

TABLE OF CONTENTS

	Page
INTRODUCTION	1
RESULT AND DISCUSSIONS	21
CONCLUSION	45
EXPERIMENTAL	46
REFERENCES	79

ABSTRACT

The ketene-anthracene adduct has been shown to be a good source for ketene, acetylene, and methyleneketene precursors. Vacuum pyrolyses of these precursors gave, correspondingly, ketene, acetylenes and methyleneketenes in respectable yields via a retro Diels-Alder reaction. In this study, methyleneketenes could not be trapped. Instead decarbonylation took place, followed by rearrangement to give acetylenes.