

## BIONAND 2017 CONFERENCE SERIES

### Smart nanomaterials and micromotors for biomedical applications

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#### Abstract:

Micro and nanomotors represent one of the most exciting horizons in micro and nanotechnologies at the vanguard of Analytical Chemistry. Such “nanoscale tools” offer considerable promise for advanced sensing, bio sensing and labs-on-a-chip (LOCs) applications.

In this talk, selected examples illustrating the analytical potency of Janus micromotors and the coupling of quantum dots-based tubular micromotors will be discussed.

Relevant examples involving graphene-based LOCs and graphene-based tubular micromotors, which combine the outstanding catalytic properties of micromachines with the unique surface chemistry of graphene, will be also discussed.

Self-propelled antibody-functionalized synthetic catalytic microengines for capturing and transporting target proteins well as biological motors in LOCs devices will finally be illustrated.

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