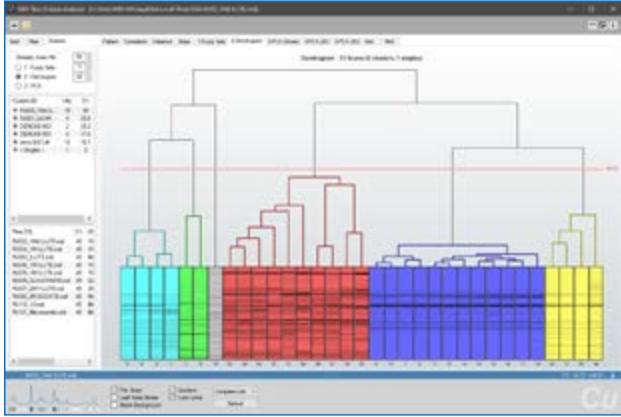# TOOLKIT
Only in JADE Pro

Toolkit currently includes these utilities designed for JADE.

For Oriented Clays - ClaySim ▶

For (00l)-patterns. Performs simulations and analyses of oriented clays based on structure types introduced by R.C. Reynolds.

XRD Digitizer

Just take a picture of an XRD plot and this tool will convert it to a digital format that you can now work with in JADE. Use advanced image editing options to tweak any imperfections or remove artifacts from your image.

Cluster Analysis ▲

Offers hierarchical Dendrogram Clustering with Principal Component Analysis in addition to Fuzzy Clustering

Charge Flipper + Solve Structure

For structure solution using the charge flipping method.

Pattern Matching ▲

Try the fulll Pattern Matching method used in ROCKJOCK and ClaySim.

Regression Analysis

Perform regression analysis on data without leaving JADE Pro's Toolkit.

3D Scatter Plot

A scatter plot tool for xyz data sets from columnar data files.

Laue Visualization ▶

Laue simulations, stereograpic projections and alternative structure visualizations. This tool also exports multi-page Adobe PDF booklets.
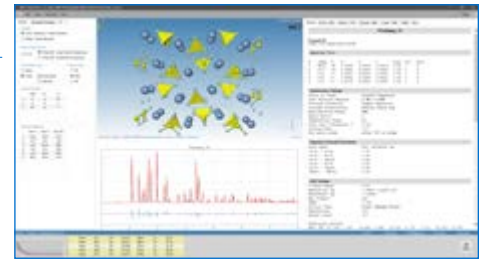
Microstructure Tool

Provides methods for the analysis of the residual stress and microstructure defects for various diffraction geometries and is applicable to cubic phases (FCC, BCC) following a profile fitting in JADE. (D. Rafaja)

MDI SizeStrain

Designed for crystallite size and micro-strain analysis using X-ray powder diffraction data. This Toolkit supports both Warren-Averbach and Williamson-Hall methods for crystallite size determination.

Simulated Annealing ▶

An alternative direct space structure solution method (SA) designed for inorganic structures applying Coulomb interactions and repulsive potentials.

Area Detector Tool ▼

Built to extract powder patterns from images obtained with flat area detectors, so that they can easily be analyzed in JADE.