

Abstract:

The connection of molecular monomers through non-covalent interaction (e.g. hydrogen bonding, π - π interaction, coordination bonding) enables the formation of supramolecular polymers. The major advantage of these bonds is their reversibility and consequently their ability to self-assemble or to disconnect depending on given conditions. This thesis examines the self-assembly through quadruple hydrogen bonding, which is strong and the resulting structures stable. Ureidopyrimidinon A and aromatic amines were always used as the starting compound for the preparation of monofunctional and bifunctional ureidopyrimidinones.