

PL-7

STERIC EFFECTS CONFORMATIONAL ISOMERISM AND WEAK INTERACTIONS IN SUPRAMOLECULAR CHEMISTRY

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Abstract. The supramolecular chemistry is a field of chemical sciences that focuses on the studies of interactions between molecules. These interactions are present in solution and also contribute to the relative position of molecules in crystals. Thus, the full understanding of preferences and directionality

of interactions is crucial for several fields as, for example, in molecular sensing, crystal engineering and relative arrangement of molecules in electronic devices as OLEDs. Thus, it is beneficial to know the methods of the systematic influence on properties of supramolecular complexes.

In the light of the sensing properties of molecules the conformational change is a method of choice to influence the system response by absorption or fluorescence techniques. The systematic effect on the change of conformation in interacting molecules may be realized by the classical approach (Hammett, Fig. 1). Also, it is possible to influence complex stability and conformation of constituents in solution by introduction steric hindrance¹⁻³ (Fig. 2) or in solid state by polarisation of the respective bonds forming weak CH...N,O hydrogen bonds.⁴

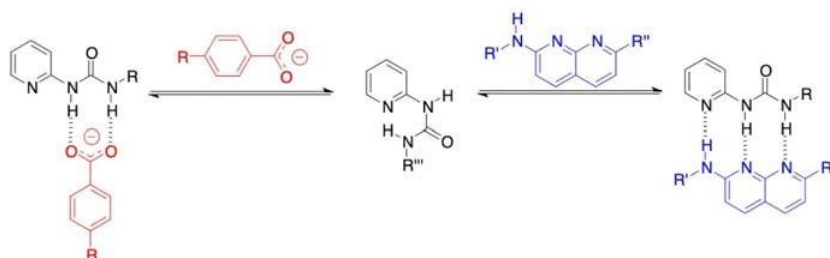


Figure 1. The conformation dependent on association.

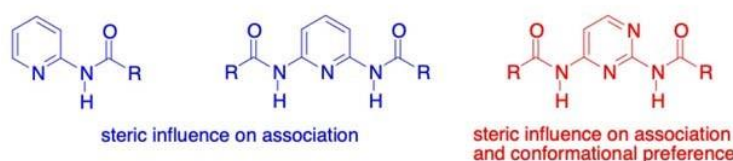


Figure 2. Effect of substituents on properties of hydrogen bonded complexes.

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