

Title: Microfluidics for life sciences: an overview

**Abstract.** Microfluidics brings the long-standing promise of miniaturised Lab-on-a-chips (LoC) able to “miniaturise and automatize a laboratory procedure on a chip” to be used especially by unskilled operators, possibly on remote and low-resource locations. In the literature, LoC are often implemented with approaches based on labelled immunoaffinity test, label free sensors and bead-based assays, where microfluidics allow sample preparation, smallvolume testing and automatic test procedures; in addition, microfluidics are opening newopportunities and concepts by the use of micro- and nano- scale phenomena.How much commercial devices and results in the literature fulfilled the claim of userfriendliness, portability and low cost? This presentation will present a brief overview ofmicrofluidics techniques and achievements in a few case studies.