

Synthesis of Altenuene Backbones through Iodine(III)-Participated Umpolung Diesterification and Insights into the General [1,5]-H Shift in para-De aromatization of Phenols via Quantum Chemical Calculations

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Abstract

Through $\text{PhI}(\text{OAc})_2$ -oxidized dearomatization and diesterification of 3'-hydroxy-[1,1'-biphenyl]-2-carboxylic acids, a series of polycyclic compounds possessing an altenuene backbone were obtained in moderate to good yields. The Umpolung diesterification reaction was completed under mild reaction conditions without an additional nucleophilic reagent. This work offers a concise method for the synthesis of diverse natural altenuene analogues. The mechanism was proposed, and the [1,5]-H shift was studied in isomerization from the ketone-form structure to a phenol employing computational studies.

Received Date: 10 April, 2022 Accepted Date: 14 April, 2022

Published Date: 29 April, 2022

Biography

Liangzhen Hu is working at Chongqing University, China.