

Abstract Submitted  
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**Study of electronic structure and magnetism at the relaxed SrTiO<sub>3</sub>/LaMO<sub>3</sub> interface** SOHAM GHOSH, EFSTRATIOS MANOUSAKIS, Florida State Univ — We present a density functional theory study of the nature of bands in z-terminated metal oxides. It is shown that the bandstructure of pure SrTiO<sub>3</sub> near the fermi surface is modified by the presence of surfaces, besides being sensitive to ionic relaxations and thickness of the material. We also study the cases where layers of LaMO<sub>3</sub> (with M = Ti, Al) have been added to create an interface. We examine doping of the SrTiO<sub>3</sub> surface bands by the added layers as a possible reason for the presence and localization of the induced electron gas and we study the character of these bands.

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