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Synthesis of aminobismethylenephosphonic acids on a platform of p-tert-Butylthiacalix[4]arene in 1,3-alternate configuration

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Abstract

© 2016, Pleiades Publishing, Ltd.Aminobismethylenephosphonic acids on a platform of p-ter--butylthiacalix[4]arene were obtained by reacting macrocyclic amines with phosphorous acid and formaldehyde under acid catalysis. Free phenol hydroxy groups on the lower rim of p-ter--butylthiacalix[4]arene were found to inhibit the interaction with the amino moieties of the macrocycle. In the case of amino derivatives of thiacalix[4]arene containing no hydroxy groups the reaction led to the formation of target compounds in good yields.

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Keywords

aminobismethylenephosphonic acid, bisphosphonates, calixarenes, phosphorylation, thiacalix[4]-arene derivatives