Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Calculation of Absorption Energies Using EAM Potential for Al-Mg alloy systems LAALITHA LIYANAGE[1], BOHUMIR JELINEK[2], SUNGHO KIM, MARK F. HORSTEMEYER[3], SEONG GON KIM[4], Center for advanced vehicular system — Spline-based embedded-atom method (EAM) interatomic potentials for Al-Mg alloy systems are developed using existing EAM potentials. The lattice constant, bulk modulus and shear modulus for the alloy are determined to demonstrate the validity of the new potential. The absorption energies of Mg atoms on Al surfaces are also calculated and compared with the results of ab-initio calculations.

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Date submitted: 27 Nov 2007 Electronic form version 1.4