Electronic transport laboratory 1L35

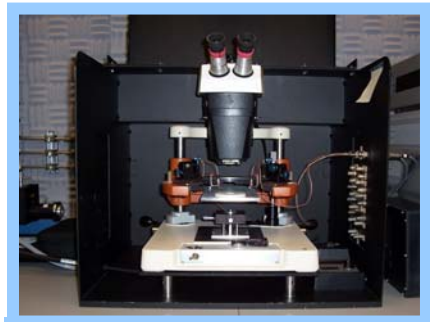
Fernando Camino
11/01/12

To understand how electrons move in nanostructures. Main tools of study are probe stations that apply electrical signals under variable temperature, magnetic field, or light

LakeShore 8404 Hall Effect Measurement System:
- mobilities down to 0.001 cm^2/Vs
- resistances in the range 0.5 mΩ-100 GΩ
- samples measured at room temperature and 77 K

Signatone CM-170
- suitable for room temperature characterization
- reliable and simple to use

LakeShore HFTTP4 cryogenic probe station:
- low-noise measurements from 4 K up to 400 K
- in-plane field from 1 Tesla superconducting magnet
- DC to 50 MHz electrical characterization



Rucker and Kolls:
- to characterize optoelectronic properties at room temperature
- fitted with solar spectrum simulator and optical monochromator

MBE-Komponenten AO500:
- high temp (500C) annealing oven with in-situ electrical measurements in vacuum (2 mbar) or under MFC-regulated gas flow (Ar, N_2, H_2, custom)

Electronic transport laboratory 1L35

Fernando Camino
11/01/12

Other Equipment:

K&S 4526 Manual Wedge Bonder

Ametek VersaStat 4 Potenstiotat

- low current, high sensitivity (min. current resolution 120 fA) potentiostat that measures electrochemical activity
- operates at room temperature and outputs maximum ±10 V voltage