

Abstract Submitted
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One-dimensional Quantum Wire Formed at the Boundary Between Two Insulating LaAlO₃/SrTiO₃ Interfaces ALON RON, Tel Aviv University, YORAM DAGAN, Tel Aviv Univ — We grow a tiled structure of insulating two dimensional LaAlO₃/SrTiO₃ interfaces composed of alternating one and three LaAlO₃ unit cells. The boundary between two tiles is conducting. At low temperatures this conductance exhibits quantized steps as a function of gate voltage indicative of a one dimensional channel. The step size of half the quantum of conductance is an evidence for absence of spin degeneracy.

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