



Agnès Tixier-Mita LAB.

[Intelligent Chemical Sensors]

Centre for International Research on MicroNano Mechatronics

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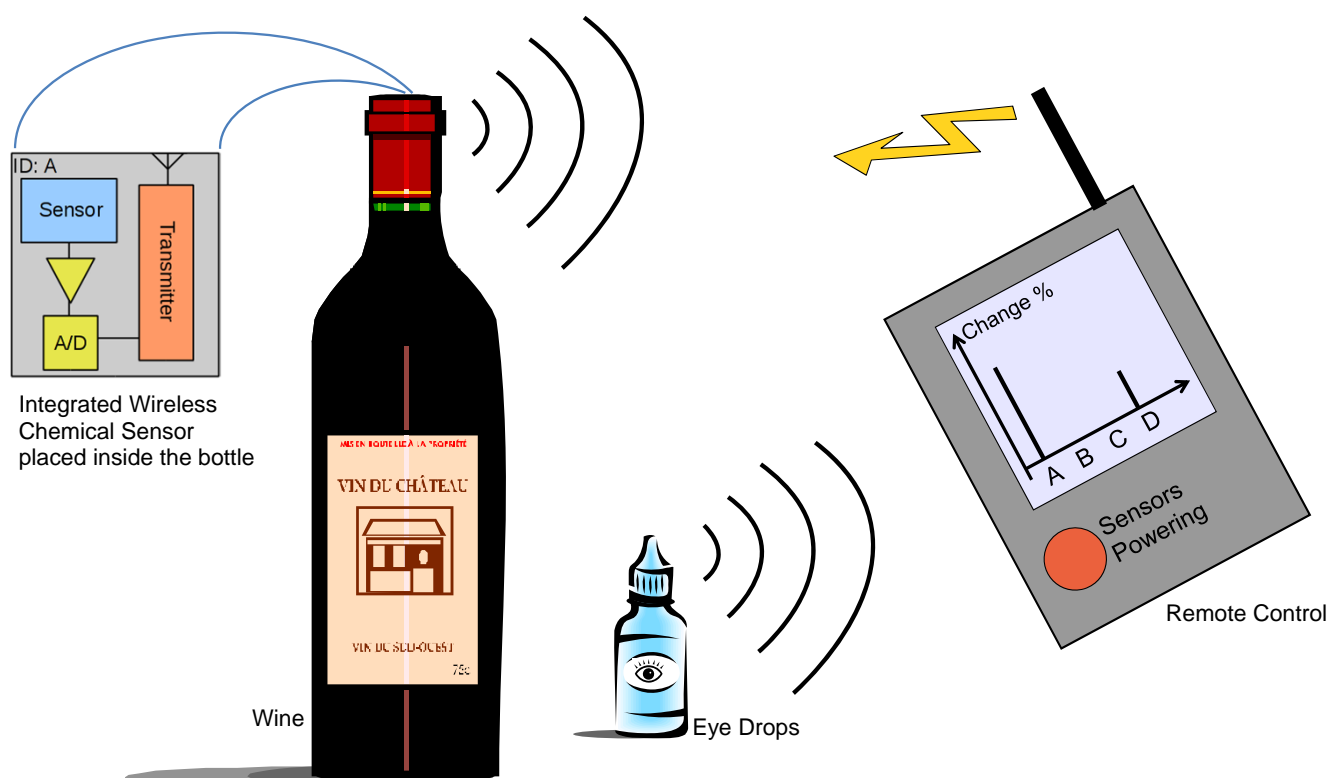
Micro-Electro-Mechatronics Systems (MEMS)

Intelligent Chemical Sensors

An all integrated wireless chemical sensor

How to know, without opening the bottle, wine or medicine went bad or not? How being informed about the wrong evolution of a product without opening its container? By placing inside the container an intelligent chemical sensor which will inform, on a long-term, about the deviation in the composition. The system has to be: tiny, autonomous in term of data processing and energy, and wireless. In a more general way our research topics of interest are:

- ◆ MEMS chemical sensors, for a global analyse of a product
- ◆ MEMS and LSI integration technology, for an intelligent MEMS
- ◆ Wireless MEMS sensors, for an autonomous system
- ◆ Autonomous long-term analyses chemical sensors, for the whole integrated system.



Principle of the system. Application to wine, medicine (eye drops...), etc.
A remote control powers on the integrated chemical sensors placed inside the container.
The sensors transmit their answer in a wireless way.