

Abstract Submitted  
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**Surface Tension Anisotropy of Lennard-Jones Systems** EMRE ES-  
ENTURK, University of Pittsburgh — Anisotropy in the surface tension plays a significant role in the evolution of interfaces and in determining the equilibrium shapes of materials (dendritic growth, motion of grain boundaries). We present a discrete version of integral Phase Field Model with non-local potential for the crystal-melt interfaces of Lennard-Jones Systems. The model provides a methodology to understand the process of transfer of microscopic anisotropy to macroscopic scale. We calculate the surface tension and the anisotropy of the crystal-melt interface in the [100] and [110] directions and compare our results with recent simulations.

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