

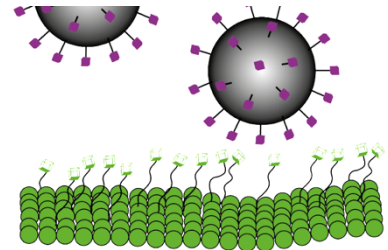
Student projects: To bind or not to bind?

Multivalent interactions in a DNA-colloidal system

We want to gain a deeper understanding on the molecular level of the ligand and receptor interactions of multivalent binding by investigating the following:

- DNA-DNA interaction strength
- DNA concentrations

Further, the self-assembly on membranes is dictated by the diffusion of the nanoparticle on the membrane. We want to study the mobility of surface-bound particles on a lipid membrane by using particle tracking algorithms.



We look for a motivated student who is interested in biophysics and who would like to work on multidisciplinary experimental research combining knowledge from Chemistry, Biology and Physics. Besides sample preparation (lipid membrane, DNA, flow channel), you will get experience in fluorescence microscopy (spinning disk, TIRF) and image analysis (ImageJ, Python).

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