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Crystal-plasticity finite-element analysis of anisotropic deformation behavior in a commercially pure titanium Grade 1 sheet

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#### ACCEPTED MANUSCRIPT

### Crystal-plasticity finite-element analysis of anisotropic deformation behavior in a commercially pure titanium Grade 1 sheet

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#### Highlights

- Deformation behavior in a CP-Ti sheet was studied using crystal-plasticity FEM.
- The material parameters were determined based on the role of each deformation mode.
- The deformation under various strain paths was predicted well using the simulation.
- The deformation mechanism was examined numerically from a mesoscopic viewpoint.

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