A new, general method of the synthesis of lariat macrocyclic compounds

– potential anion receptors

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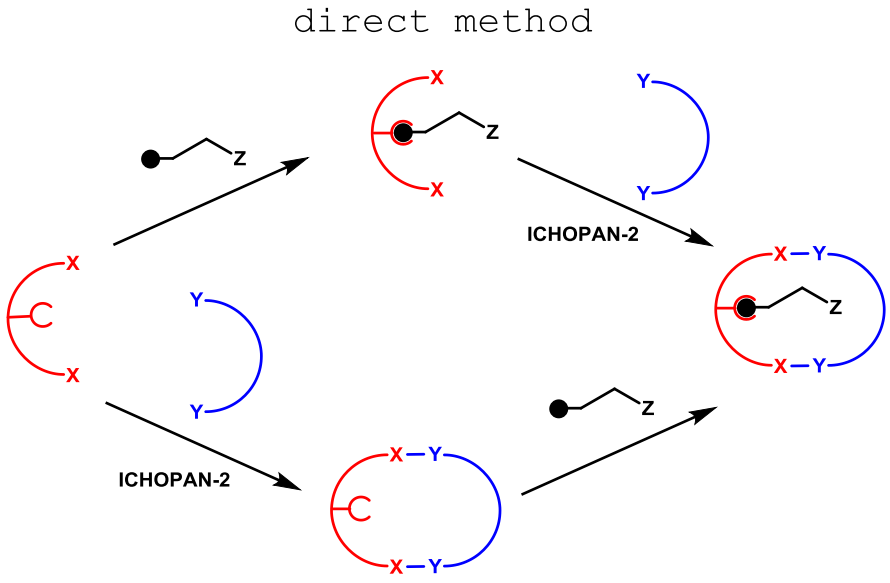
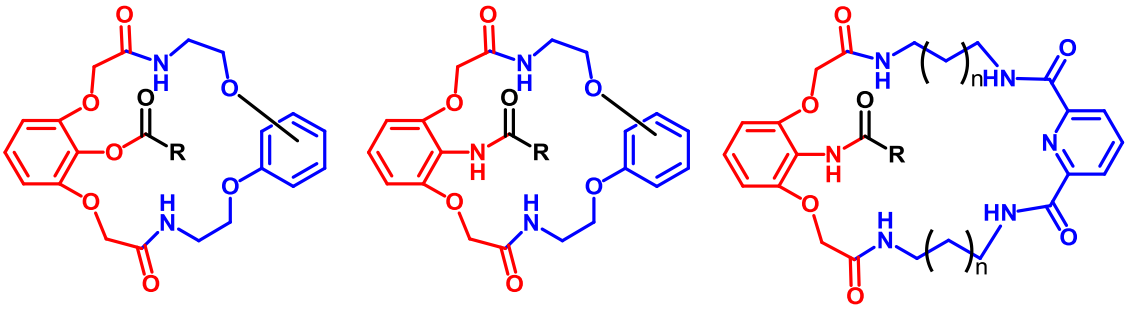
The dissertation presents the study of an indirect method for the synthesis of lariat compounds, using ICHOPAN-2 macrocyclisation step. The new method allows us to obtain a wide spectrum of lariat derivatives and to circumvent the limitations which appear when direct method is applied (Scheme 1).



Scheme 1

Obtained compounds (so-called Unclosed Cryptands) contain lariat residues, branching off the macrorings either through oxygen atom belonging to pyrogallol structure or through amide nitrogen atom deriving from 2-aminoresorcine (Scheme 2). The products, which possess increasing number of amide functions, diverse marcocycle sizes and varied residues R (from simple aromatic up to sugar one), are a rich source of potential receptors for follow-up studies on anion recognition.



Scheme 2