Quantitative HAADF Analysis
Atomic-Column Compositional Analysis from HAADF-STEM images

qHAADF performs column-to-column compositional analysis of materials from the integrated intensities of an atomic-column resolved HAADF-STEM image.

qHAADF is based on a method developed by Sergio I. Molina et al. of University of Cadiz [1].

Key Features

◆ Gives a map of integrated intensities and/or composition in materials with atomic-column spatial resolution.
◆ Experimental HAADF images are used to obtain the fitting parameters to determine composition.
◆ Automatic finding intensity peaks and noise filtering tools.
◆ Compositional segregation profiles can be obtained from epitaxial layers [2] (top figure).
◆ Counts atoms in each atomic column [3] (bottom figure).
◆ Locates interstitial atoms in materials.

References: