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In connection with the synthesis of marine products and their analogues as potential antibiotics, we report here the total synthesis of (+)-lauthisan using diastereoselective alkylation and ring closing metathesis as key steps. The starting D-glyceraldehyde acetonide was converted into (5R)-ethyl-(3S)-hexyl-(6R)-hydroxymethyl-[1,4]dioxan-2-one in 7 steps *via* bidentate chelation controlled asymmetric alkylation. Then, the dioxanone was transformed in 5 steps *via* radical allylation and Wittig olefination to the requisite diene for ring closing metathesis. The diene was exposed to Grubb's catalyst to produce 8-membered oxocane possessing the all-carbon framework of the target natural product. Chemical modification of the oxocane ring under conventional conditions completed the total synthesis of (+)-lauthisan.

[PD1-57] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Curing Characteristics and Fracture Mechanism of Liquid Crystal Epoxy(LCE) for Medical Polymers

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As medical science technology developing, medical polymer part has been importantly known to many investigators. Because medical polymers present good mechanical, electrical, thermal, chemical, and optical properties, they were utilized as artificial organs for the human being. The study of medical polymers, such as curing characteristics and physical properties, is principles to use as medical polymer. In our study, we investigated curing characteristics of liquid crystal epoxy (LCE) thermosets and fracture mechanism. Curing characteristics of LCE polymers was analyzed by FT-IR spectroscopy and fracture behaviours of them were simulated using cellular automata (CAs). From this work, we could understand the curing mechanism and fracture mechanism of LCE polymers. These results are very useful to apply LCE polymer and simulate the fracture behaviour of LCE for the understanding, test, and applications.

Poster Presentations - Field D2. Pharmacognosy

[PD2-1] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Four α-Amyrin Triterpenoids, and their Cytotoxicity and Topoisomerase I Inhibition from the Spikes of Prunella vulgaris

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