NAME OF THE THEME: Synthetic organic Chemistry

Zirconium Catalyzed Carboalumination fallowed by halogenation of 1-((E)-but-1-en-3-ynyl) benzene: The significant route to synthesize Indiacen B

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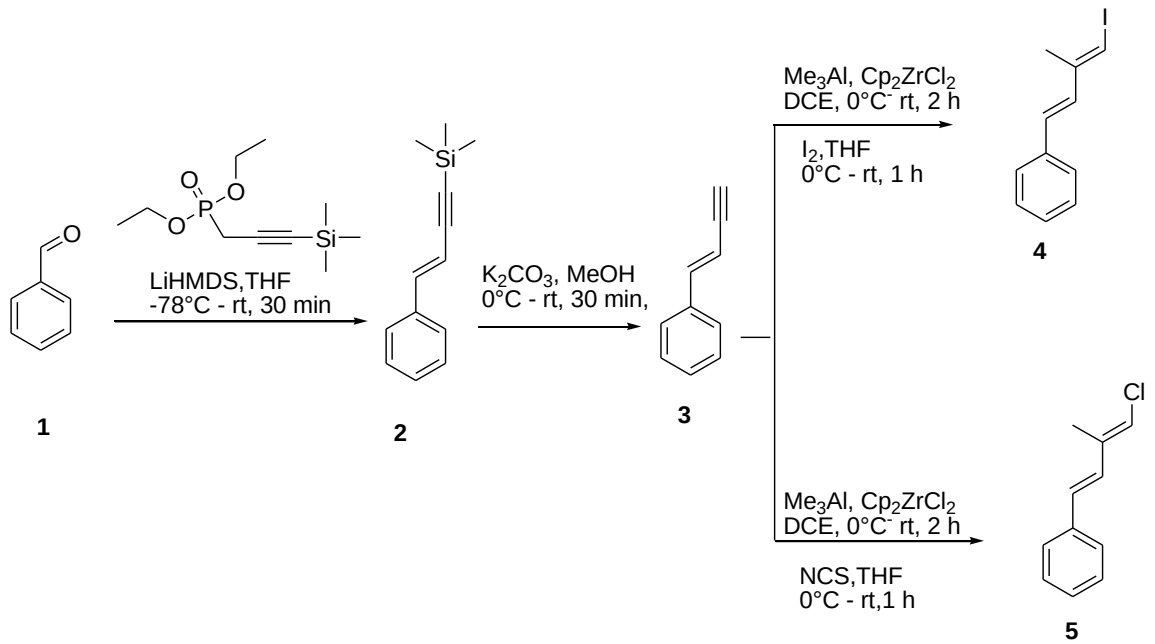
Abstract: : Indiacen A and B, prenyl indoles are the first reported secondary metabolites isolated from the bacterium Sandaracinus amylolyticus belonging to a new species of myxobacteria. These secondary metabolites Indiacen A and its chloro analogue Indiacen B have been reported to present antimicrobial activity. These were found to be active against Gram-positive and Gram-negative bacteria as well as the fungus Mucor hiemalis. 1-((1E, 3E)-4-iodo-3-methylbuta-1, 3-dienyl) benzene and 1-((1E, 3E)-4-chloro-3-methylbuta-1, 3-dienyl) benzene are the significant intermediates to synthesize Indiacen B. These compounds (4 and 5) were stereo selectively prepared in a highly convergent fashion by using a simple and efficient catalyst Bis (cyclopentadienyl) zirconium (IV) dichloride. The spectral analysis confirms the structures of the products synthesized.

Scheme



Keywords*: Natural Product, Antimicrobial, zirconium(IV) Dichloride, Selective synthesis*

Paper ID ***(To be added by Programme Committee)***