

Abstract Submitted
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The Superconducting Phase Diagram of LaAlO₃/SrTiO₃ Interfaces STEFANO GARIGLIO, ALEXANDRE FTE, DANFENG LI, WEI LIU, MARGHERITA BOSELLI, DQMP, Univ of Geneva, MARC GABAY, LPS, Univ Paris-Sud, JEAN-MARC TRISCONE, DQMP, Univ of Geneva — The discovery of a two-dimensional electron liquid (2DEL), formed at the interface between the two band insulators LaAlO₃ (LAO) and SrTiO₃ (STO), has generated significant interest. The 2DEL has indeed intriguing electronic properties including superconductivity and spin-orbit interaction which can be tuned both by field-effect. In this talk I will discuss in detail the superconducting phase diagram revealed by field-effect experiments and the consequences of the electric field on the conducting layer extension. I will then compare the superconducting behaviour of this 2D system with the 3D one of doped STO crystals.

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