Supramolecular receptor based on oligoammonium derivative of *p-tert*-buthylthiacalix[4]arene: interaction with nucleic acids

© Olga A. Mostovaya, Andry V. Galukhin, Igor S. Antipin, Aleksander I. Konovalov, and Ivan I. Stoikov

Organic Chemistry Division. A.M. Butlerov Institute of Chemistry. KFU. Kremlevskaya St., 18. Kazan, 420008. Tatarstan Republic. Russia. Phone: +7 (843) 233-74-62. E-mail: and galuhin@mail.ru

*Supervising author; ⁺Corresponding author

Keywords: thiacalixarene, fluorescence, DNA, molecular recognition.

Abstract

Interaction of 5,11,17,23-tetra-tert-buthyl-25,26,27,28-tetrakis(3-N,N-bis[3-aminopropyl] aminopropoxy)thiacalix[4]arene with some natural nucleic acids has been investigated by fluorescent spectroscopy and dynamic light scattering method. It has been shown that the binding of the polycationic receptor to the studied nucleic acids prevented the intercalation of ethidium bromide. For the first time, the formation of kinetically stable sub-micro sized aggregates has been shown.