

Accepted Manuscript

Simulation of Ferroelastic Phase Formation Using Phase-field Model

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PII: S0020-7403(17)30835-4
DOI: [10.1016/j.ijmecsci.2017.12.027](https://doi.org/10.1016/j.ijmecsci.2017.12.027)
Reference: MS 4091



To appear in: *International Journal of Mechanical Sciences*

Received date: 30 June 2017
Revised date: 4 December 2017
Accepted date: 18 December 2017

Please cite this article as: M. Muramatsu , K. Yashiro , T. Kawada , K. Terada , Simulation of Ferroelastic Phase Formation Using Phase-field Model, *International Journal of Mechanical Sciences* (2017), doi: [10.1016/j.ijmecsci.2017.12.027](https://doi.org/10.1016/j.ijmecsci.2017.12.027)

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Highlights

- A calculation scheme for ferroelastic phase transformation is newly developed.
- The phase-field model incorporating the elastic strain energy is used for this computation.
- Nucleations and nucleus growths of the rhombohedral phase in the cubic matrix are numerically reproduced.
- This simulation predicts that the ferroelastic structure in from a single matrix and polycrystalline matrices.
- This scheme well expresses the qualitative behavior of ferroelastic phase transformation.

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