

Nano-enabled Microsystems for Bio-analysis

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Fluid bio-analysis is a broadly used yet diverse type of analysis across several areas such as medical diagnostics, biopharmaceuticals production, food and beverage production and environmental analysis. A multitude of nanotechnology innovations on e.g. sensors, microfluidic fabrication, surface coatings and nano-manipulation have become available with potentially significant impact on fluid bio-analysis. Significant hurdles for the adoption of these nanotechnologies for end users but also for innovative instrument developers lies in the deep and broad technology expertise required to integrate these nanotechnologies into microfluidic microsystems, access to a variety of technologies, poor interoperability of technologies and the lack of standardization. Nano-enabled Microsystems for Bio-analysis is a demonstration case worked out under the New nano-enabled products pilot of the Vanguard Initiative to address these shortcomings by setting up demonstration value chains focusing on concrete product cases but also capturing and sharing the learnings and driving methodologies and standardization. The Vanguard Initiative is fostering inter-regional collaboration to establish value chains for a more succesful uptake of novel technologies into products.