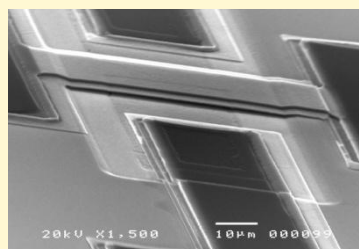


Staff: IETR: 280 members including 118 PhD students
Groupe Microelectronique: 29 members including 8 PhD students

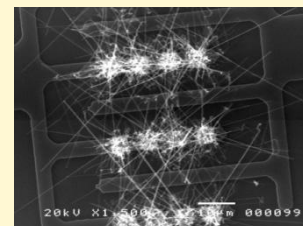
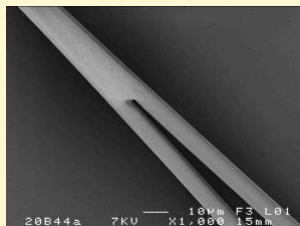
Research fields (Groupe Microélectronique): Micro/nano electronics, nanophotonics, microsystems and systems, low temperature process on plastic substrates

Research topics in Micro and NanoSystems

- Synthesis of Si related materials (thin films, nano-objects)
- Si technology
- Si & Ge low temperature technology on flexible substrate
- Actuation and detection techniques
- Chemical and biological detection
- Optical waveguides on Chalcogenides
- IR nanophotonics devices
- Electrical qualification (reliability, modelling)



Suspended Gate FET as generic structure for electrical charge detection



Y IR Waveguides made of Chalcogenides Devices based on Si Nanowires

Technology

- 200 m² clean rooms class 1000 & 100
- UV, DUV lithographies
- Deposition reactors LPCVD, PECVD, APCVD, DC&RF Sputtering, e-beam, electroplating
- Etching: KOH, TMAH, RIE, DRIE
- Si & related materials on low temperature (<180° C) plastics
- Si surface and bulk micromachining
- Technology on polymer substrates

Design, simulation & characterization tools

- Cadence, VHDL, Silvaco
- Microscopies: SEM, AFM
- LF and HF electrical measurements
- Static electrical measurements for materials and devices at different temperature
- Hall effect for resistive materials
- Possibilities for X-ray diffraction, Nano-SIMS, EDS, EBSD, Raman