

## ● QUANTAX EBSD Fast Facts

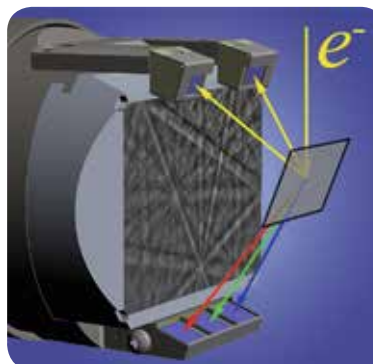
QUANTAX EBSD is Bruker's powerful, yet easy-to-use, electron backscatter diffraction analysis system. It features the unique **eFlash** detector series with a technologically leading detector architecture and excellent performance in all EBSD applications.

- **eFlash<sup>FS</sup>** for high speed measurements with up to 945 frames per second (fps); best solution for all Hough based EBSD applications
- **eFlash<sup>HD</sup>** high resolution detector featuring 1600x1200 pixels native resolution; best solution 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
- Ultra accurate screen positioning (< 10  $\mu\text{m}$ ) 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 at least 10 times stronger signal and minimum gnomonic projection distortions
- Ultrafast orientation mapping in transmission mode at speeds of up to 630 fps; effective spatial resolution can be as good as 2 nm at speeds of up to 250 fps
- Bright Field and Dark Field imaging with a resolution down to 1 nm
- TKD toolkit featuring our special 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 ESPRIT EDS software

- Simultaneous high speed EBSD pattern and EDS spectra acquisition from up to 945 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

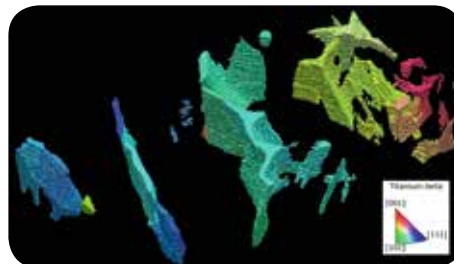
- Storage of band positions and optionally of patterns for unique flexibility and efficiency
- Semi-automatic offline phase ID and subsequent data re-analysis at incredibly fast speeds of up to 40,000 points/s
- Full access to all measurement and postprocessing results through an easy-to-use interface
- 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

### Unparalleled pattern simulation tools

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

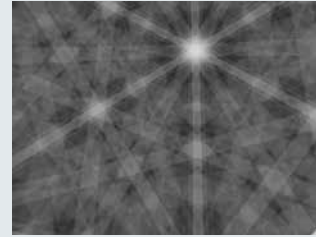
### Advanced 3D data processing and visualization using ESPRIT QUBE

- 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

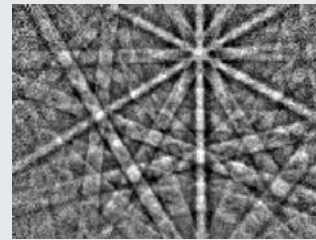


### Point inspector

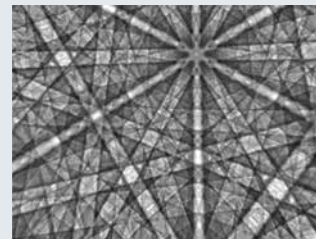
The point inspector provides easy access to point data, e.g.



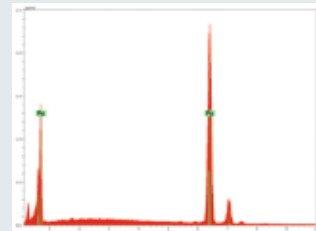
Fast intensity prediction



Experimental pattern



Realistic intensity prediction



EDS spectrum

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