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Title: Ring-closing metathesis reaction-based synthesis of new classes of polyether macrocyclic systems Authors: Naveen (/jspui/browse?type=author&value=Naveen) Babu, S.A. (/jspui/browse?type=author&value=Babu%2C+S.A.) Ring closing metathesis (RCM) Kevwords: reaction-based polyether macrocyclic Issue Date: Publisher: Elsevier Ltd Citation: Tetrahedron, 71(40) Abstract: Ring closing metathesis (RCM) reactions of suitable substrates having terminal olefins, which are assembled from various linkers and hydroxy benzaldehydes and syntheses of a wide range of 16-30 membered, new crown ether-type polyether, aza-polyether, bis aza-polyether macrocycles and dilactone moiety embedded polyether macrocycles (macrolides) are reported. After the ring-closure reaction, installation of different functional groups and functional group modification on the periphery of the synthesized polyether/crown ether macrocycles obtained in the RCM reactions are accomplished using the epoxidation, oxidation and catalytic hydrogenation-based synthetic transformations. Along this line, the syntheses of a variety of polyether macrocycles possessing epoxide or α -hydroxy ketone or 1,2-diol functionalities at the periphery have been shown. Furthermore, the synthesized $\alpha\text{-hydroxy}$ ketone functionality installed polyether macrocycles were subjected to the allylation and Reformatsky type reactions to obtain homoallyl alcohol moietybased and lactone ring-appended polyether macrocycles.

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