

КОЛОКВИУМ „АЛЕКСЕЙ ШЕЛУДКО”
СЕКЦИЯ „ПОВЪРХНОСТИ И КОЛОИДИ”
ИНСТИТУТ ПО ФИЗИКОХИМИЯ НА БАН

С Ъ О Б Щ Е Н И Е

На **14 октомври 2016 г. (петък)** от **11:00 часа** в зала „Болцман” на **ИФХ-БАН**, ще се проведе заседание на Колоквиума със следния дневен ред:

1. Доклад на Николай Панчев на тема:

**„ELECTRO-MICROINTERFEROMETRIC STUDIES
OF WATER-IN-OIL EMULSION FILMS
STABILIZED BY NATURAL AND SYNTHETIC SURFACTANTS”**

Stability of water-in-oil emulsions depends to a great extent on properties of thin oil films that separate water droplets. It is generally recognized that the thinning of these films and their resistance to rupture play a crucial role in determining the stability of emulsions. Studies on water-in-oil emulsion films are few and information on the film structure and stability is limited. We present a modified microinterferometric pressure balance technique for single film study is used in order to apply AC and DC electric potentials over the film. It is yet another approach to elucidate fundamental science aspects of electro-coalescence of emulsion systems. The major advantage of this technique is that a single experiment allows the independent determination of the most important film parameters: film thickness, critical voltage of film rupture, film diameter, rate of film drainage, film capacitance and relative film permittivity. The experimental results with AC polarization present the film capacitance vs. film thickness data and provide a calculation of dielectric film permittivity. DC voltage ramps experiments allow measurements of the values of critical voltage of film rupture for different film thicknesses, film areas and concentrations. Thus the influence of these factors on film stability is assessed individually. Further the disjoining pressure vs thickness isotherms are implemented at different DC potentials. Above certain voltage difference the isotherms appear to be shifted and thus the surface forces are to be affected.

2. Разни (съобщения, организационни и др. въпроси).