

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

---

---

## **С Ъ О Б Щ Е Н И Е**

На **10 май 2019 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:

### **‘STAINED GLASSES’, THIN LIQUID FILMS AND LAMELLAR LIQUID CRYSTALS**

Foam films drawn from aqueous solutions of sodium naphthenates and Aerosol OT, at concentrations close to or just above the lamellar liquid crystal (LLC) phase boundary, contain domains of uniform color (thus of uniform thickness) with sharp boundaries, resembling 'stained glasses'. To be colored, the domains must be thicker than half of the visible light wavelength. Analysis of Newton rings shows that these domains exist well above 1  $\mu\text{m}$  thickness. To have a uniform thickness, the domains must contain hundreds of ordered layers of molecular dimension. Statistical mechanical considerations for hard spheres (which represent micelles) predict the existence of only a few such layers. It is thus likely that Wasan and Nikolov's model of film stratification, based on parallel layers of ordered micelles, describes film structure at moderate surfactant concentrations. At high concentrations however, LLC-like organization is likely responsible for film stratification, in agreement with pioneering works of Stig Friberg.

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