



Crystallography Solutions

Product Guide

www.axt.com.au

Solutions for Science and Industry



Rigaku
oxford diffraction

A Crystallographer's Dream Come True

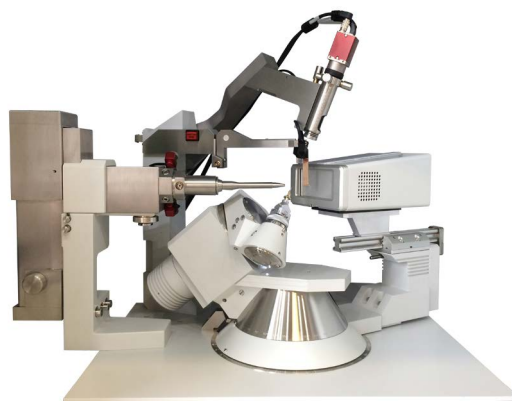


XtaLAB Synergy-S/R

- High source flux and increased goniometer speed to allow quicker and more agile experiments
- Unique telescopic two-theta arm to reach both longer and shorter crystal-to-detector distances
- Enhanced kappa goniometer design with symmetrical 2 θ positioning
- Improved X-ray optic alignment mechanism for easy maintenance
- User-inspired cabinet design for improved workflow
- New electronically controlled brightness of cabinet & crystal lighting



The World's Favourite Diffractometer Has Been Improved



XtaLAB SuperNova

- Easy dual-source upgrade – Cu, Mo or Ag
- High precision kappa 4-circle kappa goniometer
- Accepts full range of S2 CCD or HPAD detectors
- CrysAlisPro – Powerful, user-friendly software with optional AutoChem2.1 for fully-automated structure solution & refinement

Best in Class Research and Teaching Benchtop Technology



XtaLAB mini II

- Perfect self-serve departmental lab instrument
- Ideal teaching instrument
- Publication quality results
- No special infrastructure required
- Benchtop ergonomics
- New HPC detector





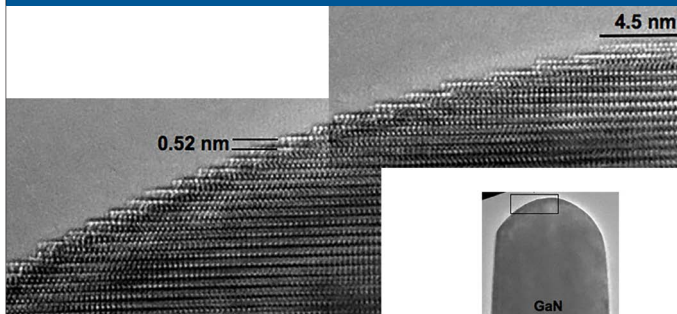
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EM Sample Preparation



The Ultimate Tool for TEM Sample Preparation



TEM Sample Prep

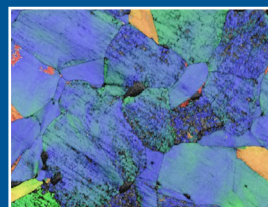
- Removes amorphisation & implanted ions
- Milling without introduction of artefacts
- *In situ* imaging with ions and electrons
- Uses your TEM holder to minimise specimen handling
- Fully automated operation via user-friendly interfaces

Produces the Highest Quality SEM Samples for EDS / EBSD

SEM Sample Prep

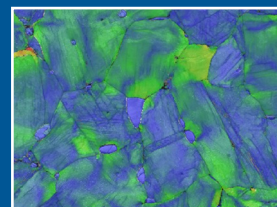
- Two independently adjustable TrueFocus ion sources
- Independently adjustable beam dia's ~100% efficiency
- Adjustable milling angle range of 0° to 10°
- Energy range 100eV to 10kV for milling/polishing

Before



Hit rate 89%

After



Hit rate 98%

Cryo-Tomography Holders

- Highest resolution cryo holder available
- Hinged, integrated, annular grid-securing mechanism
- Easy grid extraction mechanism
- Modular design for user-optimized workflow

Tomography Holders

- Dual Axis - suitable for narrow samples
- Double Tilt - up to 90° tilt
- Rotation - 360° rotation

Conventional Sample Prep

- Electropolishers
- Specimen punches
- Specimen grinders
- Ultrasonic disk cutters
- XTEM prep kit
- Dimpling grinders

The Ultimate Tool for Contamination Free Samples



NanoClean Contamination Solutions

- The only downstream, inductively coupled sputter-free plasma cleaner
- No heating or sample alteration
- Fully customisable recipe and workflow
- Suitable for TEM, SEM and bulky samples

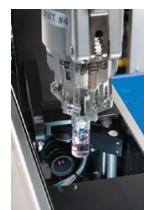


Freeslate

- Fully automated small molecule preformulation
 - Solubility screening
 - Polymorph screening
 - Powder dispensing
 - Reaction screening



Supercharge Your Workflow



Visual inspection station



Multi-channel pH probes



Viscosity station

TESCAN Leading Manufacturer of FIBs & SEMs

S8000G

- The fully automated Orage™ Ga FIB Column with up to 100 nA current
- The new BrightBeam™ SEM column with up to 400 nA current
- Sub-nanometre SEM resolution without emersion optics
- Sophisticated, angle-selective & energy selective signal collection system
- Ultimate imaging and analysis versatility including imaging magnetic materials with the field-free optics
- Allows simultaneous live imaging and FIB milling
- Ready for Cryo FIB attachments
- A workflow oriented and fully customisable user interface



TESCAN
PERFORMANCE IN NANOSPACE

Microanalysis

Thermo
SCIENTIFIC



EBSD [QUASOR]

- Acquire EBSD, WDS & EDS spectra simultaneously
- Phase and grain boundary maps
- Texture analysis & rapid pole figure interpretation
- Wide range of mapping display options e.g. Euler, HKL & UVW

HIROX 3D Microscopy



DENS
solutions

DENSolutions *In Situ* TEM Platforms



Wildfire

Heating stage for thermal studies



Ocean

Liquid cell for studying materials and biologicals - static and flowing



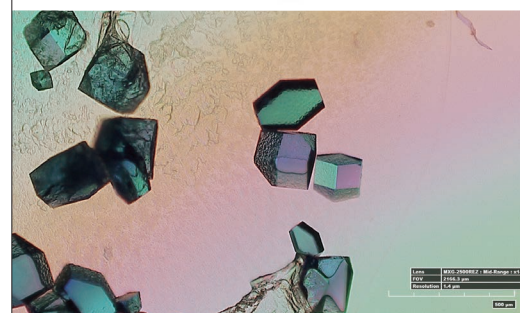
Lightning

Biasing and heating for controlled electrical/thermal studies



Climate

Gas & heating for high pressure gas studies at elevated temperatures



Hirox Digital Zoom Microscope

- One touch 3D imaging
- Rotational head allows tilted sample viewing
- Unique lens design combines brightfield/darkfield imaging
- Unrivalled range of lenses
- Real time 1920 x 1200 HD video
- Rapid auto focus & tiling
- High dynamic range imaging
- Frame capture rate up to 100fps

mosquito LCP

for membrane protein crystallisation

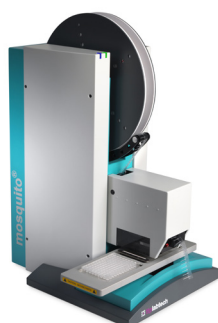
- Dispense lipid cubic phase volumes as low as 25nL
- Automated calibration and pipette positioning
- Rapid tip changing and no washing
- Optional active humidity control



mosquito Crystal

for protein crystallisation screening

- Unrivalled drop precision for Sitting drop and Hanging drop experiments
- Microbatch
- Bicelles
- Microseeding
- Additive screening



dragonfly

screen optimisation optimised

- Use your hits to produce a set of optimised conditions to grow better diffracting crystals
- Dispense any volume, regardless of viscosity
- 5 – 8 minutes per plate
- Free unlimited screen designer software



LCP Mixer

mix protein and lipids

- Any combination of 100µL and 50µL Hamilton syringes
- Any sample volume
- Simple and robust
- Glove-friendly touch screen



htplabtech

Crystallographer's Favourite Liquid Handlers

- Range of volumes
- Accurate and precise
- Cost Savings
- Zero cross contamination
- Minimal dead volumes
- Fast and easy to use

MX one (in-well Mixer)

perfect companion to dragonfly

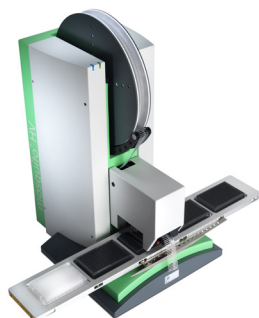
- Mix any liquid in small wells
- Keeps plate stationary, allowing for extremely fast mixing
- Mixes even the most viscous solutions
- No risk of spilling or splashing



mosquito HV

larger volumes, larger drops

- Create larger volume drops (1 to 10µL) of multiple components
- Scale-up & optimisation work
- Precise pipetting regardless of viscosity
- Zero cross-contamination



consumables

cutting-edge innovation

- Precision manufacturing
- Tips
- Plates
- Seals
- Reservoirs
- LCP syringe coupling
- LCP needles



arktic

confident cryo storage & retrieval

- -80°C storage
- Deliver and defrost only the samples that you need
- Store tubes, not racks
- Sample integrity guaranteed



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