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Graphene-nickel interface: hybridization and magnetization TESFAYE ABTEW, BI-CHING SHIH, PEIHONG ZHANG, University at Buffalo, The State University of New York — The unique properties of graphene have opened up a new avenue for fundamental research as well as technological applications. Whereas the in-plane sp^2 bonding is primarily responsible for the overall structural stability and mechanical strength of graphene, the out-of-plane pp-π states control its transport and interfacing properties. In this talk, we present a first principles study of the of single layer graphene/Ni(111) interface. We discuss how hybridization between the carbon pp-π and nickel d orbitals modifies the electronic and magnetic properties of the interface.

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