RSC Advances, 2016, vol.6, N39, pages 32722-32726

P-tert-Butylthiacalix[4]arenes equipped with guanidinium fragments: Aggregation, cytotoxicity, and DNA binding abilities

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Abstract

© The Royal Society of Chemistry 2016.Mono-, di- and tetracationic thiacalix[4]arenes in a 1,3-alternate conformation functionalized with guanidinium groups showed a strong dependence of the aggregation properties with the ratio of guanidinium/n-decyl fragments attached to phenolic groups. Increasing the amount of guanidinium fragments improved the macrocycles solubility in water as well as the sorption capacity towards polynucleotide molecules. The synthesized thiacalixarenes showed relatively high toxicity comparable with that for similar receptors based on the classical calixarene.

http://dx.doi.org/10.1039/c6ra04733e