PROJECT FACTSHEET

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NANO-PH

Nano electronics for pH control and ultra-dense electrochemical synthesis

CONTEXT

Diagnosis is based on the preparation of target molecules and the later detection of chemical reactions. With the increasing knowledge of the complexity of biomolecules, the improvements on public health and the next generation drug discovery will rely in our ability to provide high throughput assays. A limiting aspect is the capacity to spot or synthesise arrays of complex molecular entities and to manage small quantities of reagents.

INNOVATION

The main goal of the project to tackle this challenge is to develop the means to perform solid phase synthesis or to be able to spot complex molecules with the maximum density and resolution. The route to this objective is the use of nanotechnology to control the pH-regulated electrochemical processes. Nanotechnology will also be used for the implementation of sensing techniques in a holistic lab-on-a-chip concept for a complete diagnosis prototype.

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