MAPEX Bremen
Material. Process. Excellence.

01
03-2016

INSTRUMENT DATABASE
Single Crystal X-ray Diffractometer

Universität Bremen

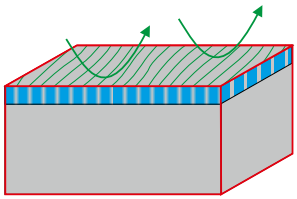
II THE MAPEX INSTRUMENT DATABASE

The database facilitates scientific work by offering a searchable list of analytical equipment available in the groups of MAPEX members. The online database is aimed at making it easier for students, university employees as well as external researchers to learn about analytical methods and get in contact with the responsible instrument operators. You can easily browse through the predefined categories (figure) or perform keyword and text searches.

The MAPEX Instrument Database was launched in November 2015 and it contains by now about 30 instruments. To add new instruments or change details of your instrument, please contact Hanna Lührs or download the registration form from

www.uni-bremen.de/mapex > Instrument Database

In this newsletter, we will regularly inform you of the latest additions to the database and present selected methods with examples of scientific applications.



|| SINGLE CRYSTAL X-RAY DIFFRACTOMETER

Bruker D8 venture Kappa-diffractometer

01 || General Information

Keywords: XRD, single crystal diffraction, single crystal orientation

Categories:

- Diffraction
- Near- / Subsurface Properties
- Material Properties

Main Application: Single crystal diffraction for crystal structure analysis

Measured quantities: Unit cell of single crystals; Orientation of single crystals; X-ray diffraction data for single crystal structure analysis

Year of Fabrication: 2011

02 || Specifications:

- Fast 4-circle Kappa-diffractometer with monochromatic Mo Kα radiation and 2D detector.
- Complete diffraction data sets can be obtained for crystal structure analysis of single crystals of about 100-400 µm diameter.
- Determination of orientation only is also possible for large crystals up to several mm.
- Extremely small amounts of powder are subjected to rotation measurements to achieve powder patterns (however, with rather low resolution in reflection widths) – usually use powder XRD for small samples due to better resolution.
- Single crystals can be investigated at temperatures from -100 to 1000°C.

03 || Contact:

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Location: Geo building

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