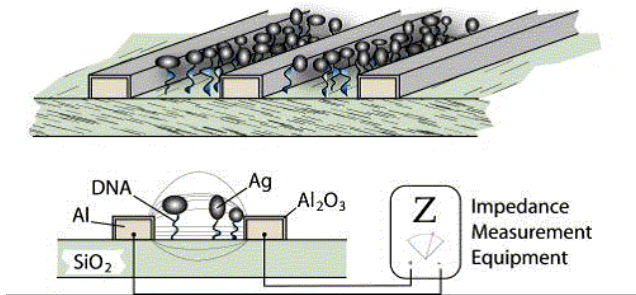


SOFT BIO-ELECTRONIC SENSORS

Sopartec, the technology transfer company of the Université catholique de Louvain (UCL), introduces cutting edge bio-electronic transducers.



Technology Keywords

- integrated bio-electronics
- electrochemical transduction
- intelligent sensing

Technology Market : Sensors

Our front-end bio-electronic transducers support microsystems' quality and versatility in the following fields:

- **Healthcare:** biochemical agents detection, pathogen screening
- **Vehicle control:** chemical health monitoring
- **Environment:** particles detection, water quality assessment
- **Swarm intelligence:** food, drugs or goods manufacturing process control, biometric devices complementation

The cutting edge bio-electronic microsensors from UCL address market needs for **innovative sensing components** integrated in soft biochemical monitoring systems.

The UCL invention

Each of our patented bio-electronic transducers offers the best starting conditions to **versatile sensing**

microsystems projects. Taking advantage from complex vector analysis as well as single-parameter detection, the UCL integrated **CMOS chips** extract maximum information out of minimum data.

Sensitive area down to **100 microns wide** (1–10 pF capacitance range) typically reaches the following performances:

- ✓ metallic **nanoparticles** detection starting from **1 % vol. concentration**;
- ✓ metallic labelled DNA identification below **10 million molecules per cm²** – down to 30 pM in concentration;
- ✓ up to **38 dB impedance change**.

UCL technologies feature low production cost since components can be manufactured in any CMOS semiconductor process.

Technology Status

This work is subjected to patent applications:

- Insulated Substrate Impedance Transducers (EP Patent Application 06018835.6 , Priority date: 2006-09-08 ; EP Patent Application 07802238.1, 2007-09-10; Us Patent Application 12/440,469, 2007-09-10,)
- Method & device for high sensitivity detection of the presence of DNA and other probes, EP Patent Application 02447122.9, Priority date : 2002-06-04; US Patent Application 10/519,014, 2003-06-04 ; BE, FR, DE, GB granted patents 03760533.4, 2003-06-04)

Sopartec would like to talk to companies interested in developing and commercializing this opportunity.

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