



TIXIER-MITA LAB.

[Integrated CMOS-MEMS Sensors]

Center for International Research on MicroNano Mechatronics

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Integrated Bio and Chemical Sensors

Integrated CMOS-MEMS Sensors

Autonomous sensing systems for chemical and biological applications.

Integration of sensors and data analyses systems on a same chip allows further miniaturization, parallel analyses, reduction of parasitic noise due to wiring, and autonomy. The advancement in technology allows now to realize single chip integrated devices, opening the door to new functions and applications to standard sensors systems, for more diversified analyses. Targeted applications concern chemical and biological sensing.

- ◆ Wireless Chemical Sensor, for analyses inside a closed container (bottle): beverage or medicine applications
- ◆ Cells Sensing CMOS-MEMS Chip for cells characterization and manipulation: electro-rotation and electro-fusion applications
- ◆ Autonomous and Battery Free Gas Sensing System with Integrated MEMS-Memory: measurement of the cumulated dose of chemicals on a period of time.

