



The IQARO (Spin-orbitronic QuAntum bits in Reconfigurable 2D-Oxides) project hosts a series of monthly seminars to communicate the work being done as part of the project. The seminars will feature presentations from IQARO partners from across all areas of the project, followed by a brief Q&A.

The next seminar will take place on **Wednesday, 23rd of April at 10:00 a.m.**

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***Recent progress in low temperature transport measurement of electrical devices based on LAO/STO spalled membranes on silicon***

**Abstract:**

LAO/STO micromembranes produced via spalling offer an alternative platform for fabricating LAO/STO microscale devices on silicon. In this symposium, we present recent progress at DTU within the IQARO project, focusing on reliable methods for membrane contacting and electrostatic gating.

We also report recent low-temperature measurements on a variety of devices, which reveal signatures of intrinsic inhomogeneity in the membranes. In some devices, this results in the formation of quantum dots operating in the negative-U regime, while others exhibit Josephson behavior characterized by a Fraunhofer-like dependence of the critical current on the perpendicular magnetic field.

In both cases, characteristic parameters are extracted, and we discuss the possible origins of the observed inhomogeneity. Achieving reproducible devices will require precise local electrostatic control, and we present initial results toward this objective.

for more information about the project: [www.iqaro.eu](http://www.iqaro.eu)



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