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Modeling thermal recovery of the Mullins effect

Shuolun Wang, Shawn A. Chester

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Highlights

- Both the rate and degree of recovery of the Mullins effect are temperature dependent.
- A thermodynamically consistent constitutive model is developed to quantitatively capture thermal recovery of the Mullins effect.
- The model is calibrated to a loading history that consists of uniaxial tension experiments and stress free annealing at elevated temperatures.
- Numerically simulated results show that unanticipated behavior due to thermal recovery of the Mullins effect is possible.

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