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Towards superconducting spintronics with RuO₂ and CrO₂ nanowires

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List of Publications

- C. Yin, **K. Prateek**, W. Gelling and J. Aarts. Tunable Magnetic Scattering Effects at the $\text{LaAlO}_3/\text{SrTiO}_3$ Interface by Ionic Liquid Gating, *ACS Applied Electronic Materials* **2** (12), 3837-3842 (2020).
- **K. Prateek**, M. Bolhuis, A.B. Hamida, D. Scholma, S. C. Boj and J. Aarts. Magnetotransport properties of CrO_2 nanowires fabricated by Selective Area growth, *Journal of Physics and Chemistry of Solids* **178**, 111350 (2023).
- J. Yao, **K. Prateek**, M. Cabero-Piris and J. Aarts. Non-local Spin Transport based on a Half-metallic Ferromagnet, *Phys. Rev. Materials* **7**, 104408 (2023).
- **K. Prateek**, T. Mechielsen, A.B. Hamida, D. Scholma and J. Aarts. Fabrication and properties of lateral Josephson junctions with a RuO_2 weak link, *under review*.

Curriculum Vitae

Kumar Prateek

Education

- 2005-09 SASTRA University
BTech. in Electronics and Instrumentation Engineering
Thesis: Monitor & Control of interdependent parameters using
 Fuzzy Logic Controller
Supervisor: Dr. N. A. Kumar
- 2012-14 Leuven University and T.U. Dresden
Erasmus Mundus Masters in Nanoscience and Nanotechnology
Thesis: Aharonov-Bohm oscillations in a 3D long-perimeter
 Bi₂Te₃ nanowire
Supervisor: Dr. R. Giraud
- 2017-23 Leiden University
PhD in Physics
Thesis: Towards Superconducting Spintronics with RuO₂ and
 CrO₂ nanowires
Supervisor: Prof.dr. J. Aarts

Professional Experience

- 2009-12 Tata Consultancy Services, India
Systems Engineer
- 2014-16 Robotics Core School, India
Electronics Engineer

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