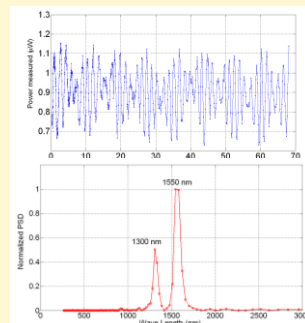
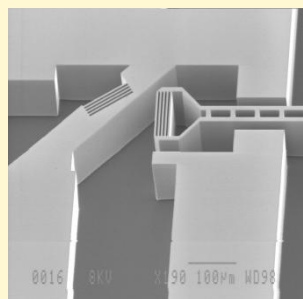


Staff: 28 researchers, professors, lecturers, engineers and technicians
42 PhD students, post-docs and temporary staff

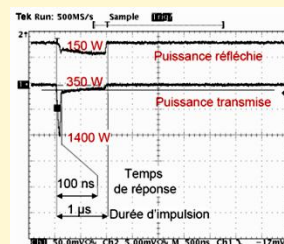
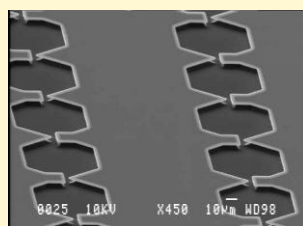
Research fields: Multiphysics components, micro & nanotechnology

Research topics in Micro and NanoSystems

- DRIE-based and 3D micromachining
- di-block copolymers nanopatterning
- Photonic MEMS and RF MEMS
- Sensors for harsh environment
- Gas analysis systems
- Fluidic sensors
- Air quality and water quality monitoring
- Energy harvesting
- Microprobe interface arrays for neural tissues



FTIR Microspectrometer : device photo, recorded interferogram and corresponding FT leading to the optical spectrum



Microwave Power Limiter based on electronic emission ; demonstrated power limitation of 2 kW at 12 GHz

Technology

- 350 m² clean rooms class 100 & 10000
- UV lithography with backside alignment
- e-beam lithography
- DRIE, Bosch and Cryogenic process
- Chlorine RIE, Fluorine RIE
- FIBE
- PVD, LPCVD, PECVD, oxydation, doping
- poly-Si, Pt, W, Ti-Pt, Au, Cr, Al, Cu, SiN, AlN
- back-end : dicing, packaging, wire-bonding

Design, simulation & characterization tools

- Ansys, Coventore, Comsol, HFSS, R-soft
- FE-SEM, AFM, STM
- Optical Profiler, Mechanical Profiler
- Laser Doppler Vibrometer
- Optical bench 900 and 1550 nm, OSA, TLS
- Microfluidic lab.
- LF and RF labs.



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