

Accepted Manuscript

A Phase-Field Model Integrating Reaction-Diffusion Kinetics and Elasto-plastic Deformation with Application to Lithiated Selenium-doped Germanium Electrodes

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PII: S0020-7403(18)30055-9
DOI: [10.1016/j.ijmecsci.2018.05.040](https://doi.org/10.1016/j.ijmecsci.2018.05.040)
Reference: MS 4351



To appear in: *International Journal of Mechanical Sciences*

Received date: 10 January 2018
Revised date: 13 April 2018
Accepted date: 18 May 2018

Please cite this article as: X. Wang , B. Wang , M. Meyerson , C.B. Mullins , Y. Fu , L. Zhu , L. Chen , A Phase-Field Model Integrating Reaction-Diffusion Kinetics and Elasto-plastic Deformation with Application to Lithiated Selenium-doped Germanium Electrodes, *International Journal of Mechanical Sciences* (2018), doi: [10.1016/j.ijmecsci.2018.05.040](https://doi.org/10.1016/j.ijmecsci.2018.05.040)

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Research highlights

- A reaction-diffusion phase field model coupling elasto-plastic deformation is developed;
- Reaction/diffusion controlled lithiation kinetics of Se-doped Ge electrode are directly simulated and compared;
- The role of the inactive phase in morphology and stress variation of Se-doped Ge electrode upon lithiation is investigate.

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