

Zapraszamy na seminarium dr Zbigniewa Rozyńka, ICHF PAN. [Seminarium Zakładu Fizyki Biomedycznej](#) odbędzie się

2014-11-20

w

godz.

13:15-14

:00 w sali 1.40. Seminarium technik tworzenia mikrootoczek polimerowych, które potencjalnie mogą być wykorzystywane do dostarczania leków w sposób wybiórczy. Prowadzący przedstawi też propozycje projektów na prace magisterskie do wykonania we współpracy z ICHF PAN.

Plan seminarium:

Behavior of droplets subjected to E-fields.

Manipulation of particles on a surface of a droplet

Novel route for fabricating patchy colloidal shells

Behavior of droplets subjected to E-fields.

I will briefly discuss the behavior of droplets subjected to E-fields. An external E-field applied to a droplet surrounded by a dielectric medium, deforms the droplet to a prolate geometry, i.e., droplets are stretched along the direction of the E-field. This behavior is described by a simple dielectric model. However, in practice the perfect dielectric medium does not exist, i.e., even very pure oils cannot be considered as perfect isolators, since they possess mobile charges (ions) that are able to reach the interface of the droplet. Surface charges may deform a droplet to an oblate geometry, and also induce fluid motion. The general concept of the induced electrohydrodynamic liquid flows will be touched upon.

Manipulation of particles on a surface of a droplet

In this part of my talk I will demonstrate that electrohydrodynamic flows and electro-rheological effects in leaky-dielectric liquid droplets can be used to structure and control colloidal particle

Colloidal assemblies on droplet interfaces

Wpisany przez Jacek Szczytko

środa, 19 listopada 2014 08:04 - Poprawiony poniedziałek, 24 listopada 2014 09:08

assemblies at surfaces of a droplet. These include jammed colloidal “ribbons”, electro-rheological colloidal chains confined to a two-dimensional surface and spinning colloidal domains on that surface. In addition, I will present the size control of “eye pupil” like openings in colloidal shells.

Novel route for fabricating patchy colloidal shells

In the third part of my lecture I will introduce you to a new method for fabricating highly ordered jammed colloidal shells of various shapes with domains of controlled size and composition. Janus and patchy shells have designed heterogeneous surfaces that consist of two or several patches with different materials properties. These shells are emerging as building blocks for a new class of soft matter and functional materials.