

Anion templated dynamic combinatorial libraries based on reversible S-S bond formation

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Dynamic combinatorial chemistry (DCC) based on disulfide bonds formation is particularly interesting because the components of the library can bind directly or via an appropriate linker¹⁻³. This leads to a greater freedom and therefore diversity of the library formed. We synthesised simple amidic anion binding moieties (**1**, **2**) equipped with sulfide groups in the side chains. A mixtures of **1** and/or **2** with sets of linkers (**3a-c**) allowed us to obtain dynamic combinatorial libraries, which changed their composition upon templation with anionic guests. The influence of the introduced anion on the library composition was analysed and the results elucidated the preferable structures of selective and efficient anion receptors..

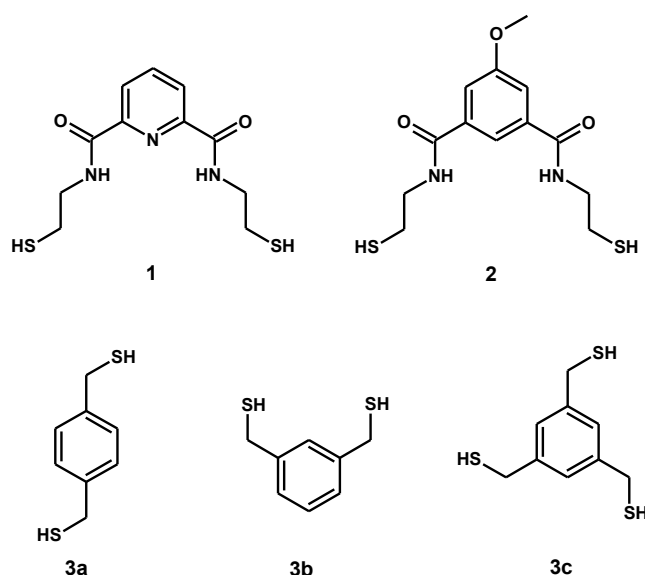


Figure 1. Structures of receptor moieties and linkers

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2. B. L. Miller, *Dynamic Combinatorial Chemistry*, Wiley (2010)
3. Otto, S.; Kubik, S. *J. Am. Chem. Soc.* **2003**, 125, 7804-5