

## **Friedel-pair based indexing method for characterization of single grains with hard X-rays**

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A new evaluation procedure is presented to characterize the orientation and position of single grains within the bulk of a polycrystalline sample. Considering the symmetry properties of Friedel-pairs the contributions to reflection spot positions arising from grain orientation and position could be clearly separated. The proposed method avoids simultaneous fitting of all grain parameters with the goal of a higher accuracy. Depending on the number of reflections considered the accuracy of grain orientation may be less than  $0.1^\circ$ , and the position of the center of mass of the grains can be accurate within one third of the pixel size.

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