Electron Microscope Analyzers

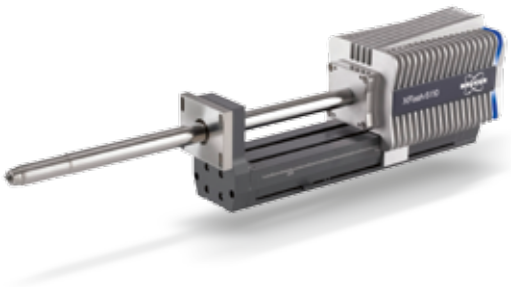
- Advancing compositional and structural analysis

Innovation with Integrity

Nano-Analysis

Unique range of analytical tools for electron microscopes

Bruker's electron microscope analyzers EDS, WDS, EBSD and Micro-XRF on SEM offer the most comprehensive compositional and structural analysis of materials available today. The full integration of all these techniques into the ESPRIT 2 software allows you to easily combine data obtained by these complementary methods for best results.

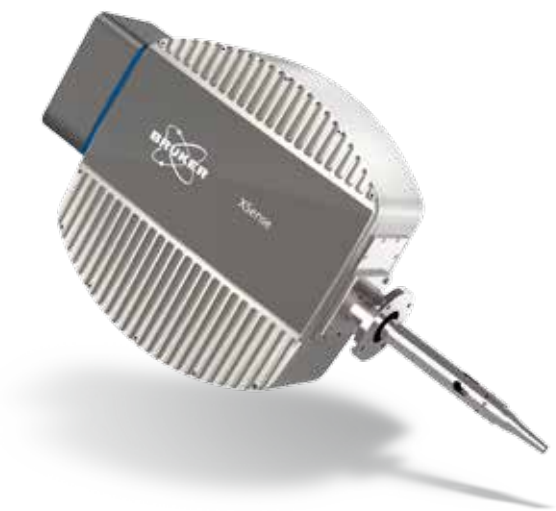


QUANTAX EDS for SEM and TEM

Our EDS systems provide highest energy resolution, maximum throughput and optimum geometry. QUANTAX EDS features the XFlash® 6 detector series with active areas from 10 to 100 mm².

- Best energy resolution down to 121 eV at Mn Kα for efficient light element and low energy analysis
- Slim-line detector technology for even more counts at lower beam currents
- Ultra high throughput with over 600 kcps output count rate at 1,500 kcps input with refined pile-up rejection for fastest measurements
- Multiple and FlatQUAD detector sytems provide large solid angles up to 1.2 sr and best take-off angles
- Fully integrated in ESPRIT 2

Visit www.bruker.com/quantax-eds-for-sem and www.bruker.com/quantax-eds-for-tem



QUANTAX WDS

The QUANTAX WDS system enables ultra-sensitive, high resolution X-ray microanalysis in the low energy range. The compact WD spectrometer XSense features a distortion-free non-magnetic parallel beam optics and incorporates latest detector technologies.

- Energy range: 100 eV to 3.6 keV; energy resolution: 4.6 eV at Si Kα
- Six diffracting crystals: 200 Å, 80 Å, 60 Å, 30 Å multilayers, TAP and PET
- Auto-aligning optics with secondary optics ensure optimum measurement conditions and large solid angle
- Reliable acquisition with pressure controlled proportional counter
- Easy setup and rapid start of measurement
- Fully integrated in ESPRIT 2

Visit www.bruker.com/quantax-wds

QUANTAX EBSD

Our high-end EBSD system, featuring the *e⁻Flash* detector series, sets new standards in combined EBSD/EDS analysis.

- Pattern streaming with up to 630 patterns/s (4x4 binning) or 945 patterns/s (8x8 binning)
- EBSPs with up to 1600x1200 pixels
- Fastest simultaneous EBSD and EDS acquisition and analysis at speeds of up to 945 points/s
- In-situ vertically adjustable detectors for maximum analytical flexibility
- Unique ARGUS™ FSE/BSE imaging system for microstructure visualization in color
- OPTIMUS™ TKD detector head for Transmission Kikuchi Diffraction (TKD) in SEM for materials characterization on the nanoscale
- Fully integrated in ESPRIT 2

Visit www.bruker.com/quantax-ebsd

QUANTAX Micro-XRF

NEW!

XTrace, our micro-spot X-ray source adds the capabilities of a complete Micro-XRF spectrometer to your SEM – but without the investment.

- Polycapillary optics for spot sizes below 40 µm
- 20 to 50 times better sensitivity for heavier elements compared to e-beam excitation improves trace element detection
- Detection limit: typically 100 ppm down to 10 ppm
- Now available with layer analysis software for characterization of films and multi-layer structures
- Enhanced analytical accuracy through combination of quantitative results from both electron and X-ray induced spectra
- Fully radiation protected system, radiation < 1 µSv/h
- Fully integrated in ESPRIT 2

Visit www.bruker.com/quantax-micro-xrf

PicoIndenters

NEW!

SEM and TEM PicoIndenters enable the quantitative measurement of nanomechanical properties including hardness, modulus, and yield strength, which are correlated to the live imaging of material deformation provided by the host microscope.

- Testing modes for nanoindentation, compression, tension, or bending tests
- Modular design for upgradability to our full suite of analytical techniques
- Interchangeable probes in a variety of geometries to meet the demands of different test types
- Compatible with most major microscope models for SEM, FIB/SEM, and TEM

Visit www.bruker.com/picoindenters

ESPRIT 2

Our unique software ESPRIT 2 allows full control and flexible combination of up to four analytical methods via a single user interface.

- Seamless integration of EDS, WDS, EBSD and Micro-XRF on SEM
- Intuitive intra- and inter-method navigation
- Enhanced analytical power through synergistic combination of results delivered by different methods
- Extensive automation tools including new scripting environment for fully customized workflow solutions

Visit www.bruker.com/esprit2

For more information visit www.bruker.com/quantax

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