

Hydrogen-Bonding Module Mediated Self-Assembly on Silica Surfaces

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A urea of 7-deazaguanine (deUG, **1**) that allows for covalent incorporation into supramolecular architectures has been synthesized. The design and synthesis of deUG, as well as its complexation with 2,7-diamido-1,8-naphthyridine (DAN, **2**), will be presented. Additionally, monolayers of deUG have been prepared on both quartz slides and silica particles utilizing the Huisgen 1,3-dipolar cycloaddition (“click”) reaction between alkyne functionalized deUG and azide functionalized silica surfaces. Solvent controlled reversible self-assembly of side-chain and chain-end DAN-functionalized polystyrene occurred on these surfaces as evidenced by UV-vis spectroscopy. Preliminary studies designed to probe the kinetics of desorption will also be presented.

