Growth and Transport Properties of [Rare Earth]TiO3/SrTiO3 Interfaces

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List of Publications

Publications

- **N. Lebedev**, M. Stehno, A. Rana, P. Reith, N. Gauquelin, J. Verbeeck, H. Hilgenkamp, A. Brinkman, and J. Aarts. Gate-tuned Anomalous Hall Effect Driven by Rashba Splitting in Intermixed $LaAlO_3/GdTiO_3/SrTiO_3$, arxiv.org/abs/2002.11408, and *submitted to Physical Review Materials*.

- **N. Lebedev**, M. Stehno, A. Rana, N. Gauquelin, J. Verbeeck, A. Brinkman, and J. Aarts. Inhomogeneous superconductivity and quasilinear magnetoresistance at amorphous $LaTiO_3/SrTiO_3$ interfaces, arxiv.org/abs/2008.03224, and *accepted for publication in Journal of Physics: Condensed Matter*.

- **N. Lebedev**, M. Stehno, A. Rana, N. Gauquelin, J.Verbeeck, A. Brinkman, and J. Aarts, On the superconducting-insulator transition in disordered oxide interfaces, *in preparation for publication*.

- C. Yin, A. E. M. Smink, I. Leermakers, L. M. K. Tang, **N. Lebedev**, U. Zeitler, W. G. van der Wiel, H. Hilgenkamp, and J. Aarts. Electron Trapping Mechanism in $LaAlO_3/SrTiO_3$ Heterostructures, Phys. Rev. Lett. **124**, 017702 (2020).

- C. Yin, P. Seiler, L. M. K. Tang, I. Leermakers, **N. Lebedev**, U. Zeitler, and J. Aarts. Tuning Rashba spin-orbit coupling at $LaAlO_3/SrTiO_3$ interfaces by band filling, Phys. Rev. B **101**, 245114 (2020).

- H. Arjmandi-Tash, **N. Lebedev**, P. M. G. van Deursen, J. Aarts, and G. F. Schneider, Hybrid cold and hot-wall reaction chamber for the rapid synthesis of uniform graphene, Carbon **118**, 438 (2017).

Curriculum Vitae

I was born on the 4th of October 1990 in Kamensk-Uralsky, Russia. Before my school years, my family moved to Revda, where I attended school. In 2008, I was admitted to the Institute of Physics and Technology, Ural Federal University in Yekaterinburg. After completing the third academic year, I started an internship at the Institute of Metal Physics, Ural Branch of the Russian Academy of Sciences. Soon after, I was hired as a part-time research technician. Other internship projects and research work, including my Diploma project on giant magnetic resistance in metal multilayers, were also performed at the Institute of Metal Physics. I graduated from Ural Federal University in 2014. After graduation, I continued to work as a research technician at the Institute of Metal physics for some time. At the end of 2014, I started my Ph.D. on the growth and transport properties of $LaAlO_3/SrTiO_3$ interfaces in the group of Prof. Dr. Jan Aarts in Leiden.

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