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NANOSCIENCE COLLOQUIUM

Thursday November 20th 2014 at 15:15, K-space, Fysicum

Molecular Machinery from DNA: Synthetic Biology from the Bottom Up

Prof. Andrew J. Turberfield

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DNA is not only a wonderful material for nanoscale construction, its hybridization or hydrolysis can be used to provide energy for synthetic molecular machinery. With DNA it is possible to design and build three-dimensional scaffolds, to attach molecular components to them with sub-nanometre precision – and then to make them move. I shall describe our work on assembly pathways, on autonomous, biomimetic molecular motors powered by chemical fuels and the use of synthetic molecular machinery to control covalent chemical synthesis. I shall also discuss the use of kinesin motor proteins to power synthetic devices.



Prof. Turberfield will serve as the faculty opponent in the defense of Cassandra Niman's PhD thesis "Nano- and Microstructures for Studies of Model Biological Systems" on Friday, November 21, 9.15 am, in Rydbergsalen. Welcome!

Host: Heiner Linke (Solid State Physics)

This is one in a regular series of Nanoscience Colloquia, aimed at all researchers and students with an interest in nanoscience. The series is arranged by the Strategic Research Environment "The Nanometer Structure Consortium at Lund University" (nmC@LU) and by the Linnaeus environment "Nanoscience and Quantum Engineering", funded by the Swedish Research Council (VR).



Vetenskapsrådet