



## Catalytic Nano-and Micro-bots: What for?

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Engineering tiny nano-bots that actively and autonomously act for desired applications is envisioned to be part of future nanotechnology. Mimicking biomotors, scientists use catalytic reaction to power artificial nano-bots. Self-powered micro-nano-bots can be fabricated from multiple materials, shapes and by various methods, and have demonstrated several proof-of-concept applications in robotics, Lab-chip biosensing, nanomedicine, and environmental field [1].

We fabricate nano-bots from mesoporous silica nanoparticles, microcapsules, electrodeposited microtubes and rolled-up thin films into microtubular jets. Very recently, we have found that hybrid micro-bio-bots combine the best from the two worlds, biology and nanomaterials providing very promising bio-related applications [2].

What can nano-microbots do for us? Here, I will present our recent developments in this fascinating field focusing on two applications, i.e. towards nanomedicine [2,3,4] and water remediation[5,6].

**Keywords:** nanomotors, nanotechnology, drug delivery, active matter, self-propulsion, bots.

### References

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