# ATOMIC STRUCTURE OF Ni NANOCLUSTERS ON Cu (001) SURFACES

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Depositions of different Ni cluster nanostructures on a Cu (001) surface have been simulated by molecular dynamics. Ni clusters (a few monolayers) with different structure have been softly deposited on a Cu (001) surface. The system was afterwards driven to the minimum energy state. The bombardment energy was varied between 0 and 1 eV/atom. The difference in the Ni and Cu lattice parameters (2.6%) gives rise to strain near the interface, which is the cause of magnetoelastic anisotropy. We have focused our interest especially on matching effects. Final atomic structures of the clusters and present lattice defects have been analysed. Mean changes in the lattice parameters have been quantified near the interface. A study of atomic mixing at the interface and of its influence in the matching is also accomplished.