

SEMINARIO

“Biomolecular self-organization, bionanodevices, and synthetic biology”

Profesor invitado:

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SEMINARIOS UPM

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Máster en Inteligencia Artificial

Motivación: DNA is not only in the focus of modern molecular biology, but also plays an increasingly important role as a building block for nanoscale materials and devices. In recent years, many researchers in nanoscience have used the unique, programmable molecular recognition properties of DNA to build nanostructures by self-assembly and to realize artificial, machine-like devices. We give in this seminar a brief survey of this field and discuss the possible applications of DNA-based nanodevices either as nanoscale motors and actuators, or as novel biosensors with built-in information-processing capability.

Títulos de las charlas - seminarios

- Self-assembly and self-organization in biology
- Structure formation & nonequilibrium processes
- DNA-based self-assembly and applications

- Biomolecular nanodevices
- Molecular machines & motors

- Biomolecular computing in vitro and in vivo
- Synthetic gene networks

Bibliografía:

http://bi.snu.ac.kr/DNA12/ppt/FriedrichCSimmel_DNA12.pdf

T. Liedl, T. L. Sobey, and F. C. Simmel, *DNA-based nanodevices*, *Nano Today* **2**, 36-41 (2007). http://www.nanotoday.com/pdfs_nanotoday_02_2007/nano_v2_2_review02.pdf