

Chalcogen-functionalization of organic molecules: from supramolecular catalysts to biologically active heterocycles

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Abstract

The development of methodologies to incorporate chalcogen atoms into organic molecules is an important strategy in obtaining promising compounds, since many of them have relevant properties for application in medicine and/or materials science. This talk will first discuss the development of chalcogen-containing pillar[n]arenes as efficient catalysts in nucleophilic reactions in water. This class of macrocycles has unique electron-rich cavity, is easily functionalized and has been extensively studied for several synthetic and biological applications in recent years. The presentation will also provide a comprehensive overview of the methods reported by our group, including green protocols, in the discovery of new chalcogen-containing biologically relevant molecules.