Abstract

The synthetic utilities of the cyclization reactions based on α-sulfinyl carbanions have been successfully demonstrated for the preparation of 5-alkylidene-2-cyclopentenones, 5-alkylidene-2-hydroxyalkyl-2-cyclopentenones, enantiomers of pentenomycin I, epipentenomycin I, desoxypentenomycin and analogs. Moreover, the synthetic strategy was employed for the syntheses of 1-azabicyclic alkaloids; (±)-tashiromine, indolizidine 167B, indolizidine 209D, (±)-lupinine , (±)-epilupinine, (+)-swainsonine as well as substituted pyrrolidines and piperidines, starting from appropriate lactams or amides.

Keywords: intramolecular cyclization, α-sulfinyl carbanions, 5-alkylidene-2-cyclopentenones, 5-alkylidene-2-hydroxyalkyl-2-cyclopentenones, pentenomycin I, epipentenomycin I, desoxypentenomycin, (±)-tashiromine, indolizidine 167B, indolizidine 209D, (±)-lupinine , (±)-epilupinine, (+)-swainsonine, pyrrolidines, piperidines.

บทคัดย่อ

(ได้ประยุกต์ใช้ปฏิกิริยา cyclization based on α-sulfinyl carbanions ในการเตรียม 5-alkylidene-2-cyclopentenones, 5-alkylidene-2-hydroxyalkyl-2-cyclopentenones, enantiomers ของ pentenomycin I, epipentenomycin I, desoxypentenomycin และ analogs, (±)-tashiromine, indolizidine 167B, indolizidine 209D, (±)-lupinine , (±)-epilupinine, (+)-swainsonine, substituted pyrrolidines, และ substituted piperidines)

Keywords: intramolecular cyclization, α-sulfinyl carbanions, 5-alkylidene-2-cyclopentenones, 5-alkylidene-2-hydroxyalkyl-2-cyclopentenones, pentenomycin I, epipentenomycin I, desoxypentenomycin, (±)-tashiromine, indolizidine 167B, indolizidine 209D, (±)-lupinine , (±)-epilupinine, (+)-swainsonine, pyrrolidines, piperidines.