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Molecular dynamics study of the elastic properties of copper-silver alloys using embedded atom model potentials

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The elastic properties of copper-silver alloy were determined for different atomic compositions by molecular dynamics simulations using an embedded atom model (EAM) potential. The elastic constants (c_{11}, c_{12}, c_{44}) that describe the Young's modulus, bulk modulus, and shear modulus, were obtained from the stress-strain curves using strains applied at a constant rate. The temperature dependence of the elastic properties from 300K to 600K is also reported.

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