

Tuesday 12 February 2013
at 10:30 in the FKF meeting-room

Prof. Robert Häner

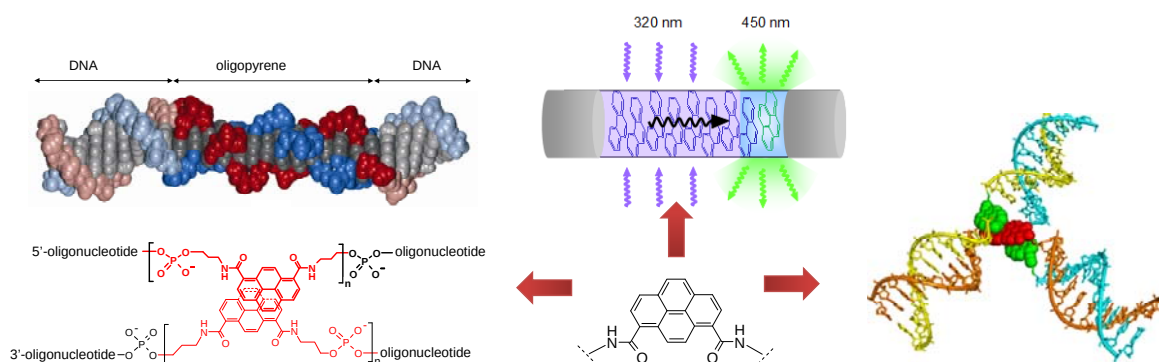
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"Organizing Chromophores the DNA Way: How we drifted into Materials Research"

Abstract:

DNA takes an eminent role in the construction of well-defined nanostructures and -devices. The unique feature of *molecular self-organization*, combined with the ease of automated oligonucleotide synthesis has driven the rapid progress in DNA nanotechnology. To increase the number of different types of DNA-like structures, the synthesis of modified building blocks matching the special needs is rapidly progressing. Such building blocks will allow the construction of novel types of artificial helical structures, which may find applications in various areas of nanotechnology.

We have pursued the synthesis and investigation of nucleic acids containing non-nucleosidic, polyaromatic compounds, as the e.g. the pyrene shown below. Oligonucleotides containing such building blocks reveal a multitude of different structures and diverse electronic properties.



We will describe the design and construction of different types of molecular architectures based on the use of these polyaromatic building blocks.