INCLUSION AND EXCLUSION COMPLEXES OF CUCURBITURIL

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Cucurbit[*n*]urils are relatively new macrocyclic hosts in the supramolecular chemistry which have attracted much attention owing to their excellent ability to bind various inorganic, organic and biological molecules and ions in both aqueous solution and solid state. Cucurbit[*n*]urils are characterized by a varying hydrophobic cavity accessible through two oxygen-crowned portals which allow the formation of inclusion or exclusion complexes *via* a combination of ion-dipole, hydrogen bonding and hydrophobic interactions. The easy synthesis from cheap starting materials, high chemical and thermal stability together with first reports concerning their low toxicity make them attractive as both receptors for the molecular recognition and the building blocks for the construction of various functional materials.

Therefore, continuing our research on the recognition and inclusion of biologically and pharmaceutically relevant molecules such as amino acids, dipeptides and Active Pharmaceutical Ingredients by synthetic receptors, we would like to present our recent results on the complexation of these compounds by the cucurbit[6]uril in the solid state.