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Analysis of three-dimensional hexagonal and cubic polycrystals using the boundary element method

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Highlights

- We evaluate the macroscopic elastic properties of HCP and FCC polycrystals using BEM.
- Anisotropy level and elastic properties were extensively compared with references.
- We used the new 3D anisotropic fundamental solution based on double Fourier series.
- The Fourier coefficients allow the efficient evaluation of the BEM matrices.
- A parallel algorithm is presented and an efficient solver based on MPI is applied.

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