

#### **4. Chips and integrated systems**

Biochips and integrated systems integrating electrochemical activities have been proposed following the integration of microtechnologies in analytical sciences, particularly bioanalytical ones. Indeed, the development of lithography on many supports, of elastomers for micro-molding and of microfluidics, has paved the way for the fabrication of multiple types of electrode arrays and for lab-on-chip Microsystems.

These Microsystems are currently used for the electrochemical detection of analytes of environmental or biological interest, for the achievement of biochips integrating spots ranging from micro to nanometric dimension, as well as for electrode arrays implanted *in vivo* to electrostimulate biological functions.