

Abstract Submitted
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Searching for superconducting Fe-pnictide features in FeAs/GaAs heterostructures SINEAD GRIFFIN, University of California Santa Barbara, NICOLA SPALDIN, University of California, Santa Barbara — Superconducting Fe-pnictide compounds are a class of materials in the limelight, with focus on the FeAs layer to provide insight into their behaviour. We investigate the inclusion of these layers in FeAs/GaAs heterostructures using ab initio density functional theory calculations to search for the superconducting Fe-pnictide properties. We consider the effect of increasing Fe content and Fe-As arrangements on the magnetic and electronic properties in an effort to reproduce Fe-pnictide type magnetic ordering and Fermi surfaces.

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