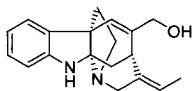


Contents

Chapter 1

Mienfiensine

(Overman 2005)



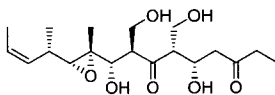
1

Key Chemistry: Enantioselective *Heck* Reactions

Chapter 2

Myriaporone 4

(Taylor 1998, 2004)



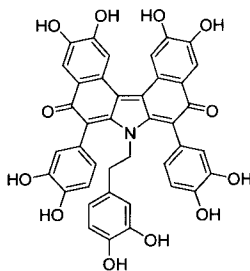
21

Key Chemistry: *Evans* Aldol Reactions

Chapter 3

Ningalin D

(Boger 2005)



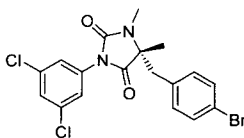
41

Key Chemistry: Pyrrole Synthesis using a 1,2,4,5-Tetrazine \rightarrow 1,2-Diazine \rightarrow Pyrrole Strategy

Chapter 4

BIRT-377

(Barbas 2005)



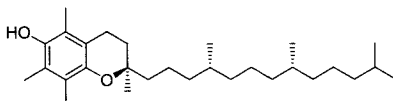
59

Key Chemistry: Organocatalysis

Chapter 5

Vitamin E

(Tietze 2006)



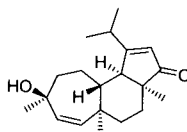
77

Key Chemistry: Palladium(II)-catalyzed Domino *Wacker-Heck* Reaction

Chapter 6

(+)-Cyanthiwigin U

(Phillips 2005, Palomo 2002)



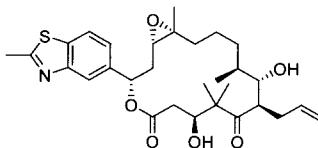
93

Key Chemistry: Alkene Metathesis

Chapter 7

ZK-EPO

(Schering AG 2006)



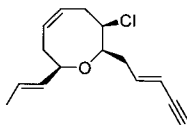
113

Key Chemistry: Macrolactonization

Chapter 8

(+)-Laurenine

(Boeckmann 2002)



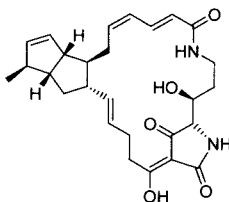
139

Key Chemistry: Enantioselective Reduction of Ketones

Chapter 9

Cylindramide

(Laschat 2005)



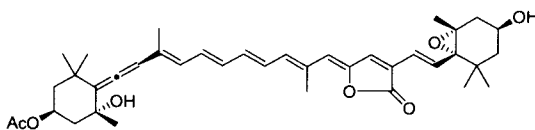
157

Key Chemistry: Oxidation of ketones to the corresponding α,β -unsaturated carbonyl compounds via the silyl enol ether

Chapter 10

Peridinin

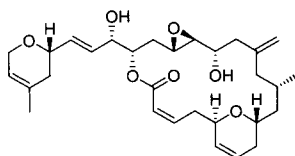
(Brückner 2006)



175

Key Chemistry: Formation of C=C double bonds

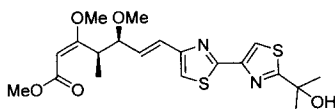
Chapter 11
Laulimalide
(Mulzer 2003)



193

Key Chemistry: Asymmetric Epoxidation of Alkenes

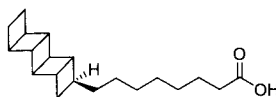
Chapter 12
Cystothiazole B
(Panek 2004)



217

Key Chemistry: Stereoselective Crotylation of Aldehydes with Chiral Crotyl Silanes

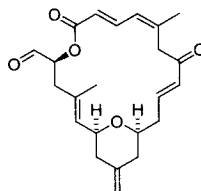
Chapter 13
(+)-Pentacycloanammoxic acid
(Corey 2006)



233

Key Chemistry: Photochemical Cycloadditions

Chapter 14
(-)-Dactylolide
(McLeod 2006)



253

Key Chemistry: [3,3]-Sigmatropic *Ireland-Claisen* Rearrangement

Abbreviations

277

Index

279
