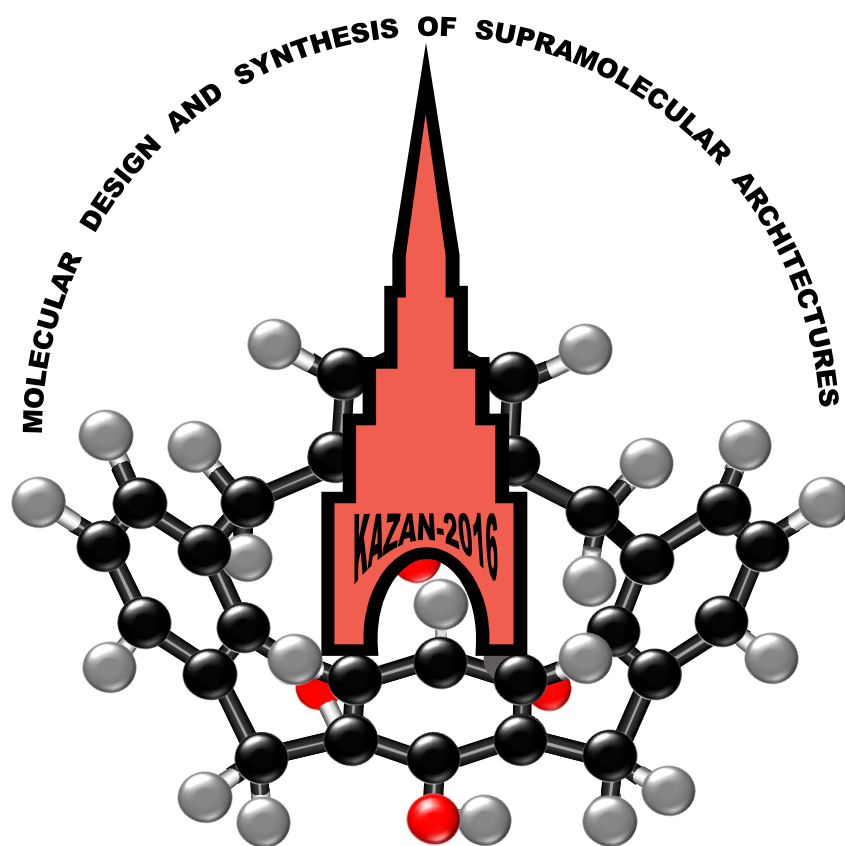


**KAZAN FEDERAL UNIVERSITY
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**VIIIth INTERNATIONAL SYMPOSIUM
«DESIGN AND SYNTHESIS OF SUPRAMOLECULAR
ARCHITECTURES»**

**IInd YOUTH SCHOOL ON SUPRAMOLECULAR AND
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ELUCIDATION OF HYBRID MULTI-PORPHYRIN SUPRAMOLECULAR ASSEMBLIES BY 2D NMR SPECTROSCOPY

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Two-dimensional nuclear magnetic resonance (NMR) spectroscopy studies of supramolecular assemblies were carried out. The chemical structure of supramolecular assemblies were confirmed by the two-dimensional NMR. It was found that two-dimensional rotating-frame Overhauser spectroscopy and double-quantum filtered correlation spectroscopy for this system are not sufficiently informative. Moreover, the explanation of experimental data is complicated by the fact that spectral signals of the supramolecular assemblies molecules at the same time depend on two factors: a variation of the electron density distribution and a change in the shielding upon complex formation. Thus questions about the chemical structure of the complexes formed and their size remains open. Therefore, to obtain true evidence of the fact of information about their size and complex formation, other way should be applied. We have used an approach to elucidate the chemical structures for complex that is based on the analysis of two-dimensional high-resolution diffusion-ordered NMR spectroscopy.

1. I.A. Khodov, G.A. Alper, G.M. Mamardashvili, N.Z. Mamardashvili . *J. Mols. Str.*, 2015, **1090**, 174-180.

Acknowledgements This work was supported by Russian Scientific Foundation, project № 14-13-00232.