

■ PREFACE

- 1 **Preface**
Steven M. Weinreb/ Heterocycles
Richard W. Franck*
-

■ CURRICULUM VITAE

- 5 **Biographical Data**
Steven M. Weinreb*
-

■ PUBLICATIONS

- 9 **Publications**
Steven M. Weinreb*
-

23 Chapters and Books

Steven M. Weinreb*

■ Celebration of Professor Steven M. Weinreb

25 Graduate Students Supervised

Steven M. Weinreb*

31 Invited and Plenary Lectures

Steven M. Weinreb*

■ COMMUNICATIONS

41 **Brominative Indolization of an Unsaturated Bridgehead Sultam with Extrusion of Sulfur Dioxide**

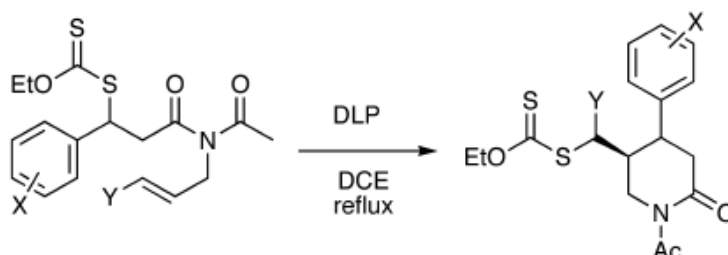
Adam J. Preston and Leo A. Paquette*



Bromine Indole Sultam Ullmann Reaction Ring-Closing Metathesis

45 **Synthesis of Substituted 4-Arylpiperidin-2-ones by a 6-*exo*-Trig Radical Cyclization**

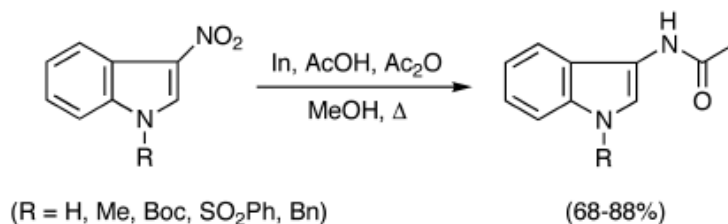
Xavier Vila and Samir Z. Zard*



3-Arylpiperidone Benzylic Radical Lauroyl Peroxide Radical Cyclization Xanthate

51 **Convenient Synthesis of Masked Aminoindoles by Indium Mediated Ont-Pot Reductive Acylation of 3- and 2-Nitroindoles**

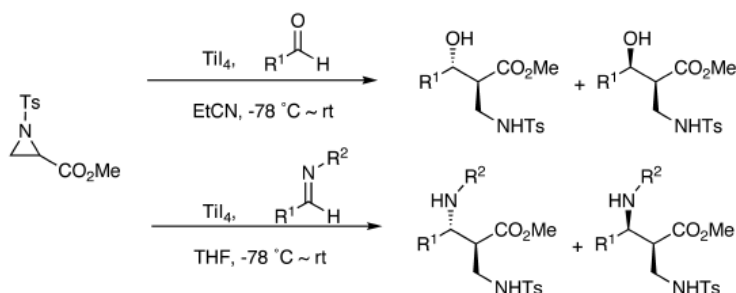
Sujata Roy and Gordon W. Gribble*



Aminoindole Acetylaminoindole Nitroindole Indium Reduction

57 **Titanium Tetraiodide Mediated Reductive Opening of Aziridines, Leading to the Aldol and Mannich-Type Reactions**

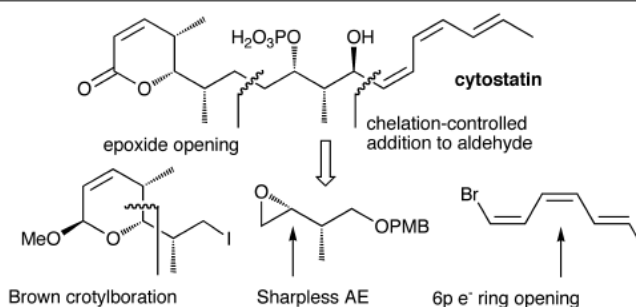
Makoto Shimizu,* Hiroshi Kurokawa, Shuji Nishiura, and Iwao Hachiya



Titanium Tetraiodide Aziridine Aldol Reaction Mannich Type Reaction Reductive Enolate Formation

65 **Total Synthesis of Cytostatin**

Scott E. Wolkenberg, Sobhana B. Boga, Brian G. Lawhorn, and Dale L. Boger*

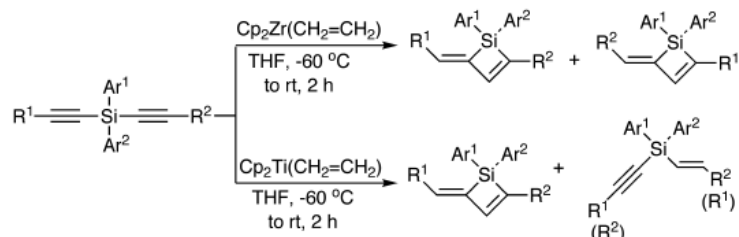


Protein Phosphatase 2A Fostriecin α,β -Unsaturated Lactone

Convergent Synthesis

71 Synthesis of Novel Silacyclobutene Derivatives Utilizing Zirconocene- and Titanocene-Ethylene Complexes

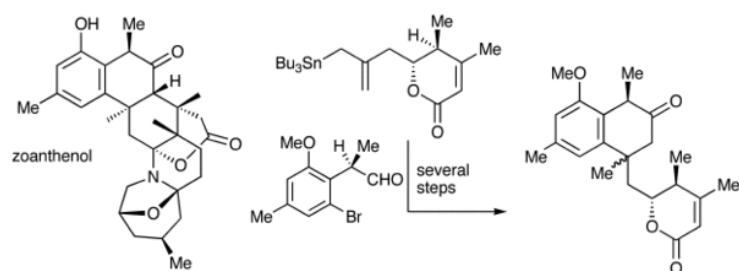
Chung Keun Jin, Tinh Van Dang, Yoshifumi Ikee, Toshiaki Yamada, Shigeki Sano, Motoo Shiro, and Yoshimitsu Nagao*



Dialkynyl diarylsilane Titanocene Silacyclobutene X-Ray Analysis Zirconocene

77 Investigations of Pd-Catalyzed Aryl Substitution Reactions. A Case Study towards Zoanthenol

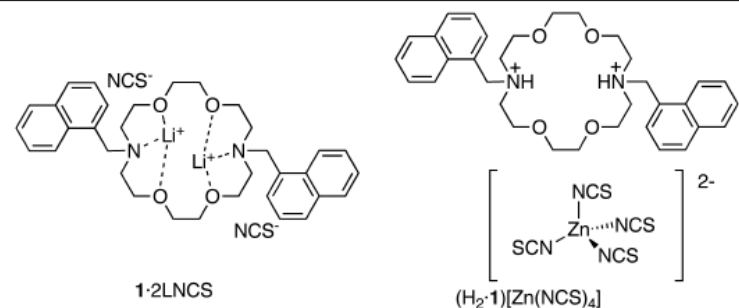
David R. Williams,* David C. Ihle, Todd A. Brugel, and Samarjit Patnaik



Heck Reaction Aryl Substitution Palladium Catalysis Allylic Stannane Radical Cyclization

83 Crystal Structures of *N,N*-Bis(1-naphthylmethyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane Complexed with Lithium and Zinc Thiocyanates

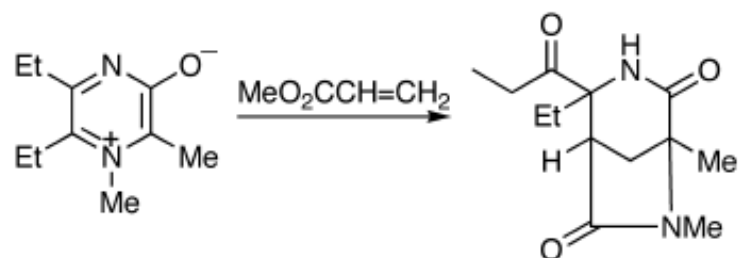
Kanji Kubo,* Tadamitsu Sakurai, Hajime Takahashi, and Haruko Takechi



Crystal Structure Fluoroionophore Photoinduced Electron Transfer Diazacrown Ether Complex

87 The 1,3-Dipolar Cycloaddition of Methyl Acrylate to Hindered 3-Oxidopyraziniums

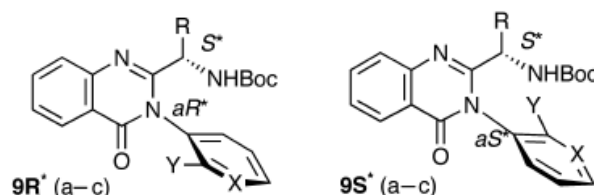
Madeleine Helliwell, Yun You, and John A. Joule*



3-Oxidopyrazinium 1,3-Dipolar Cycloaddition 3,8-Diazabicyclo[3.2.1]octan-2-one 4,7-Dioxo-3,6-diazabicyclo[3.2.1]octane Pyrazin-2-one

93 Diastereoselective Synthesis of Atropisomeric 3-(2-Substituted Aryl)quinazolin-4-ones and Their Stereochemical Properties

Takashi Tokitoh, Toshitake Kobayashi, Eisuke Nakada, Tohru Inoue, Satoshi Yokoshima, Hideyo Takahashi, and Hideaki Natsugari*

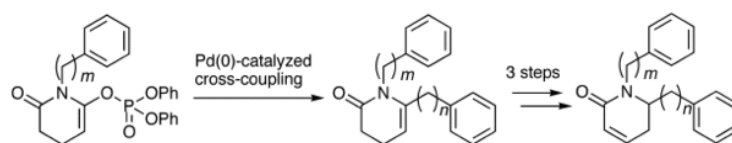


a: X = N; Y = Cl; R = Me
 b: X = N; Y = Cl; R = CH₂Ph
 c: X = CH; Y = CO₂Me; R = CH₂Ph

Atropisomer Stereoselectivity 3-Arylquinazolin-4-one Dehydrative Cyclization X-Ray Analysis

101 Concise and Short Synthesis of Functionalized 5,6-Dihydropyridin-2-ones by Means of Palladium(0)-Catalyzed Cross-Coupling of Ketene Amino Phosphates

Haruhiko Fuwa,* Akane Kaneko, Yasuaki Sugimoto, Taisuke Tomita, Takeshi Iwatsubo, and Makoto Sasaki*



Ketene Amino Phosphate Suzuki-Miyaura Coupling Negishi Coupling 5,6-Dihydropyridin-2-one γ -Secretase Inhibitor

107 Regioselective Oxidation of Isoxazolidines to Ketonitrone

Osamu Iwamoto, Miyuki Sekine, Hiroyuki Koshino, and Kazuo Nagasawa*



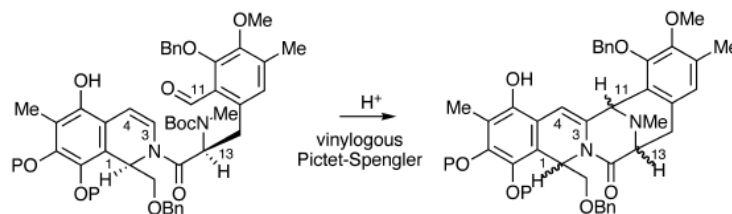
isoxazolidine

ketonitrone

Ketonitrone Peracid Oxidation Ring Opening Isoxazolidine Saxitoxin

113 Synthetic Studies toward Cribrostatin IV: An Intriguing Epimerization

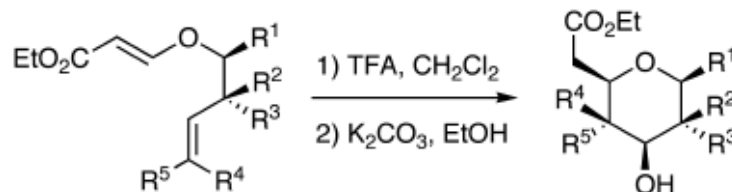
Collin Chan and Samuel J. Danishefsky*



Alkaloid Tetrahydroisoquinoline Pictet-Spengler Reaction Azomethine Ylide Epimerization

119 Substituent Effects on the Regiochemical and Stereochemical Course of the Nussbaumer-Frater Variation of the Prins Cyclization

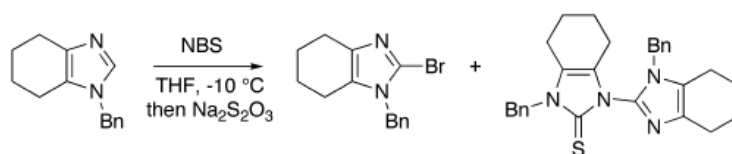
Chad E. Bennett, Ruth Figueroa, David J. Hart,* and Dexi Yang



Prins Cyclization Tetrahydropyran [3+3] Sigmatropic Rearrangement Oxocarbenium Ion Vinylogous Carbonate

129 Investigation of the Bromination of Tetrahydrobenzimidazoles

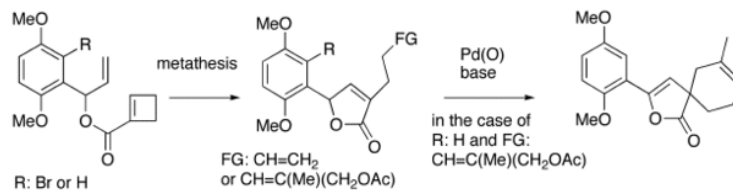
Carl J. Lovely,* Yong He, Heather M. Fenton, and H. V. Rasika Dias*



Dimerization Pyrrole-Imidazole Carbene Oroidin Natural Product

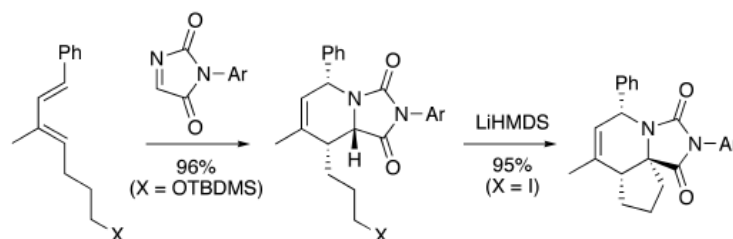
135 Synthetic Studies toward Clavilactone A: A Concise Access to α,γ -Substituted γ -Butenolides by Metathesis

Hiroyuki Yasui, Shun Yamamoto, Ken-ichi Takao, and Kin-ichi Tadano*


 Clavilactone Antifungal Activity Antibacterial Activity α,β -Eoxy- γ -lactone Olefin Metathesis

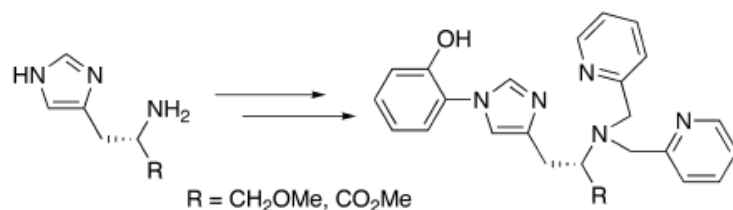
143 An Approach to Cyclic α -Amino Acids by a Novel Hetero Diels-Alder/Intramolecular Hydantoin Enolate Alkylation Strategy: An Approach to Halichlorine

Hyungsu Kim, Jae Hong Seo, Kye Jung Shin, Dong Jin Kim, and Deukjoon Kim*


 Cyclic α -Amino Acid Hetero Diels-Alder Reaction Intramolecular Hydantoin Enolate Alkylation C- vs O-Alkylation Halichlorine

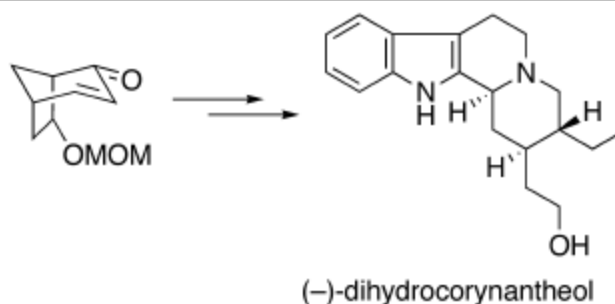
147 Cytochrome *c* Oxidase Active Site Mimics: New Ligands for Copper and an Unexpected Oxidative C-C Bond Formation

Yakira R. Landaverry, Kimberly N. White, Marilyn M. Olmstead, Ólaf Einarsson, and Joseph P. Konopelski*


 Aryllead(IV) Reagent *N*-Arylation C-H Bond Activation Cytochrome Oxidase X-Ray Diffraction

153 Total Synthesis of (-)-Dihydrocorynantheol Using Bicyclo[3.2.1]octenone Chiral Building Block

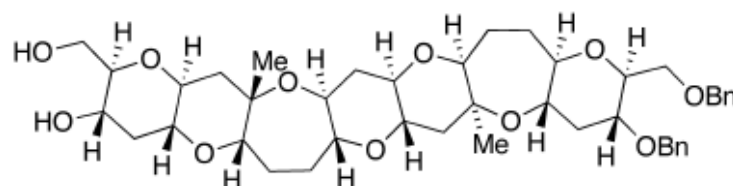
Ayako Tosaka, Shinichiro Ito, Norio Miyazawa, Masatoshi Shibuya, Kunio Ogasawara,* and Yoshiharu Iwabuchi*



(-)-Dihydrocorynantheol Bicyclo[3.2.1]octenone Chiral Building Block Retro-Aldol Reaction Pictet-Spengler Reaction

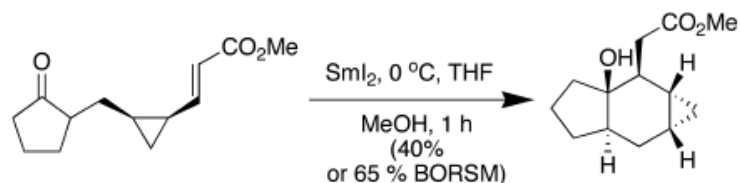
161 Synthesis of Artificial Ladder-Shaped Polyethers Containing a 6/7 *cis*-Fused Ring System

Kohei Torikai, Hiroshi Yari, Michio Murata, and Tohru Oishi*


 Ladder-Shaped Polyether 6/7 *cis*-Fused Ring System Takeda Reaction Hydroxy Dithioacetal Cyclization Double Reaction Strategy

169 Investigation of Vinylcyclopropane Monoradical Cyclization-Fragmentation as a Possible Route towards Eight-Membered Rings

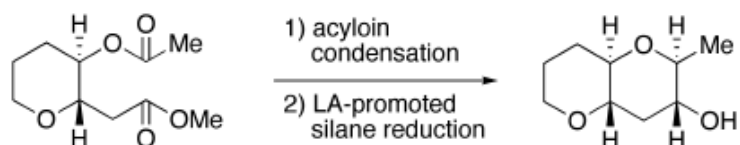
R. Daniel Little and James A. Miranda*



Samariumketyl Tricyclic Stereoselectivity

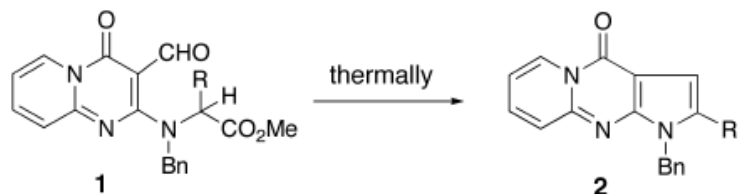
177 Synthesis of Cyclic Ether *via* Intramolecular Acyloin Condensation

Tatsuo Saito, Atsushi Kimishima, and Tadashi Nakata*


 Samarium Diodide Bis-silyloxyalkene α -Hydroxy Acetal Triethylsilane

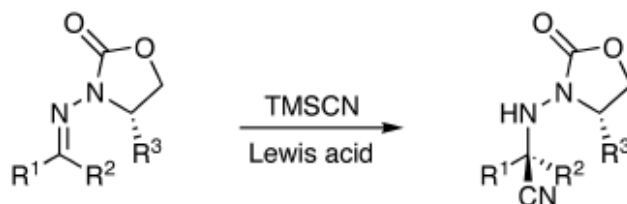
181 A Convenient Synthesis of 2-Functionalized Pyrrolo-[2,3-*d*]pyrido[1,2-*a*]pyrimidines

Yuchi Zhang, Keisuke Kawashima, and Michihiko Noguchi*


 Thermal Cyclization Pyrrole-Ring Formation Lactonization of β -Hydroxy Ester Decarboxylation of Lactone Pyrrolo[2,3-*d*]pyrido[1,2-*a*]pyrimidine

■ PAPERS
185 Strecker Reactions of Chiral *N*-Acylhydrazones

Hui Ding and Gregory K. Friestad*

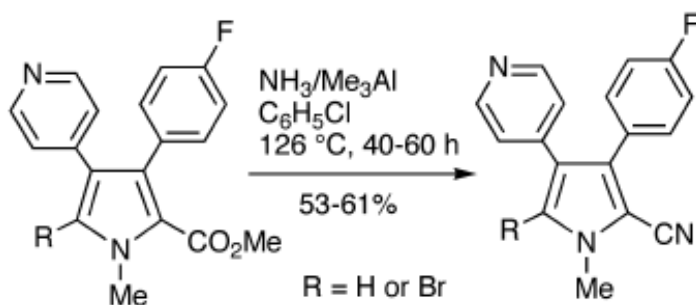


- Phenyloxazolidinone ($R^3 = \text{Ph}$) gives best dr
- 11 examples: $R^1 = \text{alkyl, aryl}$; $R^2 = \text{H}$

Cyanation Imine Amine Nitrile Oxazolidinone

201 Direct Conversion of Substituted Pyrrole-2-carboxylic Acid Methyl Esters to Their 2-Carbonitrile Analogues

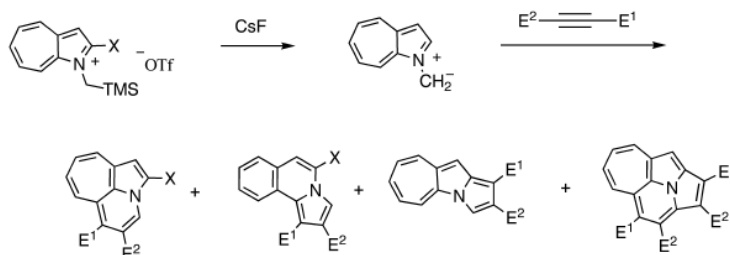
Xun Li,* Michael Reuman, and Ronald K. Russell



Weinreb's Reaction Ammonia Trimethylaluminum Chlorobenzene

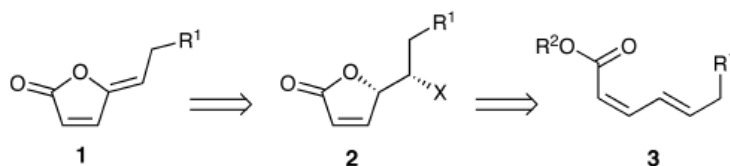
207 Cycloaddition Reactions of 1-Aza- and 1,3-Diaza-azulenium 1-Methylides

Hiroyuki Fujii,* Izumi Kawano, Kaoru Iwafuji, Yoshiyuki Sawae, Kentaro Nagamatsu, and Noritaka Abe*


 1-Azaazulene *N*-Ylide Dipolar Cycloaddition Rearrangement Fused Heterocycle

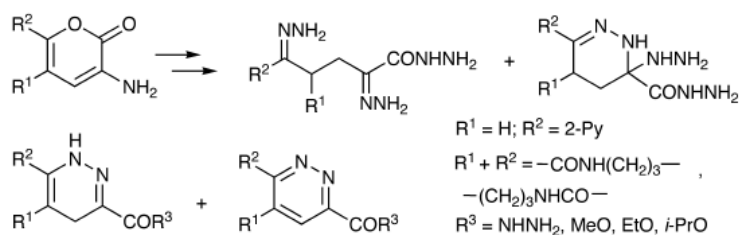
223 A De Novo Asymmetric Approach to Achiral Deoxy-Melodorinol Analogues

Md. Moinuddin Ahmed, Novruz Akhmedov, Hu Cui, Dirk Friedrich, and George A. O'Doherty*


 Asymmetric Dihydroxylation *E,Z*-Dienoate Mitsunobu Elimination Butenolide

235 Pyran-2-ones as Synthons for Pyridazine-3-carboxylic Derivatives. Oxidation of Nitrogen-Rich Compounds

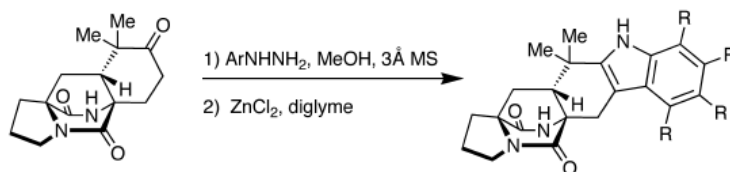
Franc Požgan, Stanislav Kafka, Slovenko Polanc, and Marijan Kočevar*



2-H-Pyran-2-one Hydrazone Carbohydrazone Pyridazinecarboxylic Ester Oxidation

249 The Concise and Versatile Synthesis of Epi-malbrancheamide and Structurally Related Analogs

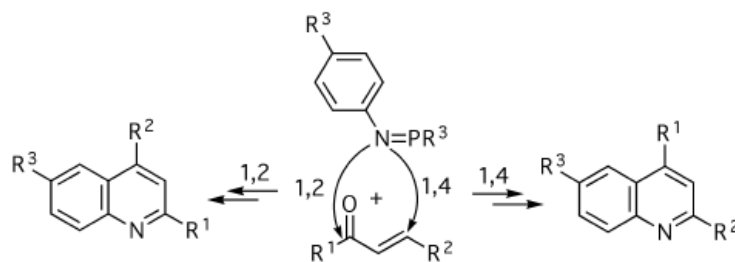
Meriah W. N. Valente and Robert M. Williams*



Malbrancheamide Stephacidin Intramolecular Diels-Alder Reaction Piperazinedione Parahequamide

261 Selective 1,2- vs 1,4-Addition of *N*-Arylphosphazenes to β,γ -Unsaturated α -Ketoesters. Synthesis of Quinolinecarboxylates

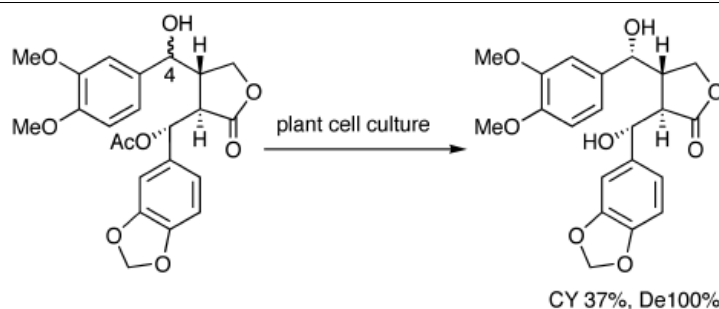
Francisco Palacios,* Javier Vicario, Jesús M. de los Santos, and Domitila Aparicio



Quinoline Phosphazene Nucleophilic Addition Aza-Wittig Reaction Azaelectrocyclization

271 Diastereomerization of Dibenzylbutanolides by Plant Cell Cultures

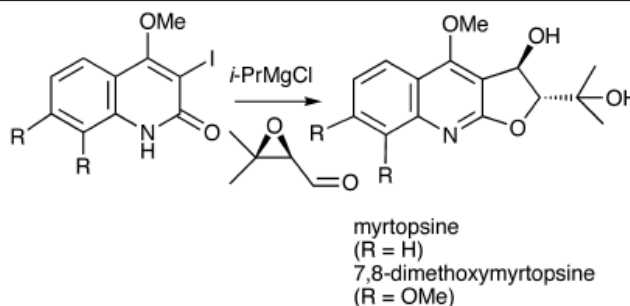
Masumi Takemoto,* Yuki Matsuoka, Kiyoshi Tanaka, and James Peter Kutney



Diastereomerization Plant Cell Culture Dibenzylbutanolide Hydrolysis of Acetate Enzyme

279 Synthesis of (+)-Myrtopsiene, (+)-7,8-Dimethoxymyrtopsiene, and Related 2,3-Dihydro-3-hydroxy-2-(1-hydroxy-1-methyl-ethyl)benzofuran Natural Products

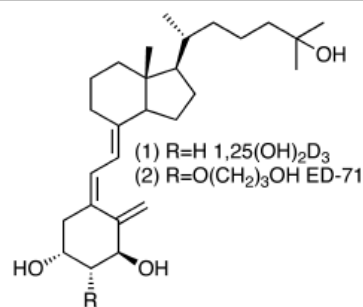
Barry B. Snider* and Xiaoxing Wu



Dihydrofuran Epoxide Alkaloid Halogen-Metal Exchange

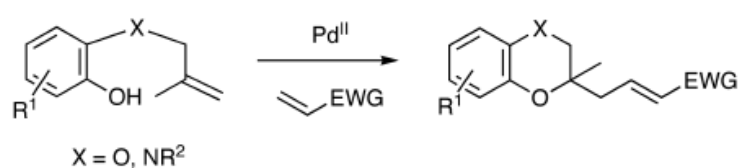
295 Two Convergent Approaches to the Synthesis of $1\alpha,25$ -Dihydroxy- 2β -(3-hydroxypropoxy)vitamin D₃ (ED-71) by the Lythgoe and the Trost Coupling Reactions

Junji Maeyama, Hiroko Hiyamizu, Keisuke Takahashi, Jun Ishihara, Susumi Hatakeyama, and Noboru Kubodera*


 Active Vitamin D₃ Analog $1,25(\text{OH})_2\text{D}_3$ ED-71 Convergent Synthesis

309 Synthesis of 2,3-Dihydrobenzo[1,4]dioxins and -oxazines *via* a Domino Wacker-Heck Reaction

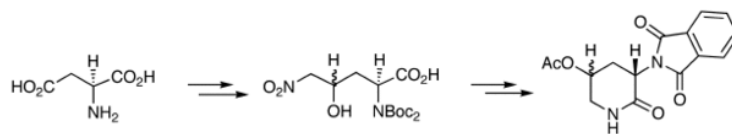
Lutz F. Tietze,* Kristina F. Wilckens, Sinem Yilmaz, Florian Stecker, and Julia Zinngrebe



Domino Reacton Wacker Reaction Heck Reaction Palladium Heterocycle

321 A Chiral Pool Approach toward the Synthesis of Thalidomide Metabolites

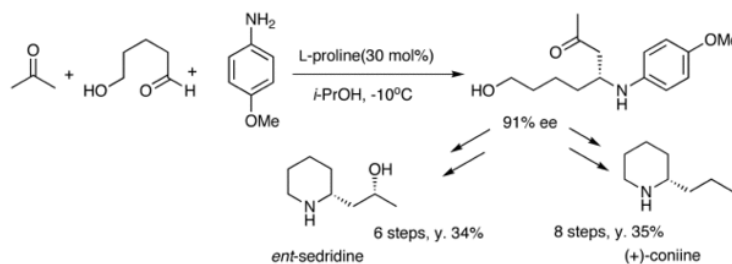
Frederick A. Luzzio,* Damien Y. Duveau, and William D. Figg



Thalidomide Angiogenesis Nitroaldol Valerolactam Phthaloylation

335 Enantioselective Synthesis of *ent*-Sedridine and (+)-Coniine *via* Proline-Catalyzed Mannich Reaction

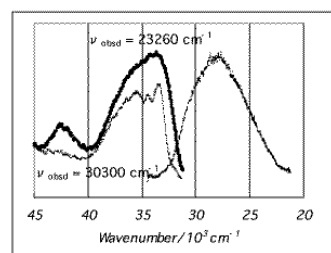
Kazuhiro Nagata, Kosuke Nishimura, Masashi Yokoya, and Takashi Itoh*



Catalytic Asymmetric Addition Proline Aliphatic Aldehyde Piperidine Alkaloid Total Synthesis

345 Dual Fluorescence Spectra of 1-Hydroxyindoles with Various C-C-N₆ Side Chains at 3-Position in Methanol

Kunihiro Tokumura,* Akio Hayashi, Kenta Imai, and Masanori Somei*

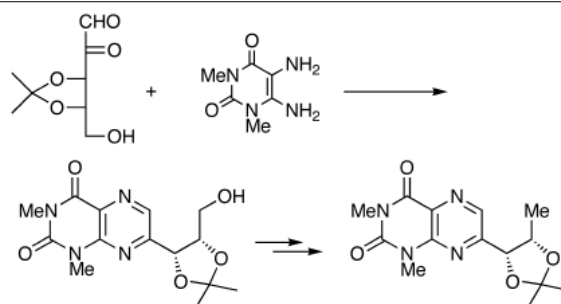


Structured and broad dual fluorescence excitation spectra of 1-hydroxy-Nb-pivaloyltryptamine in methanol

 Tryptophan Derivative Dual Fluorescence Spectra Close-Lying $\pi \rightarrow \pi^*$ Valence Singlet Excited State TD-DFT Calculation

355 Synthesis of 6- and 7-(1,2,3-Trihydroxy-1,2-*O*-isopropylidenepropyl)pteridines and Deoxygenation of Their 3'-Hydroxy Groups

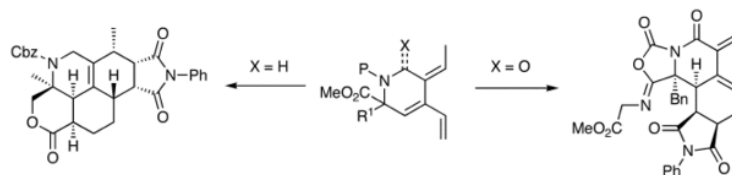
Tadashi Hanaya,* Daisuke Takayama, and Hiroshi Yamamoto



Pteridine-Ring Formation L-threo-Pentos-2-ulose 1,3-Dimethylumazine Deoxygenation L-Arabinopyranoside

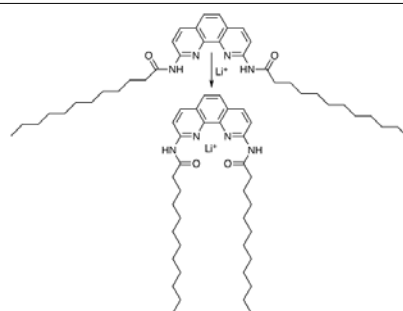
367 Cycloaddition Reactions of Amino-Acid Derived Cross-Conjugated Trienes: Stereoselective Synthesis of Novel Heterocyclic Scaffolds

Branko Mitasev, Bingli Yan, and Kay M. Brummond*


 δ -Lactam Carbocyclization Rhodium(I) Catalysis Imino-oxazolidinone

389 The Efficient Separation of Lithium Chloride by Acyclic Carrier Molecules

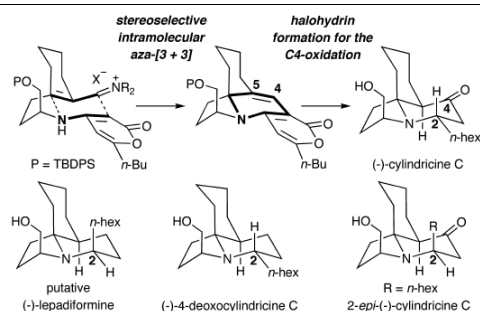
Junko Morita, Shinji Tsuchiya, Misa Ifuku, Makie Kobayashi, Eriko Araki, Zhenxia Zhu, Keiko Takano, and Shojiro Ogawa*



Lithium 1,10-Phenanthroline Carrier Liquid Membrane Transport

423 Aza-[3+3] Annulations. Part 6. Total Synthesis of Putative (-)-Lepadiformine and (-)-Cylindricine C

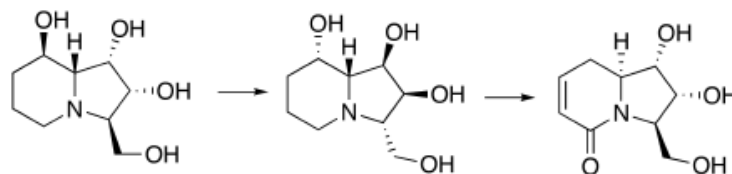
Jiashi Wang, Jacob J. Swiderski, Nadiya Sydorenko, Richard P. Hsung,* Heather A. Coverdale, Jennifer M. Kuyava, and Jia Liu



Aza-[3+3] Annulation Cylindricine Lepadiformine Chlorohydrin Formation Weinreb's Amide

461 Synthetic Approaches to Polyhydroxy Indolizidines and Related Azabicyclic Scaffolds

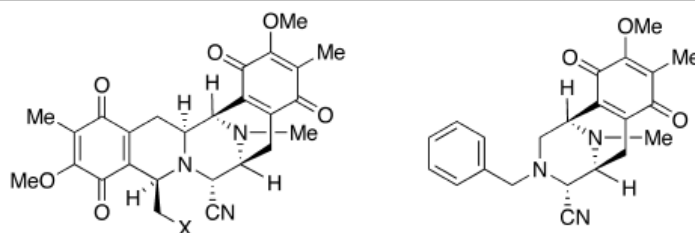
Stephen Hanessian,* Eric Therrien, Jayakumar S. Warriar, and Guillaume Charron



Azabicyclic Alkaloid Indolizidinone Acyliminium Ion Olefin Metathesis

477 Synthesis of 1,2,3,4,5,6,7,10-Octahydro-1,5-imino-7,10-dioxo-3-benzazocine-4-carbonitrile Derivative and Evaluation of Antitumor Activity Related to Saframycin and Renieramycin Isoquinolinequinones

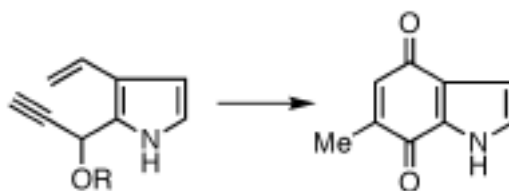
Yu-ichi Koizumi, Ken-ichi Inamura, Akinori Kubo, and Naoki Saito*


 saframycin A: X = NHCOCOMe
 renieramycin M: X = OCOCMe=CHMe

Saframycin Renieramycin Isoquinolinequinone Antitumor Activity Synthesis

491 Synthesis of 6-Methylindole-4,7-quinone and Anti-tumor Activities of Its Related Indolequinones

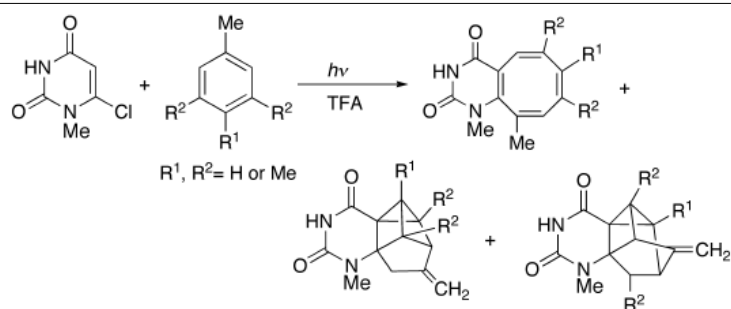
Junko Nobuhiro, Miho Hirayama, Tominari Choshi, Keiichi Kamoshita, Sakiko Maruyama, Yoshikazu Sukenaga, Takashi Ishizu, Haruto Fujioka, and Satoshi Hibino*



6-Methylindole-4,7-quinone Indole Synthesis Electrocyclic Reaction Allenyl Intermediate Anti-tumor Activity

501 Photochemical Synthesis of Polycyclic Pyrimidines through the Acid Catalyzed Cycloaddition of 6-Chloro-1-methyluracil to Methyl Substituted Benzenes

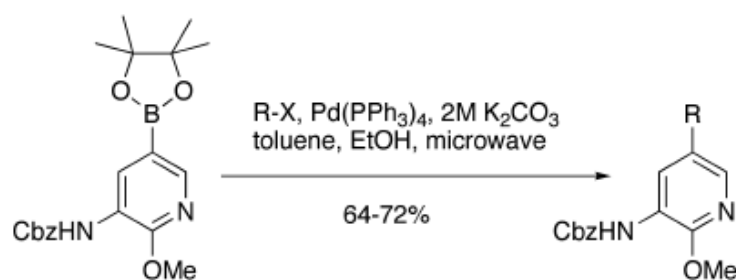
Kazue Ohkura,* Takeshi Yamaguchi, Ken-ichi Nishijima, Yuji Kuge, and Koh-ichi Seki



Acid Catalyzed Photoreaction Cyclooctapyrimidine Diazapentacyclododecane 1-Methyl-6-chlorouracil Methylbenzene

509 Synthesis of a Stable Pyridyl Boronate and Its Reaction with Aryl and Heteroaryl Halides

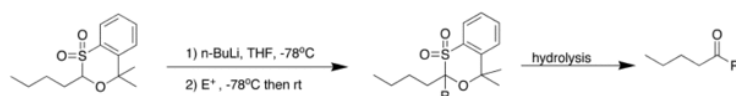
Steven J. Durrant,* Joanne L. Pinder,* Jean-Damien Charrier, Juan-Miguel Jimenez, Guy Brenchley, Philip N. Collier, David Kay, Andrew Miller, Françoise Pierard, Sharn Ramaya, Shazia Sadiq, and Heather C. Twin



Pyridone Pyridylboronate Suzuki Coupling Microwave Condition

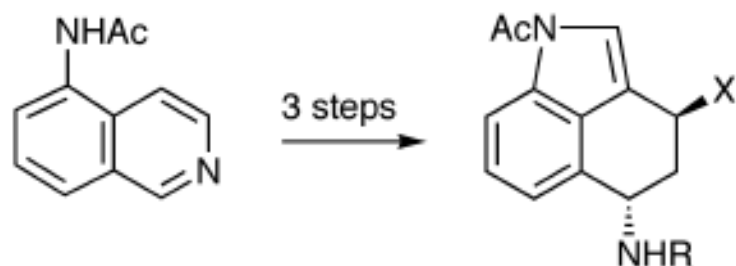
519 Alkylation of 2-Butyl-4,4-dimethyl-4H-benzo[d][1,3]-oxathione-1,1-dioxide, a New Class of Acyl Anion Equivalents as an Alternative to Dithianes

Robert K. Boeckman, Jr.,* Susan M. Hanson, and Jeremy A. Cody


 Sulfone Masked Ketone Equivalent Acyl Anion Equivalent α -Sulfonylcarbanion 1,3-Oxathiolane-S-dioxide

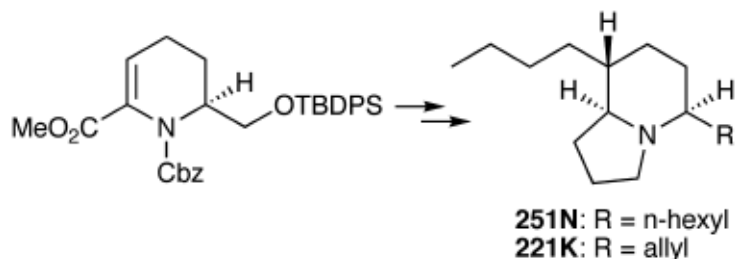
NOTES
531 A Facile Construction of the Benz[*c,d*]indole Framework

Clifford E. Soll and Richard W. Franck*


 Benz[*c,d*]indole Inverse Electron-Demand Cycloaddition Isoquinolinium Salt

541 Chiral Synthesis of Poison-Frog Alkaloids 251N and 221K

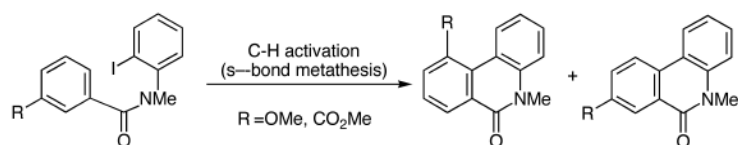
Naoki Toyooka,* Zhou Dejun, Hideo Nemoto,*
H. Martin Garraffo, Thomas F. Spande, and
John W. Daly



Poison-Frog Alkaloid 251N 221K 5,8-Disubstituted Indolizidine Nicotinic Receptor

549 Biaryl Coupling Reactions of 3-Methoxy-*N*-(2-iodophenyl)-*N*-methylbenzamide and 3-Methoxycarbonyl-*N*-(2-iodophenyl)-*N*-methylbenzamide Using Palladium Reagent

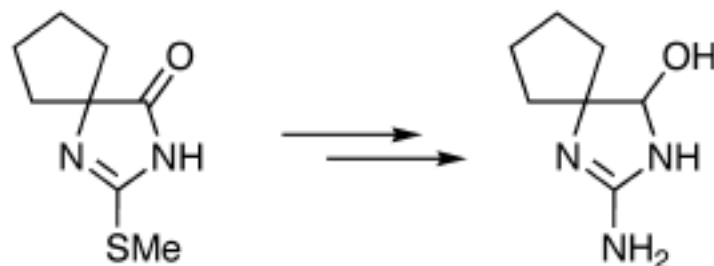
Hiromi Nishioka,* Chie Nagura, Hitoshi Abe, Yasuo Takeuchi,
and Takashi Harayama*



Biaryl Formation Mechanism Palladium C-H Activation Benzanilide Phenanthridone

557 Evaluation of Strategies for the Synthesis of the Guanidine Hemiaminal Portion of Palau'amine

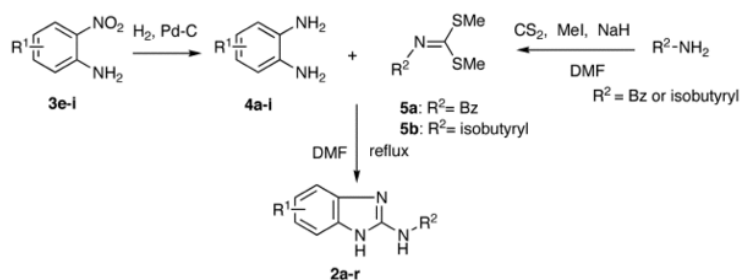
Brian A. Lanman and Larry E. Overman*



Thiohydantoin Glycohydantoin Tautomerism Aminolysis 2-Aminoimidazolin-5-ol

571 A Facile Synthesis of 2-Acyl and 2-Alkylamino-benzimidazoles for 5-Lipoxygenase Inhibitors

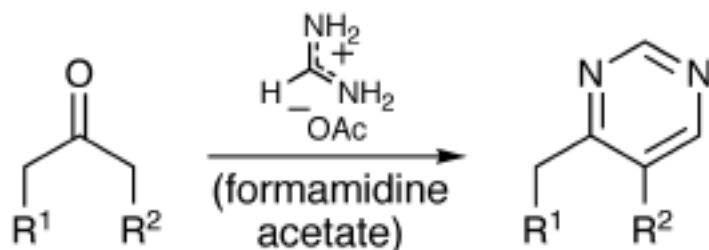
Jin Ha Lee, Mi Hyun An, Eun Hyun Choi,
Hea-Young Park Choo, and Gyoonee Han*



2-Acylaminobenzoimidazole 2-Alkylaminobenzoimidazole Bis(methanesufanyl)methylene amide Inhibitor 5-Lipoxygenase

581 One-Step Synthesis of 4,5-Disubstituted Pyrimidines Using Commercially Available and Inexpensive Reagents

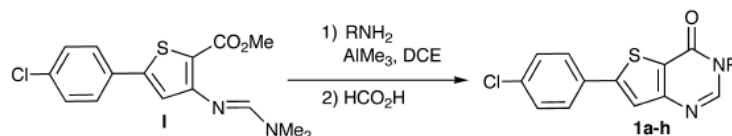
Phil S. Baran,* Ryan A. Shenvi, and Steven A. Nguyen



Pyrimidine Synthesis Chartelline Formamidinium Natural Product

587 A Novel One-Pot Synthesis of *N*-Substituted Thieno-[3,2-*d*]pyrimidin-4(3*H*)-ones

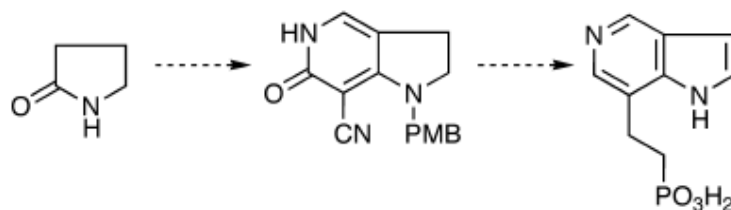
Andrew J. Peat,* Paul L. Feldman, Dulce Garrido, Yu C. Guo, and Donald L. Hertzog


 R = 2-[(dimethylamino)methyl]-6-quinolylyl (a); phenyl (b); β -naphthyl (c); 6-quinolylyl (d); benzyl (e); butyl (f); cyclohexyl (g); 4-MeO-phenyl (h)

Thienopyrimidinone Trimethylaluminum Amide Formation Cyclization MCH R1

599 Synthesis of a 5-Azaindole Phosphonic Acid as a Computationally Designed Inhibitor of the Low Molecular Weight Phosphatase HCPTP

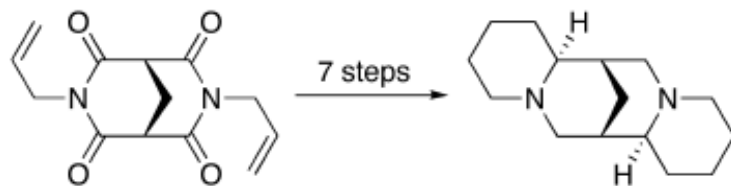
Jeremy A. Weitgenant, Isamu Katsuyama, Marinus A. Bigi, Steven J. Corden, John T. Markiewicz, Adam P. R. Zabell, Kristoff T. Homan, Olaf Wiest, Cynthia V. Stauffacher,* and Paul Helquist*



Azaindole Phosphatase Inhibitor Diphosphonate Condensation

609 A Stereocontrolled Synthesis of (\pm)- β -Isosparteine

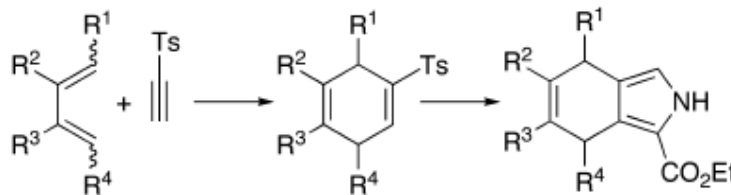
Paul R. Blakemore,* Neil R. Norcross, Stuart L. Warriner, and Peter C. Astles



Alkaloid Synthesis Tetraoxobispidine Imide Allylation Olefin Metathesis

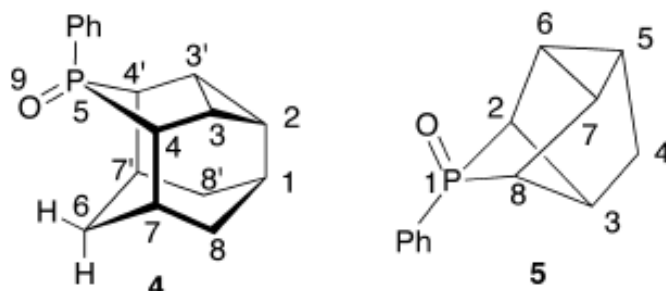
619 Synthesis of 4,7-Dihydro-2*H*-isoindole Derivatives *via* Diels-Alder Reaction of Tosylacetylene

Tetsuo Okujima,* Guangnan Jin, Yusuke Hashimoto, Hiroko Yamada, Hidemitsu Uno, and Noboru Ono*


 4,7-Dihydro-2*H*-isoindole Diels-Alder Reaction Tosylacetylene π -Expanded Porphyrin Barton-Zard Reaction

627 Comparative Study of X-Ray Structures and Molecular Orbital Calculations of 6-Phenyl-6-phosphapentacyclo-[6.3.1.0^{2,4}.0^{3,7}.0^{5,10}]dodecane 6-Oxide with 4-Phenyl-4-phosphatetracyclo[3.3.0^{2,8}.0^{3,6}]octane 4-Oxide

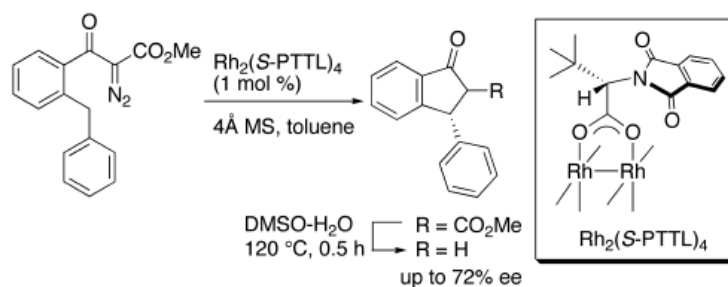
Kiyoshi Matsumoto,* Mitsuo Toda, Hirokazu Iida, and Hiroshi Hamana



Caged Phosphacycle X-Ray Structure MacCormack Reaction Computational Chemistry Heteropolycycle

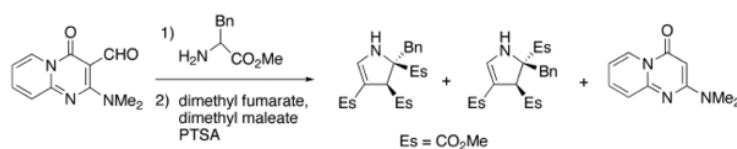
635 Enantioselective Synthesis of 3-Arylindan-1-ones via Intramolecular C-H Insertion Reactions of α -Diazo- β -Ketoesters Catalyzed by Chiral Dirhodium(II) Carboxylates

Yoshihiro Natori, Masahiro Anada, Seiichi Nakamura, Hisanori Nambu, and Shunichi Hashimoto*


 C-H Insertion Asymmetric Catalysis Enantioselection Dirhodium(II) Complex α -Diazo- β -keto Ester

647 Reaction of Functionalized Azomethine Ylides with Olefinic Dipolarophiles

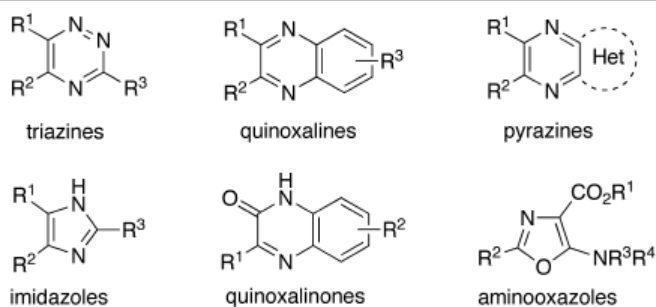
Keisuke Kawashima, Akikazu Kakehi, and Michihiko Noguchi*



Functionalized Azomethine Ylide Cycloaddition Pyrrolidine Pyrroline Nitrile Ylide Equivalent

REVIEWS
655 Convenient and General Microwave-Assisted Protocols for the Expedient Synthesis of Heterocycles

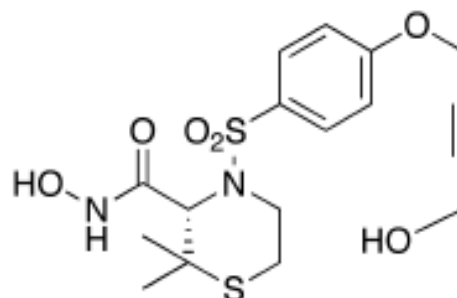
William D. Shipe,* Feng Yang, Zhijian Zhao, Scott E. Wolkenberg, M. Brad Nolt, and Craig W. Lindsley



MAOS Cyclocondensation Cornforth Rearrangement Parallel Synthesis Microwave

691 Heterocyclic Inhibitors of Tumor Necrosis Factor- α Converting Enzyme (TACE)

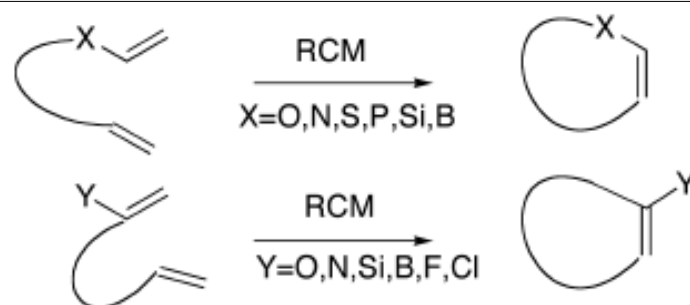
Jeremy I. Levin*



TACE MMP Butenyloxyphenyl Sulfonamide Thiomorpholine Hydroxamic Acid

705 **Ring-Closing Metathesis of Heteroatom-Substituted Dienes**

Richard C. D. Brown* and Vachiraporn Satcharoen



Ring-Closing Metathesis Enol Ether Vinyl Halide Enamide Vinylsilane

■ INDEXES

- 737 **Author Index**
 749 **Subject Index**