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VERSATILE RECEPTOR MOIETIES FOR ANION RECOGNITION AND STRUCTURAL FEATURES THEREOF

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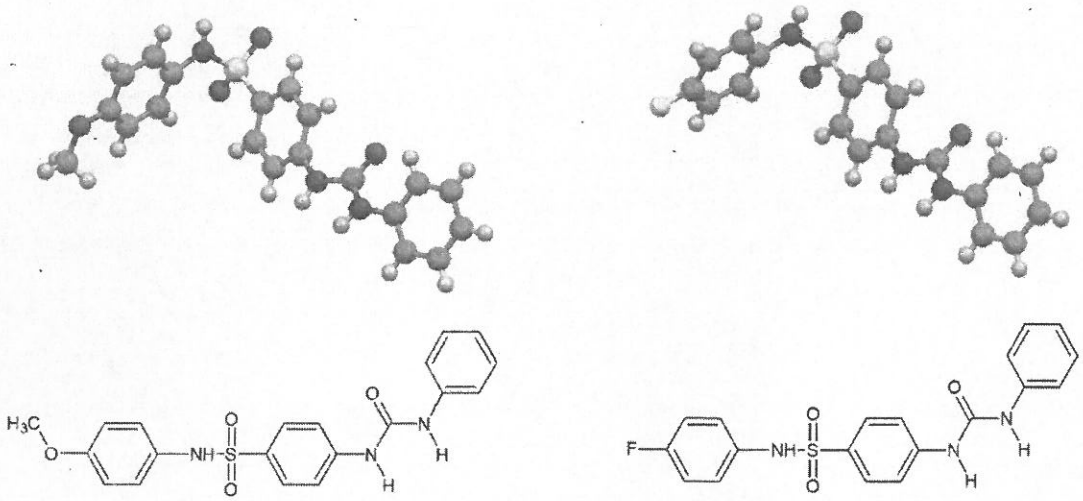
The capability of aromatic-substituted ureas to bind anions or neutral electron rich compounds is generally known [1]. This work is directed towards obtaining of receptor moieties containing a complexation site based on urea moiety, derivatized by sulphonamidic aromatics, which can be attached to a carrier. The derivatization with sulphonamidophenyl group leads to enhanced affinity of given receptor to anions. However, the acidity of sulphonamidic NH proton plays unexpectedly crucial role in the complexation process, as well as in the reactivity and other properties of given compounds. Substituent dependent complexation properties of prepared compounds are discussed and correlated with the length of NH bond in the sulphonamidic group.



Moreover, these compounds offer a possibility of alkylation at the sulphonamidic NH group, useful either for blocking of the acidic proton or to anchoring of the receptor moiety to a carrier of choice. The advantages of thus obtained compounds in connection with complexation properties are also studied.

References

[1] A. F. Li, J. H. Wang, F. Wang, Y.B. Jiang, *Chem. Soc. Rev.*, **2010**, *39*, 3729-3745.