

Seminar



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How DNA worms through protein channels and nanopores

The translocation of electrically charged macromolecules through narrow channels is a fundamental process in life. When a polymer is forced to translocate through a narrow path, its conformational entropy is reduced, resulting in a free energy barrier. This free energy barrier is additionally modulated by potential interactions between the polymer and the pore. The biophysics of polymer translocation process will be discussed using simulations and polymer physics concepts against a background of single-molecule experiments. Specifically, the movement of DNA/RNA through alpha-hemolysin channels and solid-state nanopores under an external electric field will be presented. The implications to DNA-sequencing in biotechnology will be discussed.

Wednesday, May 16th, 14h15

Hörsaal Makromolekulare Chemie, Stefan-Meier-Str. 31

Invited by: Prof. Jan Behrends

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