



Bruker X-Ray Diffraction (XRD) Solutions

● XRD for Everyone

Plan. Measure. Analyze

X-ray diffraction expands analytical capabilities down to the nanometer range. Our highly accurate, reliable and fast diffraction solutions are accompanied by an intuitive user interface, easy sample handling, and advanced data analysis. Support for both novice and expert users is achieved by providing the perfect balance of ease-of-use and full instrument control.

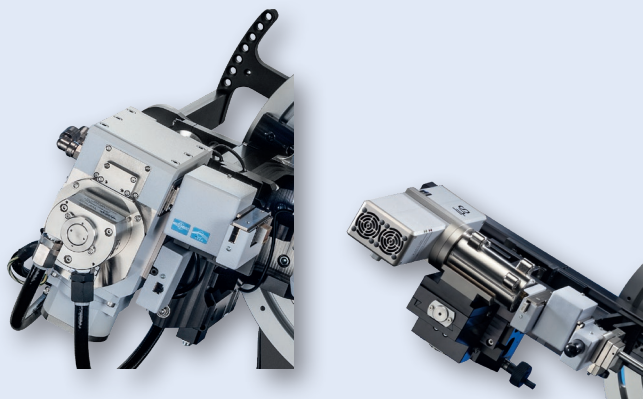
Premium Class Diffraction Solutions

The D8 DISCOVER enables cutting edge research into the frontiers of nanotechnology and materials research by offering the most powerful sources and largest sample stages available.

Applications

- Crystalline phase identification
- Crystalline phase quantification
- % crystallinity
- Crystallite size determination
- Crystal structure analysis
- Crystal orientation
- Texture and preferred orientation
- Microstrain
- Residual stress
- Layer thickness
- Layer roughness
- Lattice parameter
- Chemical composition
- Lateral structures
- Defects
- Reciprocal space mapping
- Microdiffraction
- Depth profiling
- Polymorph screening
- High temperature
- Low temperature
- Humidity
- Phase transition
- Nanoparticles

Key XRD Innovations



X-Ray Sources

Designed for maximum uptime with minimal maintenance

TXS-HE

For applications demanding maximum signal and minimal collection time

IpS^{HB}

Air cooled, high brilliance source ideal for microdiffraction

X-Ray Optics

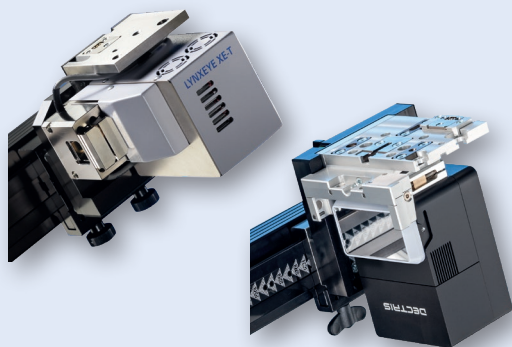
Push-Button multiple path optics offer ideal beam conditioning with ultimate ease of use

TWIN

Motorized Slit for powder diffraction
Parallel Beam for coating analysis

TRIO

Motorized Slit for powder diffraction
Parallel Beam for coating analysis
High resolution $K\alpha_1$ for epitaxial thin films



X-Ray Detectors

Bruker has always been a leader in detector technology.

LYNXEYE XE-T

Unmatched energy discrimination offering best performance for powder diffraction

EIGER2 R 500K

Unrivalled 0D/1D/2D integration for multipurpose materials research laboratories



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