

# ELECTRONIC PROPERTIES OF STRAINED Mn-COMPOUNDS

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## Abstract

We study the physical properties of MnAs under strain by using accurate first-principles pseudopotential calculations. Our results provide new insight on the physics of strained multilayer that are grown epitaxially on different lattice mismatched substrates and which are presently of interest for spintronic applications. We compute the strain dependence of the structural parameters, electronic bands, density of states and magnetization. In the region of strain/stress that is easily directly accessible to measurements, the effects on these physical quantities are linear. We also address the case of uniaxial stress inducing sizeable and strongly non linear effects on electronic and magnetic properties.

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