

Abstract Submitted
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Orbital Order in $(\text{LaMnO}_3)_m(\text{SrMnO}_3)_n$ Superlattice¹ CHUNG-WEI LIN, Physics Department, Columbia University, CLAUDE EDERER, School of Physics, Trinity College, ANDREW MILLIS, Physics Department, Columbia University — A realistic model for $(\text{LaMnO}_3)_m(\text{SrMnO}_3)_n$ is constructed and solved by the semiclassical approximation. The model includes electron-electron, electron-lattice, and lattice-lattice interactions. Technically, we generalize the semiclassical approximation to the multi-orbital system and include the cooperative Jahn-Teller effect in the impurity problem. Within this framework, we present the orbital order in the superlattice.

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