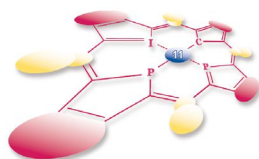


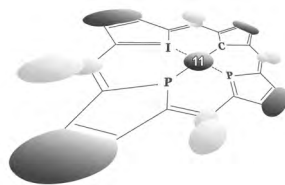
# BOOK OF ABSTRACTS

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# BOOK OF ABSTRACTS



## Structure of Nanostructured Layers at Air-Water Interface and LS Films of Macroheterocycles - in Situ X-ray Diffraction Study

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The concept of nanostructuring of organic compounds at the gas-liquid interface, according to which the structural units of a layer are generally not individual molecules (Langmuir approach), but their nanostructures with noncovalent

intermolecular interactions (the so-called M-nanostructures and supermolecules) was recently presented [1]. Using the developed approach, under conditions of confined spaces, nanostructures of a number of organic compounds were formed in Langmuir-Schaefer (LS) films and studied using X-Ray diffraction [2].

In this talk we present in situ grazing-incidence X-ray diffraction (GIXD) and X-ray reflectivity (XRR) study of structural rearrangements during compression of nanostructured layers of macroheterocycles of porphyrin type at air-water interface and in LS films (in Fig.1 GIXD patterns of porphyrin layers formed during compression at air-water interface, and in LS film on Si).

Recent results on formation and study of the first nanostructures of vitamin B<sub>12</sub> [2e] and its hydrophobic derivative – heptamethyl ester of cyanoaquacobyrinic acid, also will be presented.

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