Biophysical study of large macromolecular complexes

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flexible micropipette of known bending stiffness. This technique is promising for acquiring information that is currently difficult to quantify with other methods. Information such as nucleus stiffness and intracellular viscosity could be effectively evaluated.

Poster 13

The Experimental Study Of The Dynamics Of A Self-propelled Rod

Yasamin Mohebi

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The self-propelled particles have two categories: Natural self-propelled particles such as bacteria, and artificial self-propelled particles made in a laboratory. It is much easier to study artificial particles because particle motion parameters can be controlled by changing laboratory conditions. In this poster, we describe the results of experiments on an artificial self-propelled rod and we show that this artificial particle has the properties of an active particle.

Poster 14

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Large macromolecular complexes are ubiquitous in biological media (e.g. protein complexes, membrane-bound complexes…). Specific biophysical techniques can be used to assess the interactions and structures of such complexes. Two independent systems were chosen as examples. The first one deals with the formation of protein coronas (protein/nanoparticle interactions) while the second system concerns virus encapsidation (protein/RNA interactions). Here, we can see how three techniques (isothermal titration calorimetry, cryo-electron microscopy, and small angle scattering) can be combined in order to answer fundamental questions.