

Macroheterocycles 2014 vol.7 N4, pages 337-344

Synthesis of p-tert-butylthiacalix[4]arenes functionalized with tris(2-aminoethyl)amine fragments at the lower rim and their interaction with model lipid membranes

Puplampu J., Yakimova L., Vavilova A., Fayzullin D., Zuev Y., Stoikov I.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© ISUCT Publishing. New tetrasubstituted derivatives of thiacalix[4]arene functionalized with tris(2-aminoethyl)amine fragments at the lower rim in the cone, partial cone and 1,3-alternate conformations have been synthesized. It has been shown that during the interaction of tris(2-aminoethyl)amine with thiacalix[4]arenes in cone and partial cone conformation, epoxy cyclic fragments are formed. The structure with acyclic fragments is obtained in the case of thiacalix[4]arenes in 1,3- alternate conformation. The interaction of these compounds with a biomembrane model system was studied. It has been shown that the interaction of these compounds with model lipid membranes depends not only on the presence of hydrophilic-hydrophobic groups but also on the spatial orientation of these groups.

<http://dx.doi.org/10.6060/mhc140489s>

Keywords

Liposomes, Membranes, Molecular recognition, Thiacalix[4]arenes