Macroheterocycles 2012 vol.5 N4-5, pages 396-403

Synthesis and fluorescence properties of lower rim functionalized p-tert-butyl thiacalix[4]arenes containing anthraquinone and n,n-diethylacetamide fragments

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Abstract

It was shown that the chemo- and stereoselective alkylation of the lower rim 1,3-disubstituted p-tert-butyl thiacalix[4] arenes in the cone conformation using 2-chloro-N,N-diethylacetamide is determined by both the nature of the base and the position of the anthraquinone fragment in relation to the amide group: in the case of the 1-amidoanthraquinone derivative, tetrasubstituted products are produced, and in the case of the 2-amidoanthraquinone derivative, trisubstituted macrocycles are formed. It was established that the introduction of N,N-diethylacetamide fragments at the lower rim of 1,3-disubstituted macrocycles leads to an increase in the fluorescence intensity of the synthesized compounds. © ISUCT Publishing.

http://dx.doi.org/10.6060/mhc2012.121105s

Keywords

Fluorescence spectroscopy, Synthesis, Thiacalix[4]arenes