NEW 4H-BONDING MOTIF

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Hydrogen bonding is a highly adaptable non-covalent molecular interaction that is extensively employed by nature to fulfill crucial life functions such as maintaining structural integrity, facilitating catalytic processes, and enabling replication. The term "hydrogen bonding motifs" pertains to particular configurations of hydrogen bonds inside molecular structures, serving as fundamental units for the construction of modular assemblies of hydrogen-bonded dynamic structures. The association strength of an array is determined by the overall number and arrangement of individual hydrogen bonds. In order to form supramolecular polymers, it is necessary to have quadruply bonding motifs to ensure adequate aggregation. In this study, we introduce a novel molecular structure, present its synthesis, and aggregation properties.

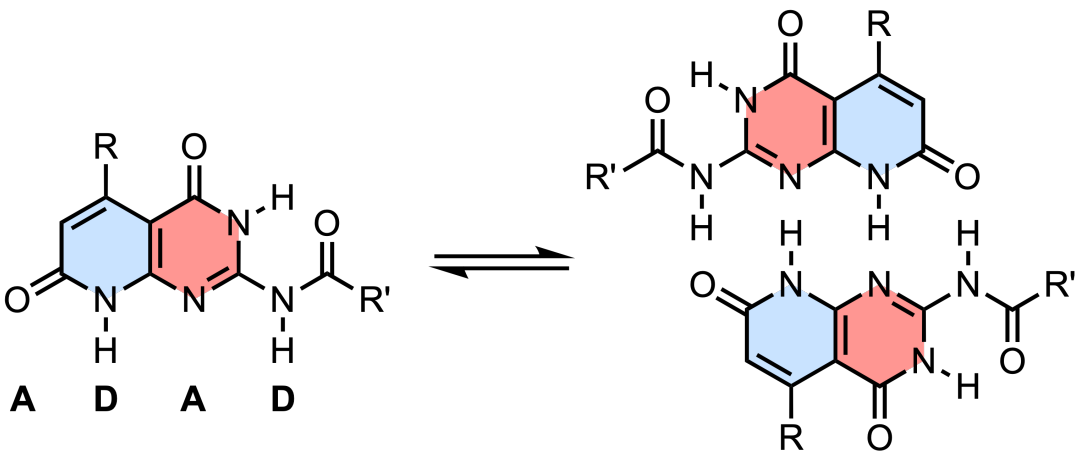

Fig. 1. Chemical structure and dimerization of the 4H-bonding motif