

## **(Quantum) Electron Optics and Microscopy group at NANO-S3 (Modena)**

Tue, 2016-11-15 11:32 - [Vincenzo Grillo](#) [1] **Website:**  
<http://tem-s3.nano.cnr.it/> [2]

**Research Type:** Experiment

The (Quantum) Electron Optics and Microscopy group at NANO-S3 (Modena) is a group that starting from electron microscopy is trying to develop quantum measurements with electrons. The basis is the large development of optics and quantum optics for light. The idea is that such developments can be brought to the measurements with electrons with the prospect of measuring new quantities on atomic scale.

For this reason our group is collaborating with the group of optics at the university of Ottawa ( prof. Karimi and Boyd) and the group of electron microscopy at Forschungszentrum Juelich (germany) (prof. Dunin-Borkowski) for a joint effort in this direction.

The main expertise of this group is in the theory and fabrication of electron holograms for electron beam shaping, theory and fabrication of new electron-optical elements based on em fields, theory and application of electron vortex beams and simulation of spin effects in electron microscopy.

**Leader:** Vincenzo Grillo

### **Location**

CNR-NANO Modena Italy  
44° 38' 49.6608" N, 10° 55' 30.8172" E

- [Quantum Metrology, Sensing and Imaging](#) [3]

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