

QUANTAX EBSD Fast Facts

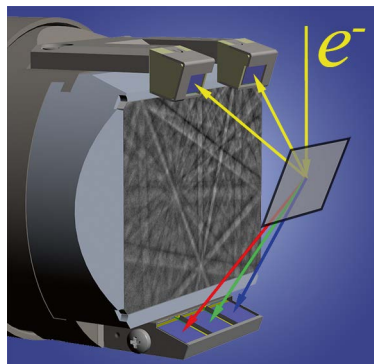
QUANTAX EBSD is Bruker's powerful, yet easy-to-use, electron backscatter diffraction analysis system. It features the unique eFlash FS detector with an optimized detector architecture for providing the best compromise between reliability, cost and excellent performance in all EBSD applications.

- Applicable for all Hough based EBSD applications with acquisition speeds of up to 520 frames per second (fps)
- Capable of speeds of up to 290 fps when functioning in native resolution, i.e., 720 x 540 pixels for applications requiring high detail Kikuchi patterns, e.g., residual strain analysis (HR-EBSD)
- In-situ vertical screen positioning for optimum sample-detector geometry over a large range of WDs
- Accurate screen positioning (< 10 μm) for residual strain applications

Unique ARGUS™ imaging system

Sophisticated detector design

- for density contrast images of highly tilted samples
- for color-coded orientation contrast images using three independent detectors
- with fully integrated electronics for low signal loss and brilliant images



Assistants and automated configuration for ease of use

- Signal assistant for automatic camera setup
- Automatic detector calibration for precise measurements
- Automatic reflector calculation for all crystal systems

Superior solution for Transmission Kikuchi Diffracton (TKD)

- OPTIMUS™ TKD detector head for analysis under optimal geometrical conditions resulting in best spatial resolution down to 2 nm
- Fast orientation mapping in transmission mode at speeds of up to 520 fps
- Bright Field and Dark Field imaging with a resolution down to 1 nm
- TKD toolkit featuring our patented TKD sample holder

Highest speed and reliability in acquisition and evaluation

- Real time data processing and indexing quality control provided by pattern streaming
- Robust indexing along grain or phase boundaries
- Exclusion of unwanted sample parts from measurement through map area definition

Seamless integration with EDS

- Simultaneous high speed EBSD pattern and EDS spectra acquisition from up to 520 points/s
- Advanced offline data re-analysis at any time, including new element and phase selection, as well as Advanced Phase ID

Unequaled software usability

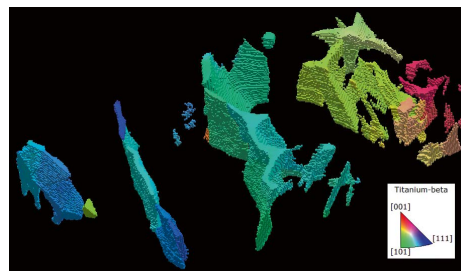
- Storage of band positions and optionally of patterns for unique flexibility and efficiency
- Semi-automatic offline phase ID and subsequent data re-analysis at incredibly fast speeds of up to 60,000 points/s
- Full access to all measurement and postprocessing results through an easy-to-use interface
- Large number of different result presentation options including point data, maps, histograms, texture representation and multiple subsetting tools
- Point inspector for instant access to all data points for quality check during or after measurement

Powerful pattern simulation tools

- First software containing simulation tools for a more realistic band intensity prediction
- Realistic simulation also provides fundamental understanding of pattern formation

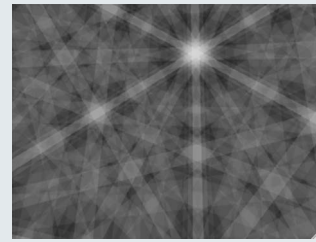
Advanced 3D data processing and visualization using ESPRIT QUBE

- Euler angles based automatic slice realignment
- Linear and non-linear data filtering
- Voxel based grain reconstruction
- Local Average Disorientation (LAD) and LAD based Geometrically Necessary Dislocations (GNDs) calculation
- Extensive list of subsetting options
- Multiple 3D visualization and exploration capabilities

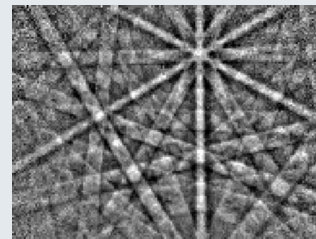


Point inspector

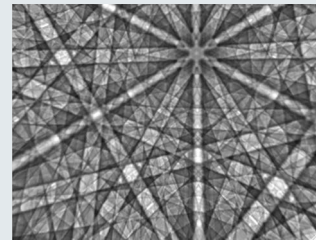
The point inspector provides easy access to point data, e.g.



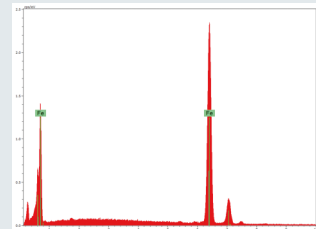
Fast intensity prediction



Experimental pattern



Realistic intensity prediction



EDS spectrum

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