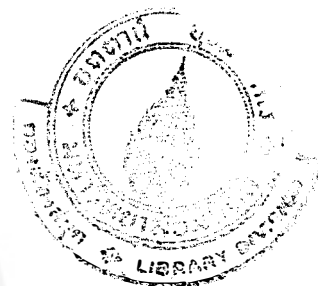


PART I: ADDITION OF α -CHLOROMETHYL PHENYL SULFONE CARBANION TO IMINE BOND

PART II: SOLVOLYSIS OF β -HYDROXY- α -IODOMETHYL PHENYL SULFOXIDES

BY

CHITCHANUN PANYACHOTIPUN

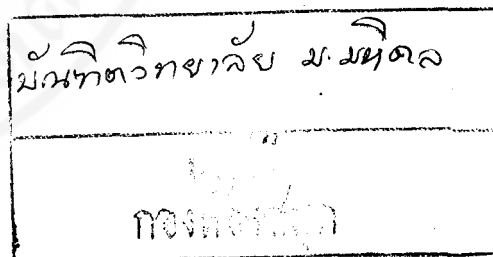


A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENT FOR THE DEGREE OF

MASTER OF SCIENCE

(ORGANIC CHEMISTRY)



IN

FACULTY OF GRADUATE STUDIES

OF

MAHIDOL UNIVERSITY

Copyright by Mahidol University 1983

PART I

ADDITION OF α -CHLOROMETHYL PHENYL SULFONE CARBANION TO IMINE BOND

Abstract

The Reaction of lithio α -chloromethyl phenyl sulfones, generated by the reaction of α -chloromethyl phenyl sulfones with lithium diisopropylamide in THF at -78°C , with aldimines at -78°C to room temperature overnight gave the corresponding 2-phenyl sulfonyl aziridines in excellent yields (72-100%).

The carbanion next to the sulfonyl group of 2-phenyl sulfonyl aziridines could be generated by LDA/THF at -78°C and was sufficiently active to undergo alkylation reaction to give the alkylated product in good yield (71-100%).

The 2-phenyl sulfonyl aziridines also underwent 1,3-dipolar cycloaddition reaction with dienophile such as DMAD in sealed tubes gave substituted pyrroles directly in good yield (71-100%). 1,3-Dipolar cycloaddition reaction of 2-phenyl sulfonyl aziridine could be occurred at room temperature in the present of Lewis acid such as borontrifluoride etherate.