Scanning at ever lower currents is an ongoing effort in the STM community. In a test run at the University of Lille, the Nanonis control system was put to test with an Omicron-1 STM to measure atomic resolution images on a Si-111 sample.

So far the record for any measurement with a Nanonis system, it was possible to see individual atoms with a setpoint of the tunneling current as low as 100fA.

Atomic resolution at a setpoint of 100fA with following scan parameters:

- **Scan Range:** 20 nm x 20 nm
- **z-Range:** 3 Å
- **Setpoint I:** 100 fA
- **Bias:** -1.5 V
- **Resolution:** 512 x 256 pixels
- **Scan Speed:** 2 s/line
- **Acquisition Time:** 730 s = 12 min
- **Channels:** Topography, Current, fwd/bwd
- **Preamplifier:** Omicron STM Pre
- **HVAMP Gain:** 4

**In Collaboration with:**
B. Grandidier, J.-P. Nys, IEMN, University of Lille, France

**Nanonis Modules in Use:**
- Base Package
- Omicron Adaption Kit
- High Voltage Amplifier 150V

**System:**
- Omicron STM-1

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