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Synthesis of α-hydroxy(polyprenyl) bisphosphonates

Kolodyazhnaya O., Kolodyazhnyi O., Cherkasov R., Garifzyanov A., Davletshina N., Koshkin S.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Bisphosphonates derived from natural terpenes were synthesized by phosphonylation of corresponding aldehydes. The general strategy of introduction of the phosphonate groups into the polyprenol molecule involves successive treatment of a hydroxyl compound by Swern reagent to oxidize the C-OH group into C=O and a (EtO)3P/[PyH]+ClO - 4 mixture to phosphylate the resulting carbonyl compound. © 2014 Pleiades Publishing, Ltd.

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Keywords

bisphosphonates, hydrophosphonates, phosphonylation, pyridinium perchlorate, terpene derivatives