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Electric Field Control of Structure, Dimensionality and Reactivity of Gold Nanoclusters Supported on Thin Films of MgO/Ag(100)[1]
BOKWON YOON, UZI LANDMAN, Georgia Institute of Technology — External electric field control and manipulations of the structural stability, dimensionality, and chemical reactivity of gold nanoclusters deposited on MgO films grown on an Ag(100) substrate, are introduced and illustrated with the use of first-principles electronic structure calculations. Field-controlled interfacial charging and field-induced structural dimensionality crossover are predicted; These structural changes are accompanied by variations of the chemical reactivity of the adsorbed gold nanostructures.

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