CO₂(n-Bu), CN

Category

Synthesis of Materials and **Unnatural Products**

Key words

quinolines

Baylis-Hillman reaction

Morita-Baylis-Hillman reaction

heterocycles

benzonaphthyridines



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A Novel Procedure for the Synthesis of Benzo[b][1,8]naphthyridine-3-carboxylate Derivatives from Morita-Baylis-Hillman Adduct Acetates

Synthesis 2009, 2333-2340.

Benzonaphthyridines from Morita-Baylis-**Hillman Adduct Acetates**

Morita-Baylis-Hillman reaction:

R¹ = H, Me, Cl
R² = CO₂Me, CO₂Et,
CO₂(
$$n$$
-Bu), CN
70–73% yield

Amine condensation-cyclization:

Significance: In this contribution the authors report the synthesis of benzonaphthyridines from Morita-Baylis-Hillman adduct acetates via an amine condensation-cyclization process. Importantly, the authors show that increasing the equivalents of amine leads to more substituted products via a 1,4-addition process. Additionally, careful control of reaction time and temperature provides access to a range of 1,2-dihydrobenzonaphthyridines.

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Comment: Benzonaphthyridines have found uses in materials due to their fluorescent and electroluminescent properties. This method allows access to multiple addition products and oxidation states from readily available starting materials under mild environmentally benign reaction conditions. The possibility of accessing more complex heterocyclic systems could be realized by expanding the methodology to allow for iterative annulation.