QUINOLINE BASED BIS-UREA RECEPTORS FOR ANION BINDING AND SELECTIVITY: A COMPARATIVE STUDY

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Abstract: Anions play an important role in a wide range of chemical and biological processes. Extensive attention has been focused on the design of hosts that can recognize and sense anion species selectively. Such recognition behavior can be monitored through optical, electrochemical, and fluorescence responses. The binding of an anion with a synthetic receptor is typically labile and reversible and involves different type of interactions including electrostatic and hydrogen bonding interactions. Among the various synthetic receptors, urea and thiourea groups have been shown to effectively bind anions by hydrogen bonding interactions. In the present study, we have focused on two newly synthesized quinoline based (-m- and -p-) dipodal bis-urea receptors which show anion binding through hydrogen bonds and other non-covalent interactions. The binding studies were evaluated for various anions through UV-visible spectroscopy. Herein, we will present detailed comparative anion binding studies of the newly synthesized receptors for halides and oxoanions.

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