

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

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## **С Ъ О Б Щ Е Н И Е**

На **22 ноември 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 Лидия Александрова на тема:

**“ INVESTIGATION OF THE SYNERGISM IN SURFACE  
TENSION REDUCTION AND MICELLES FORMATION  
OF CATIONIC-ANIONIC SURFACTANT MIXTURES  
IN AQUEOUS SOLUTIONS “**

Molecular interaction in mixtures of two ionic surfactants, the cationic decylammonium chloride ( $C_{10}$  amine) and one of the following anionic surfactants: sodium octane-1-sulfonate ( $C_8$  sulfonate), sodium decane-1-sulfonate ( $C_{10}$  sulfonate), sodium dodecane-1-sulfonate ( $C_{12}$  sulfonate) is investigated. The surface tension of the individual surfactants and their mixtures is measured. Results for the maximum adsorption on air/solution interface and molecular interaction parameter  $\beta$  for surfactants mixtures are obtained. The  $C_n$  sulfonate/ $C_{10}$  amine ( $n = 8, 10, 12$ ) mixtures show strong packing contraction at the air/water interface, and in the case of equal length of the alkyl chains ( $C_{10}$  sulfonate/ $C_{10}$  amine mixture) the area per molecule has a minimum, that is an indication of alkyl chain length compatibility synergism. The mixtures also exhibit high negative values of the molecular interaction parameters  $\beta$  (several times larger than those for nonionic surfactants), which is evidently due to the strong Coulombic interaction between ionic surfactant species. The mixtures reveal synergism in mixed micelle formation, surface tension reduction efficiency and in surface tension reduction effectiveness.

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