

Abstract Submitted
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Crack propagation in a gold crystal with and without the presence of an interface MAJID KARIMI, CARL LEBLOND, IUP, TED KAPLAN — The Embedded Atom Method (EAM) is used to study crack propagation in Au crystals and at an AuNi interface. The interface is constructed with an appropriate number of dislocations introduced to compensate for the lattice mismatch between Au and Ni crystals. Once the the stability of the interface is established, a starter crack is introduced and its properties are determined and compared with those of pure Au and Ni crystals. The massively parallel molecular dynamics code (lammmps) is used for these studies.

Majid Karimi
Indiana University of PA

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