MS33-1-2 Solid-state stabilization of water clusters by polyamide macrocyclic frameworks
#MS33-1-2

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Abstract
Unclosed Cryptands (UCs) are neutral macrocyclic organic compounds which contain several amide groups connected by alkyl linkers and flexible lariat arm resulting in their structural flexibility [1-2]. Both in solution and in the solid state, UCs are characterized by high water affinity and their conformation is very sensitive to traces of water. We designed and synthesized three UCs of type **1** differing only in the *p*-positioned substituent in the lariat arm (electron-withdrawing nitro group, electron donating methoxy group, and proton), and UC of type **2** characterized by the reversed positioning of amide group in the lariat arm. The crystal structures of so designed macrocycles revealed various water structures, such as water chain and the octameric water clusters built from cyclic tetramer with four pendulous H_2O molecules (Figure 1) [3-5].

References
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