpeners and microforceps. Tools are offered singly or in sets of eight tools with one handle to 32 tools with six handles.

www.minitoolinc.com

Navitar

Tel: 585-359-4000
http://www.navitar.com

Super Wide Angle 4K Imaging Lens

APPLICATIONS: Semiconductor defect inspection, cell imaging, FPD inspection, fluorescence microscopy and more

FEATURES: Modular, large FOV, fixed imaging systems with exceptional 4K image quality, use with large format 4/3”, 1.1” and 1” sensors for today's most demanding applications.

http://navitar.com/products/swa4k/

Object Research Systems, Inc.

Tel: +1-514-843-3861
Email: info@theobjects.com
www.theobjects.com

Dragonfly

APPLICATIONS: 2D and 3D image rendering and analysis

FEATURES: • Industry leading Deep Learning Segmentation Tools • Unparalleled high-definition image rendering • Workflow Ready and Extensionable • CT Reconstruction • State-of-the-Art Image Processing Filters

https://www.theobjects.com/dragonfly/index.html

Oregon Physics

Tel: +1 503 601 0041
Email: info@oregon-physics.com
www.oregon-physics.com

Hyperion II Dual Polarity Ion Source

APPLICATIONS: Negative and positive ion extraction • Bolt-on to existing optical system • Utilize variety of gas species • Supports surface analysis (SIMS) applications • Supports high current micromachining (PFIB) applications

FEATURES: Integrates on existing ion optical systems to deliver the highest brightness, best imaging resolution and longest source lifetime for SIMS applications or high current FIB.

http://www.oregon-physics.com/hyperion2.php

FIB Consumable Parts

APPLICATIONS: For FEI FIB columns • Suppressors • Extractors • Custom aperture strips • Standard aperture strips

FEATURES: High quality FIB replacement parts for FEI brand DualBeam and FIB systems at substantial cost savings. We offer fast delivery and discounts for volume orders.

http://www.oregon-physics.com/supressors-extractors.php

Custom Apertures

APPLICATIONS: Long life apertures for SIMS instruments • High Intensity Electron Beams • Plasma FIB systems • X-Ray Generators • Space Thrusters

FEATURES: Oregon Physics specializes in microscale apertures in custom configurations and materials. Possibilities include aperture arrays, high aspect ratio holes, tapered holes, and custom counterbores.

http://www.oregon-physics.com/aperture-strips.php

Park Systems

Tel: 408-986-1110
Email: inquiry@parksystems.com
www.parksystems.com

Park NX 12- Park NX12 features a versatile Inverted Optical Microscope (IOM) based SPM platform for SICM, SECM, and SECCM, in addition to Atomic Force Microscopy for research on a broad range of materials from organic to inorganic, transparent to opaque, soft to hard.

FEATURES: • Atomic Force Microscopy (AFM) for nanometer resolution imaging with electrical, magnetic, thermal, and mechanical property measurement capabilities • Pipette-based scanning system for high resolution Scanning Ion Conductance Microscopy (SICM), Scanning Electrochemical Microscopy (SECM), and Scanning Electrochemical Cell Microscopy (SECCM) • Inverted Optical Microscopy (IOM) for transparent material research and fluorescence microscopy integration

APPLICATIONS: Park NX12- Park NX12 was built from the ground up to accommodate the needs of multi-user facilities. Other AFM solutions lack the required versatility to address the diverse needs of users in these facilities, making it difficult to justify the equipment cost. The Park NX12, however, is built to accommodate standard ambient AFM, in-liquid SPM and optical imaging making it one of the most flexible AFMs available.

https://www.parksystems.com/index.php/products/small-sample-afm/park-nx12/technical-info

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www.pi-usa.us

PInano® Nanopositioning Solutions for Light-Sheet & Super-Resolution Microscopy

APPLICATIONS: Super Resolution Microscopy • Microscopy Stages • Atomic Force Microscopes (AFMs) • Positioning Stages & Controllers • Nanopositioners & Stages

FEATURES: 2nd Gen System • Two Versions: High Precision / High Precision and Stability • Cost-effective Piezoresistive Feedback Version Available • Extremely Fast Step & Settle, From 5msec • Low Profile: 20mm (0.8″) • 200µm Travel Ranges

www.pi-usa.us/microscopy

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www.pixelink.com

Industrial 10 GigE Cameras

APPLICATIONS: Automated inspection • sports analysis • 3D mapping • research • VT and AR applications

FEATURES: Pixelink's new high performing PL-X machine vision camera series with 10 GigE interface gives you speed, accuracy and reliability in a quick and easy set-up.

https://pixelink.com/products/industrial-cameras/10-gige-cameras/

Prior Scientific, Inc.

Tel: 781-878-8442
Email: info@prior.com
https://www.prior.com

OpenStand - Custom Microscopes & Optical Systems

APPLICATIONS: • Fluorescence Imaging • Cytology and Pathology • Metrology •Semiconductor • Confocal Imaging

FEATURES: The OpenStand is an economical microscope platform for developing custom OEM and one-off solutions. The OpenStand is supplied with the necessary components for your specific application which helps to reduce costs and future proof your design with the knowledge that additional automation, if needed, is available without having to replace all of your existing hardware.

https://www.prior.com/product/openstand-custom-microscopes-and-optical-systems

Special Optics

Tel: 973.366.7289
Email: sales@specialoptics.com
www.specialoptics.com

Custom Microscope Objectives

APPLICATIONS: Biomedical and Life Sciences, Machine Vision and Metrology, Research and OEM

FEATURES: We specialize in the design and manufacture of custom microscope objective lenses for researchers and OEMs who require a solution to a complex application that cannot be solved by off-the-shelf microscope objective lenses.

https://specialoptics.com/microscope-objectives/

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APPLICATIONS: • Life Sciences • Materials Science • Semiconductors • SEM

FEATURES: • Fine-grained, ultra-thin uniform and conformal coating • Wide choice of operating parameters to accommodate all sample types • Purpose designed with optimized vacuum pumping system • Rotary-Planetary-Tilting stage and high resolution thickness controller • Easy to operate with fast cycle times

www.tedpella.com/cressington.htm

PELCO BioWave® Pro+

APPLICATIONS: • Microwave Tissue Processing for EM • Light Microscopy • Immunolabeling and Decalcification

FEATURES: User-friendly run screens with live run-time graph • Simplified protocol selection • Report Protocol Manager App and two USB ports for simplified data transfer and custom protocol upload

www.tedpella.com/microwave_html/pelco-biowave-pro-plus-microwave-system.htm

PELCO® Dimpler™

APPLICATIONS: Materials Science • Semiconductor Failure Analysis • TEM

FEATURES: Precision specimen thinning to near electron transparency at the exact region of interest, increased productivity for thinning compared to ion milling alone, automated operation for ease of use

www.tedpella.com/Material-Sciences_html/PELCO-Dimpler.htm

PELCO® Tripod Polisher™

APPLICATIONS: Materials Science • Semiconductor Failure Analysis • TEM • SEM

FEATURES: Simple hand-held precision specimen preparation tool for thinning parallel to plane or angled to plane (wedge polishing) for thinning down to a region of interest or for electron transparency at the wedge tip, is easily used on any rotating metallographic grinder/polisher that has clear access to the platen surface.

www.tedpella.com/Material-Sciences_html/PELCO-Tripod-Polisher-590.htm

PELCO® Precision Lapping Fixtures

APPLICATIONS: Precision low deformation cutting of a wide variety of specimen types

FEATURES: PELCO® Lapping Fixtures allow for lapping of samples from <1/8" (3mm) to 1" (25mm) in diameter, and up to 1/2" (13 mm) thick. Micrometer and shim-controlled versions are available. Fixtures are equipped with tungsten carbide feet, which are highly resistant to wear from the lapping process.

www.tedpella.com/Material-Sciences_html/PELCO-Precision-Lapping-Fixtures.htm

PELCO® Precision Low Speed Saw

APPLICATIONS: Compact • multipurpose • low-damage cutting for all specimen types

FEATURES: Its low speed makes it possible to cut fragile materials that would otherwise fracture as well as soft materials that would load the diamond wheel on a higher speed saw. A variety of sample holders are available, providing a means for mounting any shape of sample.

https://www.tedpella.com/Material-Sciences_html/PELCO-Precision-Low-Speed-Saw.htm.aspx

Metallographic Consumables

APPLICATIONS: Materials Science, Metallography, Petrography, Semiconductor Failure Analysis

FEATURES: Wide selection, good quality, affordable prices.

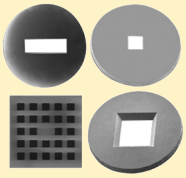
www.tedpella.com/Material-Sciences_html/metallography-overview.htm

PELCO easiGlow™

APPLICATIONS: • Life Sciences • Materials Science • TEM • Tomography

FEATURES: Precise and easy vacuum settings • Short cycle times • Consistent results • Intuitive touch screen for control and display • Supports hydrophilic/hydrophobic and negative/positive modes

www.tedpella.com/easiGlow.htm



PELCO® Silicon Nitride Support Films and TEM Supplies

APPLICATIONS: • TEM • STEM • Thin Film Research • Life Sciences • Materials Science

FEATURES: Holey SiN films down to 100nm • Solid membrane thickness of 8, 15, 35, 50 and 200nm • 3mm diameter frame fits standard TEM holders • EasyGrip™ edges for improved handling • Variety of window shapes and sizes

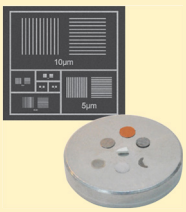
www.tedpella.com/TEM-supplies.htm

PELCO® Modular SEM/FIB Sample Holders and Supplies

APPLICATIONS: • SEM • FE-SEM • FIB • FIB/SEM • CLEM

FEATURES: Stage adapters for all major SEM brands • Large selection of effective and practical sample holders • Correlative microscopy sample holders • Conductive adhesives • Carbon tabs • Conductive tape

www.tedpella.com/SEM-supplies.htm



Optical Light Microscopy & SEM Calibration Standards

APPLICATIONS: Calibration Specimens for SEM, TEM, AFM • SPM, FIB, EDS • WDS and Optical Microscopes

FEATURES: X-Ray References Calibration for SEM: PELCO X-CHECKER™ • Pelcotec™ CDMS-XY: Critical Dimension Magnification Standards • AFM Gold Calibration Kit • AFM TipChecker • Magnification Calibration Calculators • Pelcotec™ LMS-20 G Magnification Calibration Standard • Stage Micrometers • Fluorescence Reference Slides

www.tedpella.com/calibration_html/Calibration_Overview.htm

NEW PELCO® Precision Wire Saw™

APPLICATIONS: A cutting solution for all samples.

FEATURES: • Utilizes a gentle abrasive lapping action resulting in minimal kerf loss, minimal subsurface damage, and very high quality surface finish • Can be equipped with diamond-embedded blades for dry or soft materials cutting, or plain stainless for cutting using continuously circulated abrasive slurry • Precision fixturing allows for precise alignment of specimens in almost any position • Suitable for sectioning, depackaging, and other failure analysis tasks.

https://www.tedpella.com/Material-Sciences_html/PELCO-Precision-Wire-Saw.htm.aspx

TESCAN

Tel: 1-724-772-7433
Email: info@tescan.com
https://www.tescan.com/

TESCAN CLARA

APPLICATIONS: Routine study and industrial inspection of metal samples at the nanoscale • Routine imaging of nanoparticles and agglomerates of all kinds • Analysis of beam sensitive and non-conductive materials • Analysis of plants, micro-organisms and other biological specimens • Morphological and elemental characterization of geological samples

FEATURES: Unique In-Beam BSE detector designs allow filtering of signal based on energy and take off angle • Excellent for imaging of beam-sensitive and non-conductive samples • Fast setup of electron beam – optimal imaging and analytical conditions guaranteed • UHR Field-free characterization of materials at low beam energies for maximum topography • Intuitive and precise live SEM navigation on the sample at low magnification without the need of optical navigation camera • Intuitive Essence™ software modular platform designed for effortless operation regardless of the user's skill level

https://www.tescan.com/product/sem-for-materials-science-tescan-clara/

TESCAN TIMA

APPLICATIONS: Applicable to Mining, Geoscience and Petroleum • Understand more about geology, mineralogy and petrology • Visualize and quantify exploration samples • Link geology and metallurgy for optimal mine planning and processing plant operation

FEATURES: Configurable data structure and workbooks to organize your measurements, images and results • Up to 4 EDS detectors for high-speed measurement of more samples, high mineral chemical resolution, good sampling statics, and high spatial resolution • Comprehensive Mineral Identification and composition tools • Optional robotic Auto-Loader with 100 sample magazine for 24/7 continuous unattended operation

https://www.tescan.com/product/sem-for-earth-sciences-tescan-tima/

TESCAN AMBER

APPLICATIONS: A field-free UHR-SEM combined with the most precise FIB for sample preparation, sub-surface and 3D analysis capabilities to take your materials nanocharacterization further

FEATURES: Ultra-high-resolution field-free SEM imaging and nanoanalysis • The highest precision micro sample preparation • Excellent low-keV ion beam performance • Multi-site FIB process automation • Multimodal FIB-SEM nanotomography • Extended field of view and easy navigation • Easy-to-use modular software interface

https://www.tescan.com/product/fib-sem-for-materials-science-tescan-amber/

SOLARIS X

APPLICATIONS: Curtaining-free large-area cross-sectioning for physical failure analysis of advanced packaging technologies • Observe the most beam-sensitive materials using low keVs ultra-high resolution for surface sensitivity and high material contrast • Prepare large area FIB-cross-sections up to 1 mm wide • Effective techniques and recipes for fast and artefact-free cross-sectioning of composite samples (OLED and TFT displays, MEMS devices, isolation dielectrics) at high currents

FEATURES: Obtain low noise, high-resolution image at low keVs in short acquisition time at FIB-SEM coincidence with the sample tilted • Live SEM-monitoring during FIB milling for precise end-pointing • Essence™ easy-to-use modular user interface • Easy-to-use modular software user interface • High precision nanopatterning engine for electron and ion beams • Multi-gas injection system with a variety of precursor gases

https://www.tescan.com/product/fib-sem-for-semiconductors-tescan-solaris-x/

DynaTOM

APPLICATIONS: The world's first dedicated dynamic micro-CT for your in-situ experimental needs • Multi-phase fluid flow in porous media • Tensile failure studies of structural alloys and composite materials • Crack propagation and fracture mechanics in engineered materials, geological samples and more • Hydration studies in porous materials from geoscience to consumer products • Crystal growth and mineralization in geo materials and construction materials • Plant germination, growth and decay • Freezing, melting and heating cycles in food science applications

FEATURES: Imaging of Delicate Samples • Gantry-based Design • Continuous Scanning • High Throughput • Unique Software Tools for 4D • Dynamic Screening for Synchrotron Beamtime • Acquila, a modular software architecture for tomographic acquisition and 3D reconstruction

https://www.tescan.com/product/micro-ct-for-earth-sciences-tescan-dynatom/

Sutter Instrument

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Email: info@sutter.com
www.sutter.com

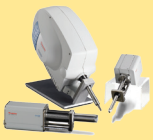
BOB - Open-Design Upright Microscope

APPLICATIONS: Fluorescence microscope • *In vivo* and *in vitro* microscopy • Life and Material Sciences • Photostimulation

FEATURES: The BOB is a compact, height-adjustable microscope that can be easily configured to different types of experiments, methods of illumination and means of signal detection.

Thermo Fisher Scientific

Email: info.spectroscopy@thermofisher.com
thermofisher.com/microanalysis



Pathfinder Microanalysis Platform

APPLICATIONS: • Energy-dispersive X-Ray spectroscopy (EDS) • Wavelength-dispersive X-ray spectroscopy (WDS) • Electron Backscatter Diffraction (EBSD) • Silicon Drift Detectors (SDD) • High throughput, accurate elemental analysis

FEATURES: Pathfinder provides highly accurate EDS & WDS quantification with high sensitivity EBSD for both routine and advanced analysis of the most challenging samples.

Voxa

Tel: 415-858-0398
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http://projectvoxa.com

Blade ultra-high-throughput TEM pipeline

APPLICATIONS: Ultra-high-throughput TEM • Conveyer belt / reel-to-reel automated microscopy • Sample delivery and stage automation • Serial section imaging • Combinatorial chemistry & materials screening

FEATURES: Blade™ is the world's fastest TEM pipeline, providing images at world record speeds up to 500Mpixels/second. 24/7 petascale automated conveyer belt delivery+analysis for 100's-100,000's of samples.

http://voxa.co/products/blade

Mochii portable spectroscopic SEM

APPLICATIONS: Energy-dispersive X-ray spectroscopy (EDS) • Scanning electron microscopy (SEM) • Elemental analysis and ID • Field portable microscopy • Remote microscopy

FEATURES: Award-winning Mochii™ fits in the overhead bin of an airplane, and performs sub-micron EDS analysis+imaging via wireless tablet anywhere, from underwater environments to the ISS.

http://voxa.co/products/mochii
http://mymochii.com

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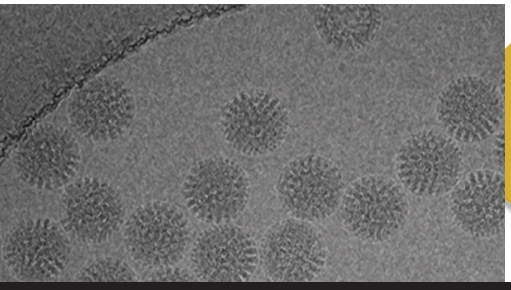
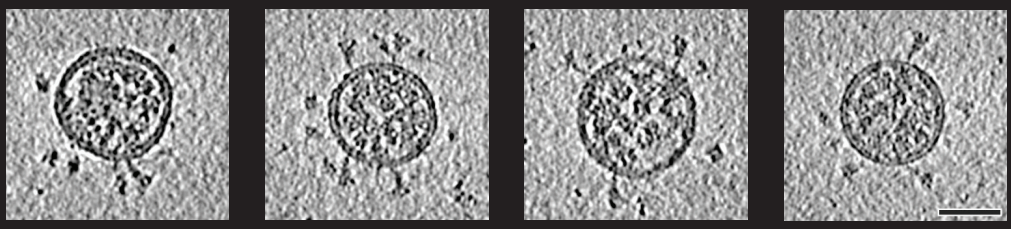
See for yourself why C-Flat is the premier holey carbon grid for cryo-transmission electron microscopy!



Above: Frozen-Hydrated Bacteriophage Capsid (data acquired on CF-1.2/1.3-4C)

Right: Cryo-ET using C-Flat 2/2 hole pattern on Covid 19 Spike Protein. Ke, Z., Oton, J., Qu, K. et al. Structures and distributions of SARS-CoV-2 spike proteins on intact virions. Nature (2020). https://doi.org/10.1038/s41586-020-2665-2



EMS has it!

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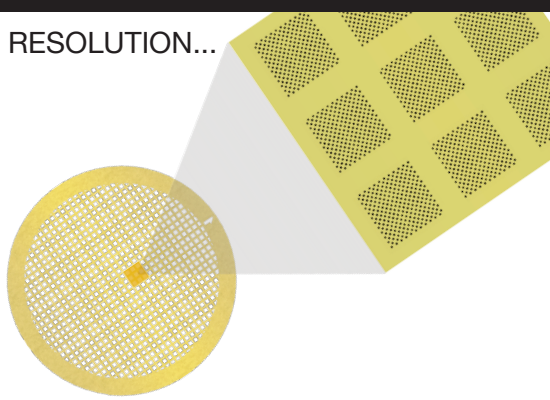

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