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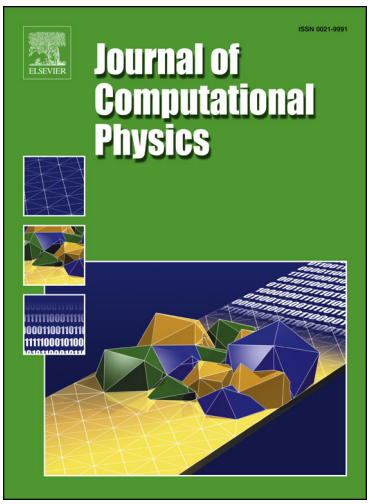

Combining dual domain material point method with molecular dynamics for thermodynamic nonequilibriums

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Highlights

- Introduced a multiscale method based on material point method and molecular dynamics.
- As an example, computed a large deformation problem at thermodynamic nonequilibrium.
- The method preserves the entire material deformation history without re-initialization.
- Studied consistence conditions for inter-scale communications.

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