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Three-Dimensional Reconstruction and Quantification of Dislocation Substructures from Transmission Electron Microscopy Stereo-Pairs

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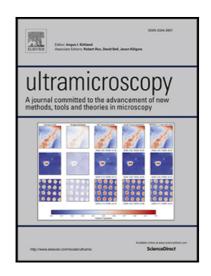
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Highlights

- Experimental 3D dislocation networks are reconstructed from STEM stereopairs.
- Useful microstructural quantities, e. g., dislocation density can be quantified.
- Crystallographic features, e.g., line directions, can be visualized and quantified.
- Advantages and disadvantages of using STEM-DF are discussed.
- Spatial and angular uncertainties of ≤ 3 % and 7°, respectively, are achieved.

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