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# Efficient Synthesis of Anion Receptors Based on the Phenoxathiin Macrocycle

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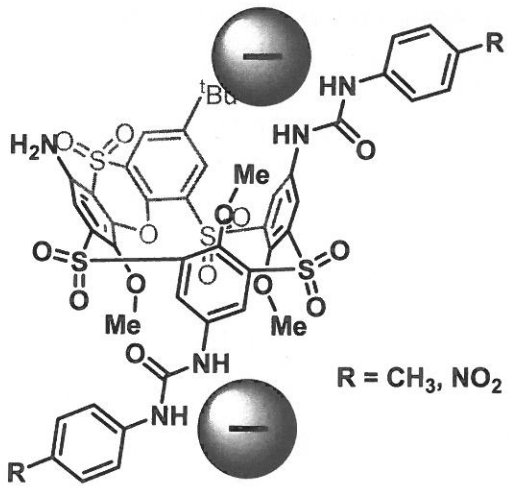
Thiacalixarenes are macrocyclic compounds that are widely used in supramolecular chemistry. The main advantage of their skeleton is the possibility of its simple modifications.[1] Being one of the easily accessible derivatives, phenoxathiin macrocycle is interesting due to its inherent chirality.[2] However, wider utilization of this novel compound is problematic because of the lack of effective derivatization techniques.[3]

We present the first and very efficient way how to introduce the amino groups to the upper rim of the macrocycle. It was performed by using the *ipso*-nitration of the fully *S*-oxidized macrocycle followed by selective reduction of nitro groups. The structures of most of the products were confirmed by X-ray crystallography of monocrystals.

Resulting amino derivative was further reacted with two selected isocyanates, providing the ureido-type receptors (Scheme 1). Their abilities to complex common anions were measured by NMR titration and unexpectedly high association constants were observed in all cases.




Scheme 1

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