

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

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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, 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.

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Keywords

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