

■ PREFACE

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- 1 **Preface**  
**Honoring the 70th Birthday of Professor Yoshito Kishi**  
Robert M. Williams\*
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■ CURRICULUM VITAE

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- 5 **Biographical Sketch**  
Yoshito Kishi\*
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■ SUMMARY

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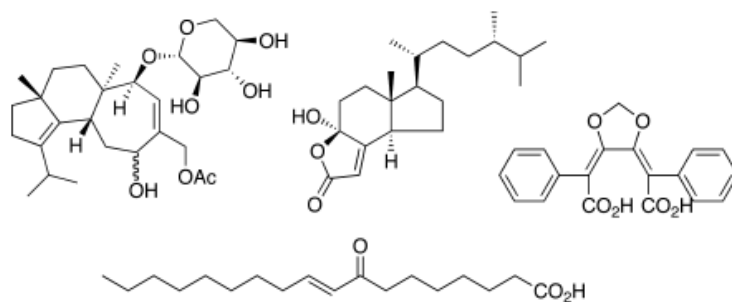
- 7 **Research Summary of Kishi Group**  
Yoshito Kishi\*
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■ PUBLICATIONS

- 21 **Publications: Yoshito Kishi**  
Yoshito Kishi\*

■ REVIEWS

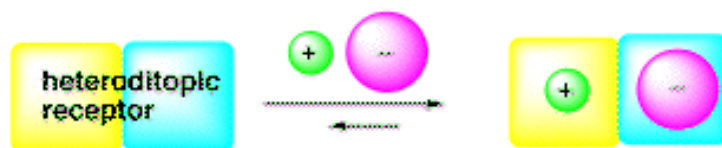
- 45 **Bioactive Compounds from Mushrooms**  
Hirokazu Kawagishi\* and Cun Zhuang



Mushroom    Anti-Dementia    Anti-MRSA    Osteoclast-Forming Suppressing    Gastrointestinal Toxin

- 53 **Heteroditopic Receptors**

Nadezhda A. Itsikson, Irina V. Geide, Yuri Yu. Morzherin,  
Anatoly I. Matern, and Oleg N. Chupakhin\*

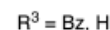
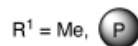
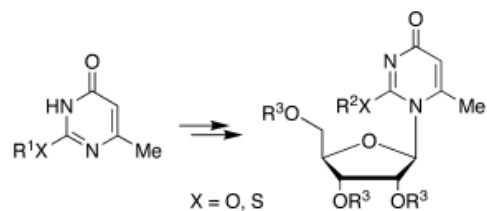


Heteroditopic Receptor    Molecular Recognition    Ion-Pair Receptor    Crown Ether    Calixarene

## ■ COMMUNICATIONS

**79 Stereoselective Synthesis of N<sup>1</sup>-6-Methyluridine and Related 2-Substituted Analogues**

Marco Radi, Elena Petricci, Federico Corelli, and Maurizio Botta\*



6-Substituted Nucleoside

2,6-Disubstituted Nucleoside

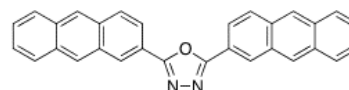
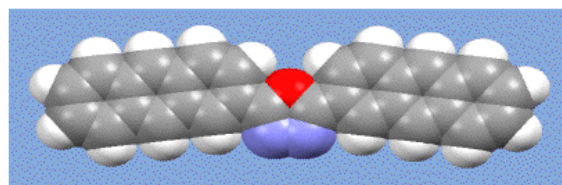
Stereoselective Synthesis

Solid Phase Synthesis

*syn*-Conformation

**85 Synthesis and Properties of Acene Dimers Linked by a 1,3,4-Oxadiazole Spacer**

Katsuhiko Ono,\* Mayuko Wakida, Ryohei Hosokawa, Katsuhiko Saito, Jun-ichi Nishida, and Yoshiro Yamashita



Acene Dimer

1,3,4-Oxadiazole

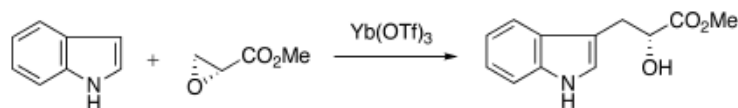
Crosslinker

Electron Affinity

Organic Thin Film

**91 A New Method for Efficient Coupling of Indole and Epoxide Catalyzed with Yb(OTf)<sub>3</sub>, and Application to the Total Synthesis of Kurasoin B**

Satoshi Tsuchiya, Toshiaki Sunazuka, Tatsuya Shirahata, Tomoyasu Hirose, Eisuke Kaji, and Satoshi Omura\*



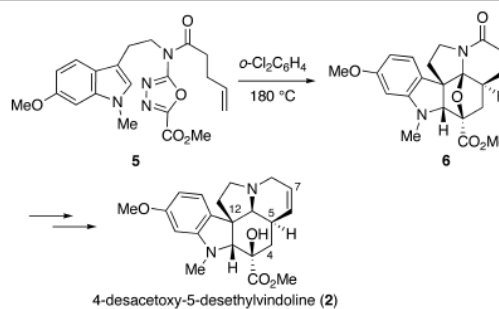
Indole

Epoxide

Coupling Reaction

**95 Total Synthesis of (-)- and *en*t-(+)-4-Desacetoxy-5-desethylvindoline**

Hayato Ishikawa and Dale L. Boger\*



Cycloaddition

1,3,4-Oxadiazole

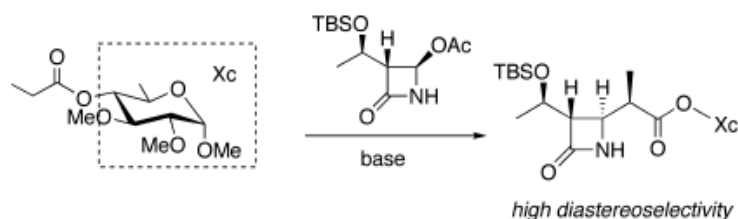
Vindoline Analogue

Elimination

Aziridinium Cation

**103 Stereoselective Mannich-Like Reactions of Ester Enolates Generated on Sugar Templates: A Novel Access to a Key Intermediate for 1 $\beta$ -Methylcarbapenem Synthesis**

Daisuke Sasaki, Daisuke Sawamoto, Ken-ichi Takao, Kin-ichi Tadano,\* Masayuki Okue, and Keiichi Ajito


 1 $\beta$ -Methylcarbapenem

Sugar Template

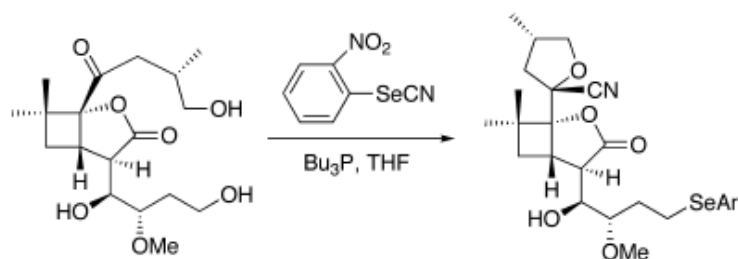
Mannich Reaction

4-Acetoxyazetid-2-one

Chiral Auxiliary

**111 An Example of Overriding Cyanation during Reaction of a Primary Alcohol with *o*-Nitrophenyl Selenocyanate**

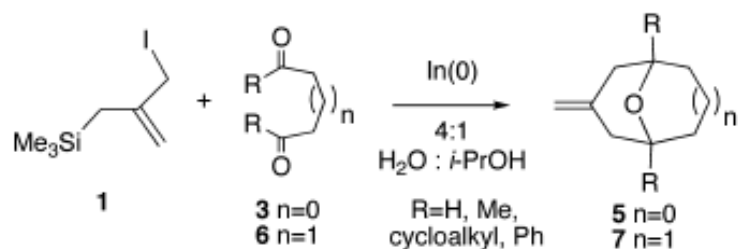
Shuzhi Dong and Leo A. Paquette\*



Selenenylation Mitsunobu Reaction Cyanation Oxaphosphonium Salt 2-Cyanotetrahydrofuran

**115 Synthesis of Oxa-Bridged 7- and 8-Membered Rings via Indium-Mediated Annulation of 1,4- and 1,5-Dicarbonyl Compounds with 3-Iodo-2-[(trimethylsilyl)methyl]propene**

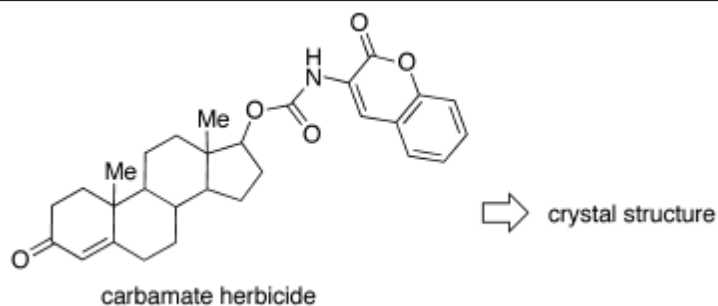
Amir Allatabakhsh, Minh Pham, and Thomas Minehan\*



Aqueous Organic Reaction [m+n] Annulation Green Chemistry Medium-Ring Synthesis Oxa-Bridged Carbocycle

**123 Crystal Structures of Coumarin-3-carbamate Derivatives with Herbicidal Activities**

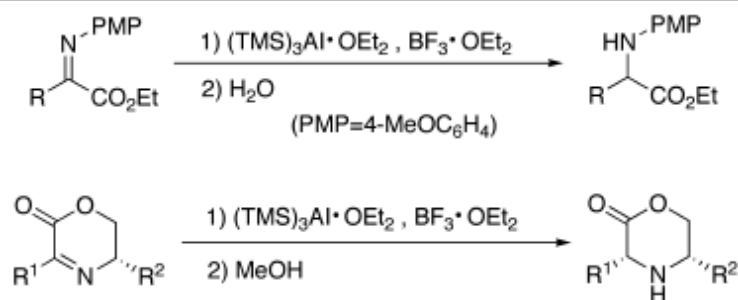
Hajime Takahashi, Haruko Takechi, Kanji Kubo,\* and Taisuke Matsumoto



Crystal Structure Herbicide Coumarin Carbamate Hydrogen Bond

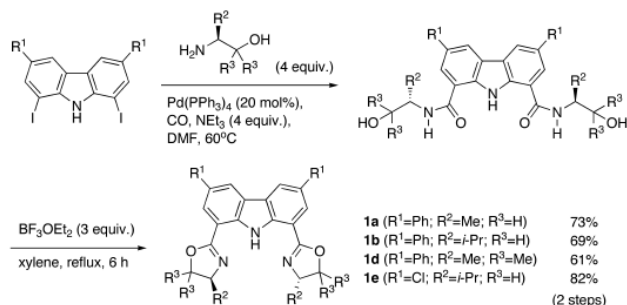
**127 Diastereoselective Reduction of  $\alpha$ -Imino Esters with Tris(trimethylsilyl)aluminum**

Makoto Shimizu,\* Yasuki Niwa, Takeshi Nagai, and Iwao Hachiya


 Tris(trimethylsilyl)aluminum  $\alpha$ -Imino Ester  $\alpha$ -Amino Ester Reduction *cis*-3,5-Disubstituted Morpholin-2-one

**133 New Preparation of Tridentate Bis-oxazoline Carbazole Ligand Effective for Enantioselective Nozaki-Hiyama Reaction**

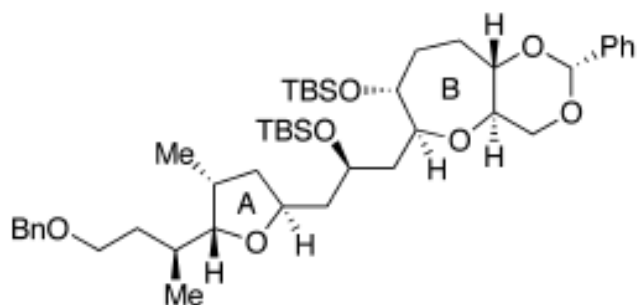
Masahiro Inoue and Masahisa Nakada\*



Bis-oxazoline Ligand Carbazole Tridentate Ligand Nozaki-Hiyama Reaction Pd-Catalyzed Amidation

**139 Stereoselective Synthesis of the AB-Ring Fragment of Gambieric Acid A**

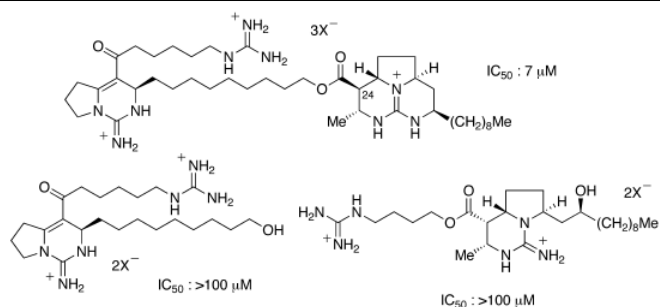
Haruhiko Fuwa,\* Akihiro Suzuki, Kazushi Sato, and Makoto Sasaki\*



Marine Polycyclic Ether    Gambieric Acid    Stereoselective Synthesis    Acetylide-Aldehyde Coupling    Bromoetherification

**145 Synthesis and Biological Activities on Batzelladine Derivatives**

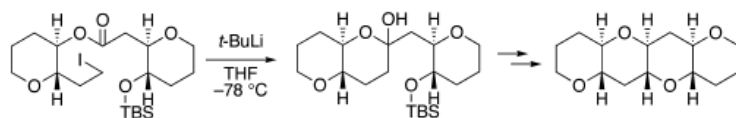
Jun Shimokawa, Yumi Iijima, Yuichi Hashimoto, Harumi Chiba, Haruo Tanaka, and Kazuo Nagasawa\*



Batzelladine    Guanidine Alkaloid    Protein-Protein Interaction    Structure-Activity Relationship Study    ELISA

**151 Synthesis of Cyclic Ether *via* an Intramolecular Barbier Reaction of Iodo Ester with Butyllithium**

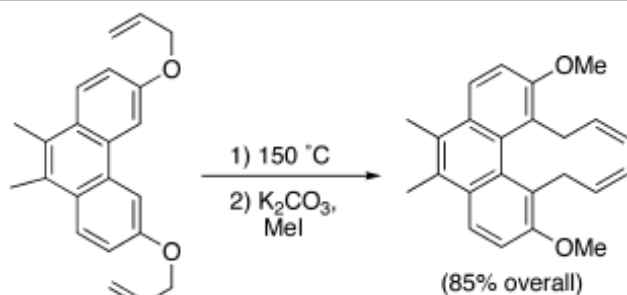
Tatsuo Saito, Toshiharu Takeuchi, Miyuki Matsuhashi, and Tadashi Nakata\*



Cyclization    Tetrahydropyran    Samarium Diiodide    Gambierol

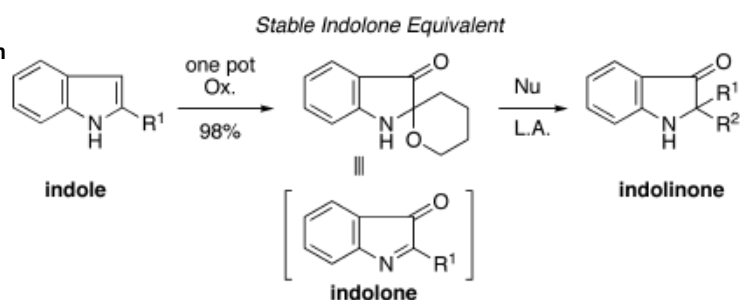
**157 The Regiochemistry of the  $\alpha$ -Claisen Rearrangement of *Bis*-(allyloxy)polycyclic Aromatics**

George Majetich,\* Jianhua Yu, Yang Li, and Scott H. Allen


 Bis(allyloxy)naphthalene, Anthracene, Phenanthrene, and Polycyclic Aromatic Rearrangements     $\alpha$ -Claisen Rearrangement

**163 Versatile Synthesis of 2,2-Disubstituted Indolinones *via* Protected Indolones Generated by One-Pot Multi-oxidation of 2-Substituted Indoles**

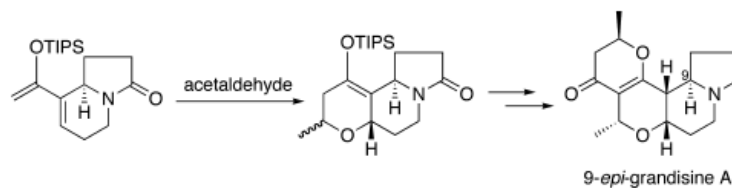
Matthew J. Buller, Travis G. Cook, and Yoshihisa Kobayashi\*



Indolinone    Indolone    Indole    Oxidation    Lewis Acid

**167 Studies toward the Total Synthesis of Grandisine A: Synthesis of 9-*epi*-Grandisine A**

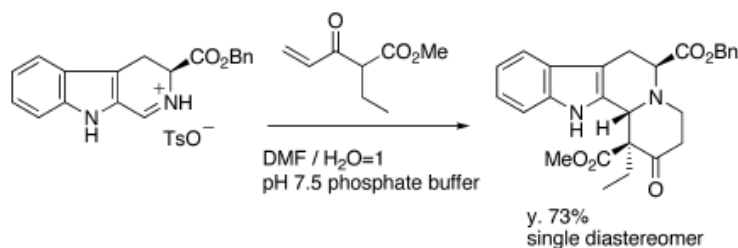
David J. Maloney and Samuel J. Danishefsky\*



Grandisine A    Total Synthesis    Hetero-Diels-Alder Reaction    Natural Product    Epimerization

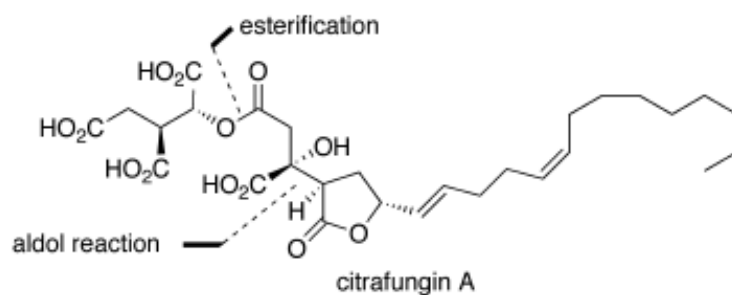
**175 Diastereoselective Construction of Indolo[2,3-*a*]quinolizidine Skeleton by Cycloaddition Reaction of 3,4-Dihydro- $\beta$ -carbolines with  $\gamma,\delta$ -Unsaturated  $\beta$ -Ketoesters**

Kazuhiro Nagata, Yusuke Sekishiro, and Takashi Itoh\*


 3,4-Dihydro- $\beta$ -carboline    Cycloaddition    Indolo[2,3-*a*]quinolizidine     $\gamma,\delta$ -Unsaturated  $\beta$ -Ketoester    Diastereoselective Reaction

**181 Total Synthesis of Citrafungin A**

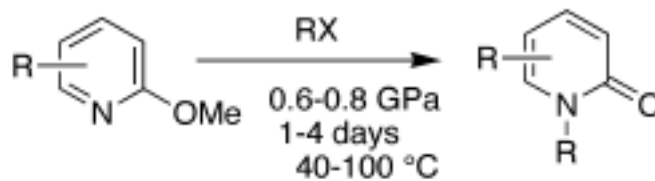
Mumen F. A. Amer, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama\*



Citrafungin A    GGTase I Inhibitor    Alkyl Citrate Family of Natural Product    Total Synthesis

**187 Hilbert-Johnson Reaction under High Pressure: A Facile Preparation of 2-Pyridones**

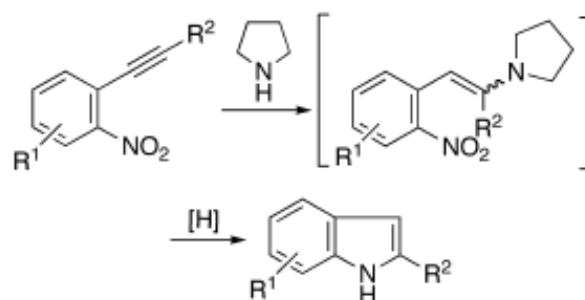
Kiyoshi Matsumoto,\* Yukio Ikemi, Machiko Suda, Hirokazu Iida, and Hiroshi Hamana



Hilbert-Johnson Reaction    2-Pyridone    High Pressure Synthesis    2-Methoxypyridine    Lactim-Lactam Tautomerization

**191 A Novel Indole Synthesis *via* Conjugate Addition of Pyrrolidine to *o*-Nitrophenylacetylenes**

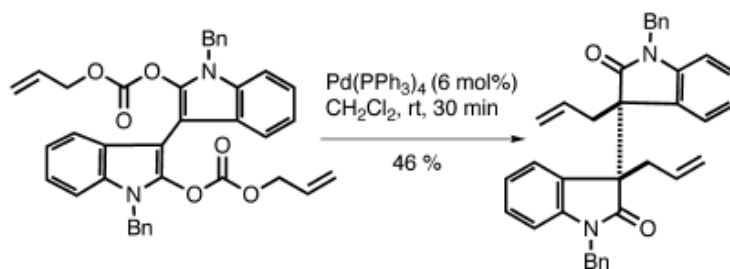
Hidetoshi Tokuyama, Takaki Makido, Yuki Han-ya, and Tohru Fukuyama\*



Leimgruber-Batcho Reaction    Indole Synthesis    Conjugate Addition    Reduction    Enamine

**199 Studies on Enol Carbonate Chemistry: Stereoselective Construction of Vicinal Quaternary Benzylic Centers in the Bis-oxindole Series**

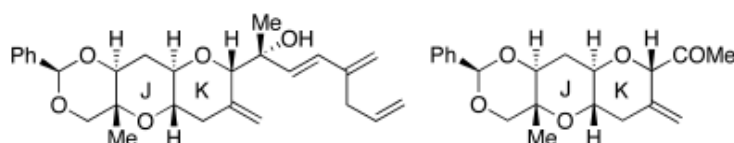
Candice Menozzi, Peter I. Dalko,\* and Janine Cossy



Stereoselective Synthesis    Allylation    Acyl-Transfer Reaction    Indole    Natural Product

**207 Synthesis of the JK Ring Fragments of Yessotoxin and 42,43,44,45,46,47,55-Heptanor-41-oxoyessotoxin**

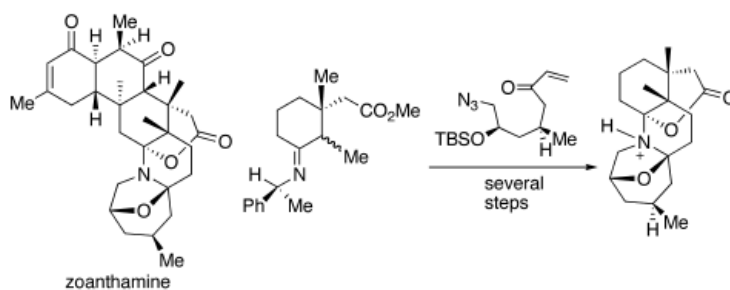
Koji Watanabe, Hiroaki Minato, Michio Murata, and Tohru Oishi\*



Yessotoxin    Polyether    Natural Product    Enyne Metathesis    6-exo Cyclization

**213 Studies of Zoanthamine Alkaloids. A General Scheme for the Preparation of Functionalized 8-Oxa-6-azabicyclo-[3.2.1]octanes**

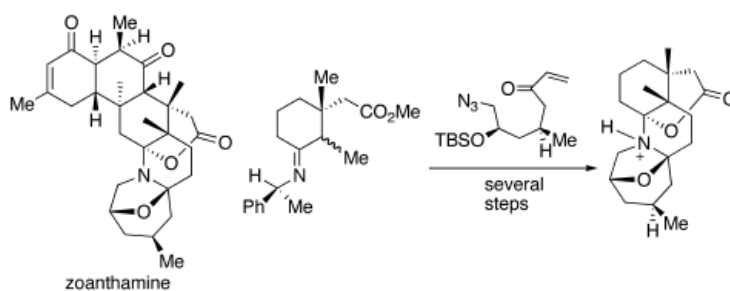
David R. Williams,\* Samarjit Patnaik, and Guillermo S. Cortez



Hemi-Aminal    Zoanthamine    Alkaloid    Asymmetric 1,4-Addition    Staudinger Reaction

**221 Ring-Mediated Transformations of Macrolide Antibiotics**

Takushi Kaneko,\* William McMillen, Meghan Keaney Lynch, and Jon Bordner

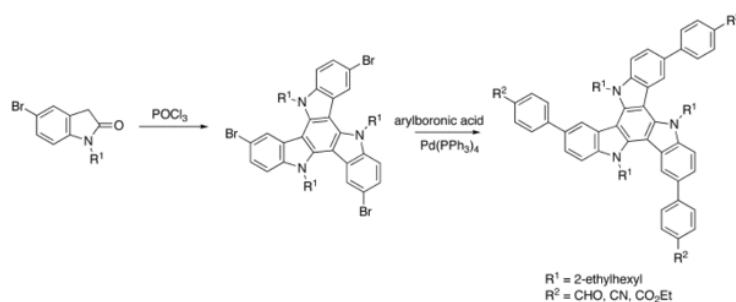


Ketolide    Ketene Acetal    Macrolide    Remote Site Functionalization    Telithromycin

## ■ PAPERS

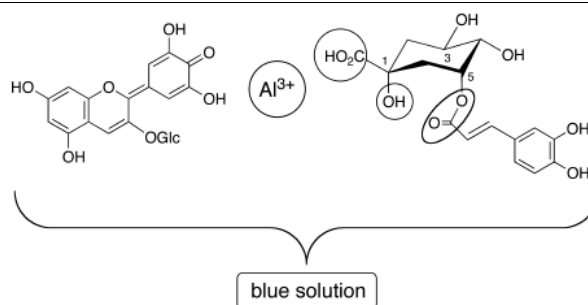
**231 Donor- $\pi$ -Acceptor Type Symmetric Cyclic Triindoles: Synthesis and Properties** PAPER

Hidetaka Hiyoshi,\* Hironobu Kumagai, Hideo Ooi, Takaaki Sonoda, and Shuntaro Mataka

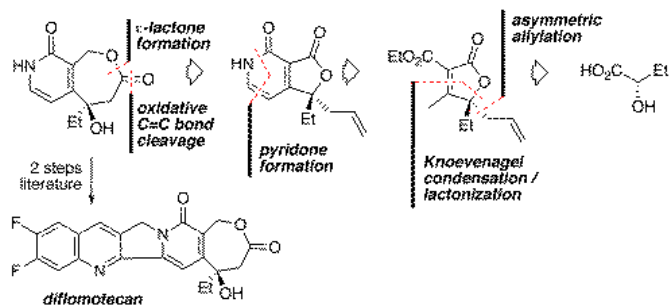

 Cyclic Indole-Trimer    Fluorescence    Solvatochromism    Donor- $\pi$ -Acceptor    Cyclic Voltammetry

**239 Synthesis of Designed Acylquinic Acid Derivatives Involved in Blue Color Development of Hydrangea and Their Co-pigmentation Effect**

Yuki Toyama-Kato, Tadao Kondo, and Kumi Yoshida\*


*Hydrangea macrophylla*    Blue Color Development    Co-Pigment    5-*O*-Acylquinic Acid    Al<sup>3+</sup>
**255 Practical Racemic and Asymmetric Formal Total Syntheses of the Homocamptothecin Derivative and Anticancer Agent Diflomotecan via Tertiary Homoallylic Alcohols as Masked Aldol Equivalents**

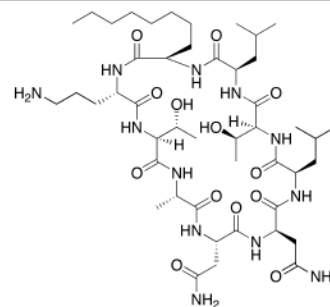
René Peters,\* Christian Diolez, Alain Rolland, Eric Manginot, and Marc Veyrat



Camptothecin    Homocamptothecin    Diflomotecan    Pyridone    Homoallylic Alcohol

**275 Synthetic Studies on Chlorofusin: Synthesis of the Cyclic Peptide Portion**

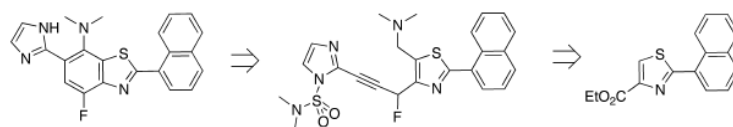
Tomonori Mori, Marie Miyagi, Kengo Suzuki, Mitsuhiro Shibasaki, Yoko Saikawa, and Masaya Nakata\*



Macrocyclization    Condensation    Cyclization Site    Selective Deprotection    Protecting Group

**293 Synthesis of 2,4,5-Trisubstituted Thiazoles with a 5-(*N,N*-Dimethylaminomethyl) Substituent**

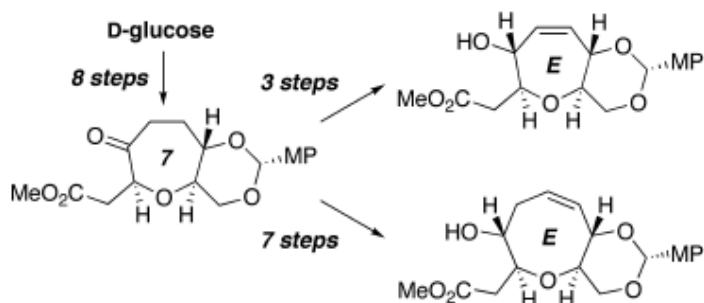
Bernhard Stump, Philipp C. Kohler, W. Bernd Schweizer, and François Diederich\*



Substituted Thiazole    Hantzsch Cyclization    Retro-Brook Rearrangement    Benzothiazole Cyclization    Trypanothione Reductase

**327 A Concise Route to Two Distinct E-Ring Structures of Ciguatoxins**

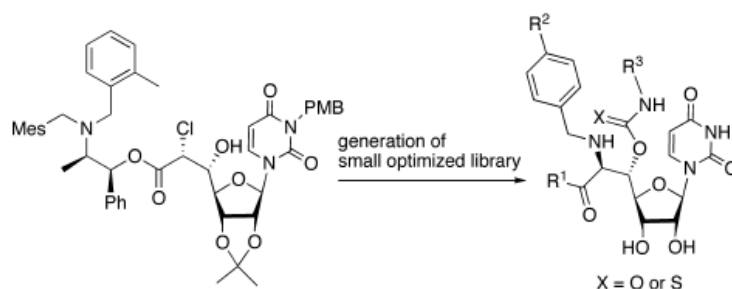
Masayuki Inoue,\* Masafumi Iwatsu, Shuji Yamashita, and Masahiro Hiramata\*



Polyether Radical Ring Expansion Olefin Isomerization

**339 Synthetic Studies toward the Generation of Uridine-Amino Alcohol-Based Small Optimized Libraries**

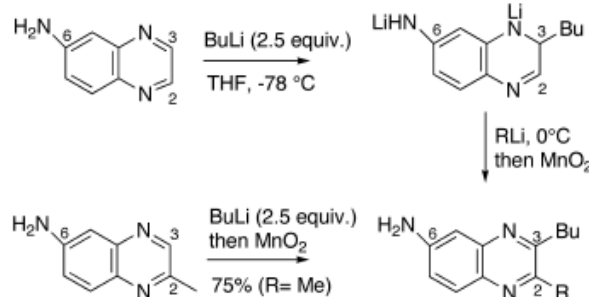
Michio Kurosu,\* Prabakaran Narayanasamy, and Dean C. Crick



Small Optimized Library Uridine-Amino Alcohol Anti-Aldol Reaction MraY Inhibitor TB Drug Lead

**353 Novel Highly Regioselective Syntheses of Unsymmetrical 2,3-Disubstituted Quinoxalines**

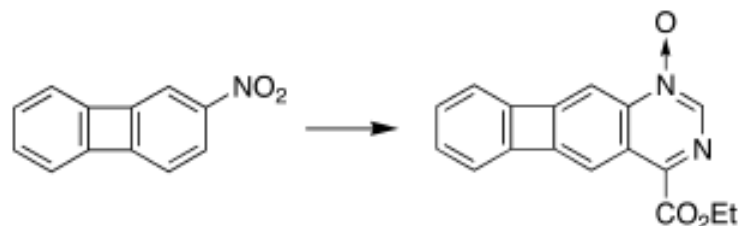
Xu Hui, Fanny Schmidt, Mohammed Akram Fakhfakh, Xavier Franck, and Bruno Figadère\*



Organolithium Alkylation Oxidation Regioselectivity Bioactive

**363 Preparation of Biphenylene- and Benzocyclooctene-Fused Heterocycles**

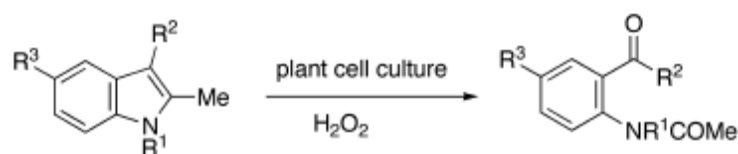
Hiroki Uoyama, Noboru Ono, and Hidemitsu Uno\*



Nitration Biphenylene Benzocyclooctene Quinoxaline Barton-Zard Pyrrole Synthesis

**373 Oxidative Cleavage Reaction of Substituted Indoles Catalyzed by Plant Cell Cultures**

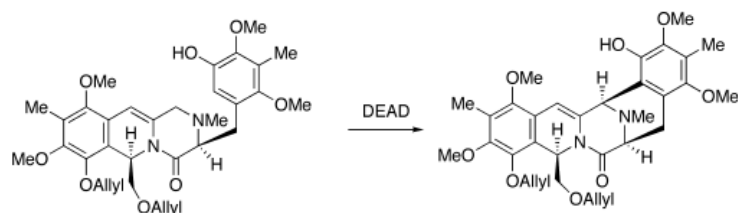
Masumi Takemoto,\* Yasutaka Iwakiri, and Kiyoshi Tanaka



Oxidative Cleavage Reaction Plant Cell Culture Indole Catalyst Enzyme

**385 Formation of the C<sub>3</sub>-C<sub>4</sub> Unsaturated Framework of Cribrostatin 4 via DEAD-Mediated Oxidation of an Allylic Tertiary Amine**

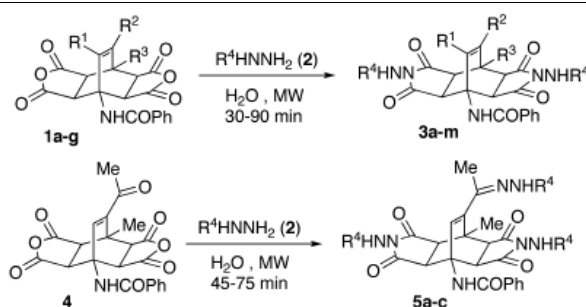
Guillaume Vincent, Yuyin Chen, Jonathan W. Lane, and Robert M. Williams\*



Tetrahydroisoquinoline    Antitumor Agent    Allylic Oxidation    Ecteinascidin    Renieramycin H

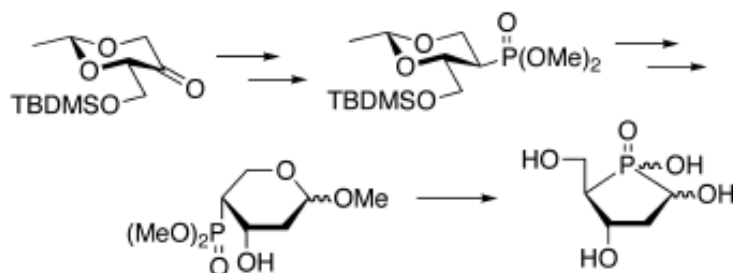
**399 Bicyclo[2.2.2]oct-7-ene Derivatives: A Green Preparation of the Fused Succinimide Ring**

Jure Hren, Krištof Kranjc, Slovenko Polanc, and Marijan Kočevár\*


 Bicyclo[2.2.2]octene    *N*-Aminosuccinimide    Fused Maleic Anhydride    Hydrazone    Microwave Irradiation

**411 A New Route for Preparation of 2-Deoxy-D-ribofuranose Phospho Sugar**

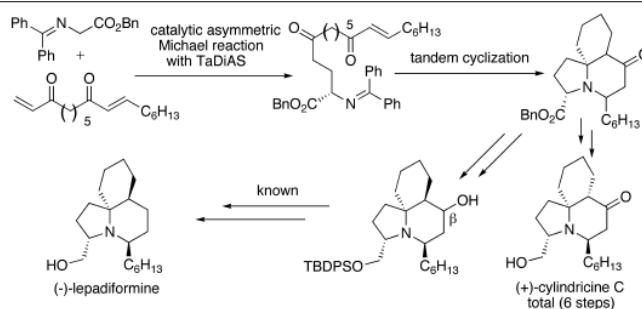
Tadashi Hanaya,\* Hiroyuki Tsukui, Naomi Igi, Ayashi Noguchi, Heizan Kawamoto, and Hiroshi Yamamoto



Phospho Sugar    2-Deoxy-D-ribofuranose Analog    C-P Bond Formation    Stereoselective Deoxygenation    Addition of Phosphonate

**421 Short Synthesis of (+)-Cylindricine C and Formal Total Synthesis of (-)-Lepadiformine**

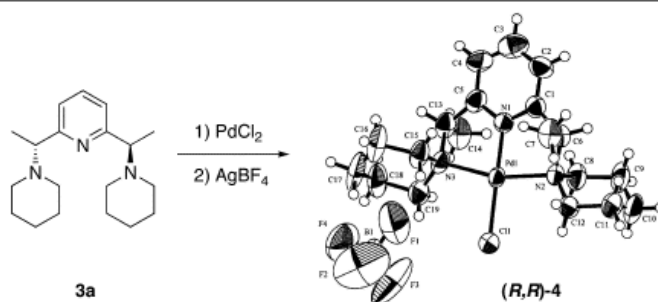
Hisashi Mihara, Tomoyuki Shibuguchi, Akiyoshi Kuramochi, Takashi Ohshima, and Masakatsu Shibasaki\*



Marine Alkaloid    Catalytic Asymmetric Michael Reaction    Two-Center Organocatalyst    Tandem Cyclization    Tricyclic Ring System

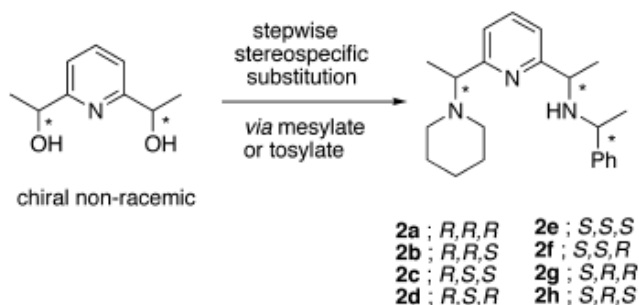
**439 Synthesis of Chiral 2,6-Bis[1-(*N*-piperidinyl)ethyl]pyridines and Crystal Structures of Their Metal Complexes**

Jun'ichi Uenishi\* and Taro Takami


 Chiral Pyridine Compound    *N,N,N*-Pincer Ligand Metal Complex    Chiral Non-Racemic Triamine Ligand    Stereospecific Substitution

**449 Stereo Differentiated Synthesis of Optically Pure 2-[1-(1-Phenylethylamino)ethyl]-6-[1-(*M*-piperidinyl)ethyl]-pyridines**

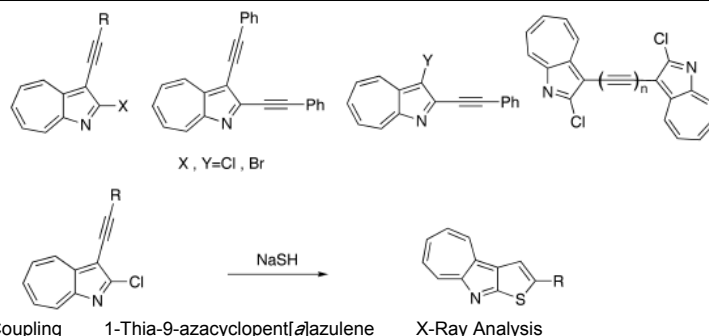
Jun'ichi Uenishi,\* Taro Takami, and Sachiko Aburatani



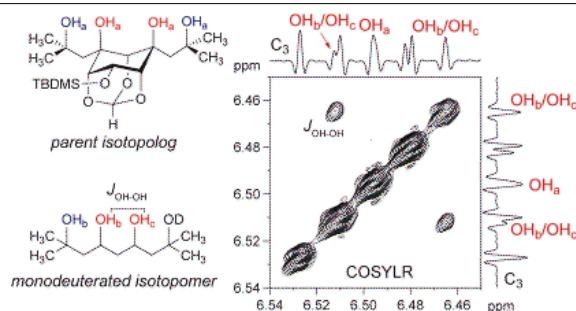
Chiral Pyridine Compound    Substitution Reaction    Chiral Triamine Ligand    Stereochemistry    Diastereomer

**459 Synthesis of Aryl Conjugated (1-Azaazulenyl)acetylenes and Facile Synthesis of Thiophene Fused 1-Azaazulenes**

Noritaka Abe,\* Yohei Harada, Yukiko Imachi, Hiroyuki Fujii, Akikazu Kakehi, and Motoo Shiro


**469 NMR Detection of Intramolecular OH/OH Hydrogen Bond Networks: An Approach Using Isotopic Perturbation and Hydrogen Bond Mediated OH...OH J-Coupling**

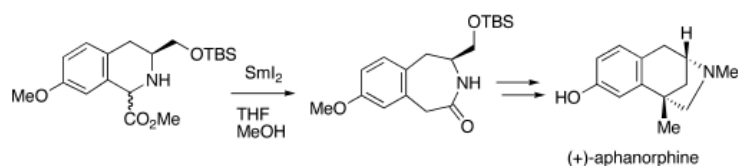
Carolyn E. Anderson, Alexander J. Pickrell, Sarah L. Sperry, Thomas E. Vasquez, Jr., Thomas G. Custer, Matthew B. Fierman, Daniel C. Lazar, Zachary W. Brown, Wendy S. Iskenderian, Daniel D. Hickstein, and Daniel J. O'Leary\*



Hydrogen Bond Network    NMR Spectroscopy    Hydroxyl Group    Isotopic Perturbation    Hydrogen Bond Mediated J-Coupling

**497 Further Studies on a Samarium Diodide-Promoted Reductive Carbon-Nitrogen Bond Cleavage Reaction: Synthesis of (+)-Aphanorphine**

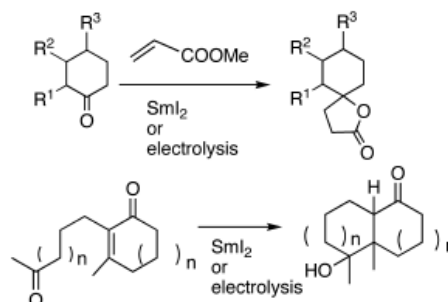
Miho Katoh, Hiroshi Inoue, and Toshio Honda\*



(+)-Aphanorphine    Benzazepinone    Samarium Diodide    1,2,3,4-Tetrahydroisoquinoline    Carbon-Nitrogen Bond Cleavage Reaction

**517 The Stereochemistry of Electrolysis and Samarium Diodide-Induced Cyclization between Carbonyl and Enone System in Inter- and Intramolecular Coupling**

Masakazu Sono,\* Tsutomu Shoji, Tatsuya Tamaki, Satoko Kishi, and Motoo Tori



Samarium Diodide    Electrolysis    Cyclization    Stereochemistry    Radical

**529 Alkyl- and Arylation of Oxacyclic Ethers with Triethylsilyl Triflate—2,4,6-Collidine—Gilman Reagent Combination: Remarkable Discrimination of Two Ether Oxygens**

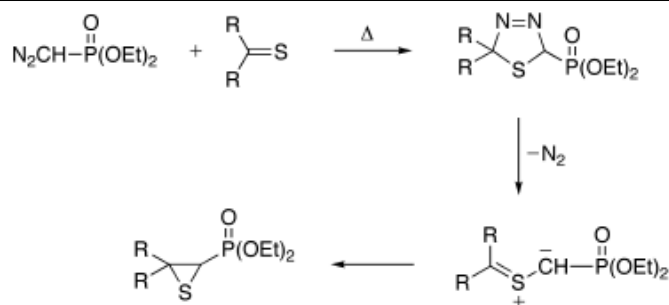
Hiromichi Fujioka,\* Takuya Ohnaka, Takashi Okitsu, Ozora Kubo, Kazuhisa Okamoto, Yoshinari Sawama, and Yasuyuki Kita\*



Chemoselective Alkylation    Collidinium Salt    Gilman Reagent

**541 Formation of Phosphonylated Thiiranes in the Reaction of a Diazomethanephosphonate and Cycloaliphatic Thioketones**

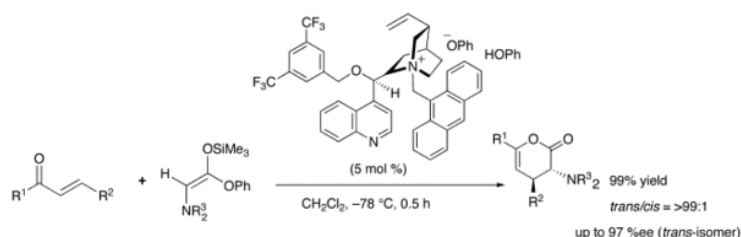
Grzegorz Mloston,\* Katarzyna Urbaniak, Stanislaw Lesniak,\* Piotr Wasiak, and Heinz Heimgartner\*



1,3-Dipolar Cycloaddition    Phosphonate    Thiirane    Thiocarbonyl Ylide    Thioketone

**553 Efficient Synthesis of Substituted 3-Amino-3,4-dihydropyran-2-ones Diastereo and Enantioselective Tandem Michael Addition and Lactonization between  $\alpha,\beta$ -Unsaturated Ketones and Glycine-Derived Silyl Enolates Using a Chiral Quaternary Ammonium Phenoxide**

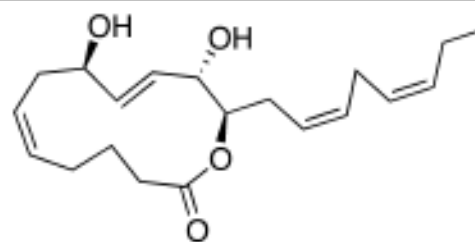
Hitoshi Nagao, Yoshinobu Yamane, and Teruaki Mukaiyama\*



3-Amino-3,4-dihydropyran-2-one    Organocatalyst    Ammonium Phenoxide    Cinchonidine    Michael Addition

**567 Amphidinolactone A, a New 13-Membered Macrolide from Dinoflagellate *Amphidinium* sp.**

Yohei Takahashi, Takaaki Kubota, and Jun'ichi Kobayashi\*

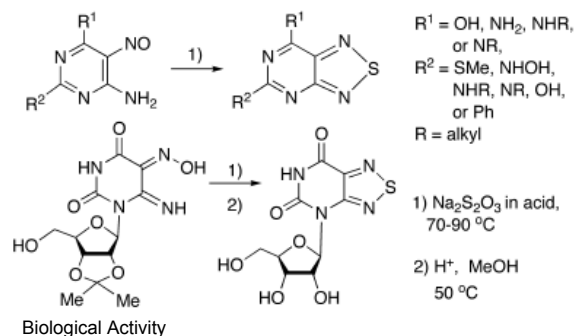


amphidinolactone A

 Dinoflagellate    *Amphidinium* sp.    Polyketide    Macrolide    Amphidinolactone A

**573 Facile Synthesis and Evaluation of Antitumor and Antiviral Activities of [1,2,5]Thiadiazolo[3,4-d]pyrimidines (8-Thiapurines) and 4- $\beta$ -D-Ribofuranosyl-[1,2,5]thiadiazolo[3,4-d]pyrimidines**

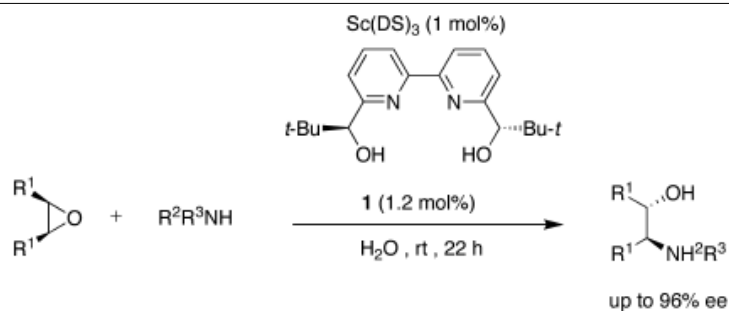
Tomohisa Nagamatsu,\* Rafiqul Islam, and Noriyuki Ashida



Thiapurine    Sodium Thiosulfate    Cyclization    Thiapurine Nucleoside    Biological Activity

**589 Scandium-Catalyzed Ring-Opening Desymmetrization of *meso*-Epoxides**

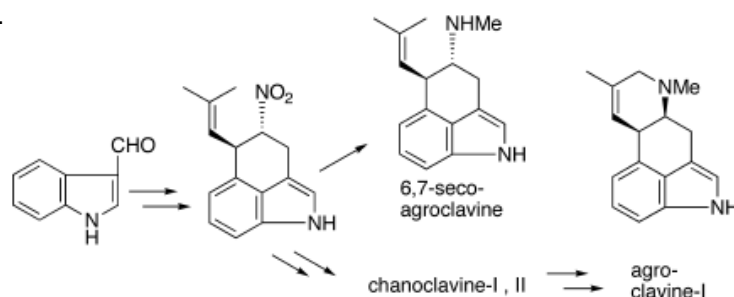
Chikako Ogawa, Naiwei Wang, Marine Boudou, Stéphane Azoulay, Kei Manabe, and Shū Kobayashi\*



Asymmetric Catalysis    Water    Lewis Acid    Epoxide    Asymmetric Synthesis

**599 Synthetic Studies Directed toward Ergot Alkaloids, (±)-6,7-Secoagroclavine, (±)-Chanoclavine-I, (±)-Chanoclavine-II, and (±)-Agroclavine-I, by an Efficient and Common Synthetic Route**

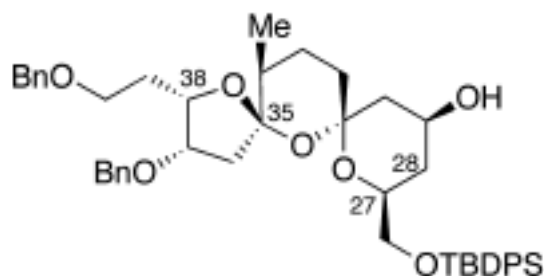
Fumio Yamada, Yoshihiko Makita, and Masanori Somei\*



Ergot Alkaloid    (±)-6,7-Secoagroclavine    (±)-Chanoclavine-I    (±)-Chanoclavine-II    (±)-Agroclavine-I

**621 Synthesis of the Trioxadispiroketal Domain of Spirastrellolide B**

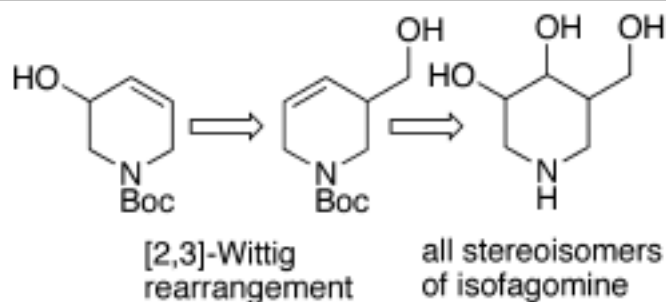
Ce Wang and Craig J. Forsyth\*



Dioxabisspiroketal    Spirastrellolide    Synthetic Methodology    Marine Toxin    Double Intramolecular Hetero-Michael Addition

**633 Asymmetric Synthesis of All Stereoisomers of Isofagomine Using [2,3]-Wittig Rearrangement**

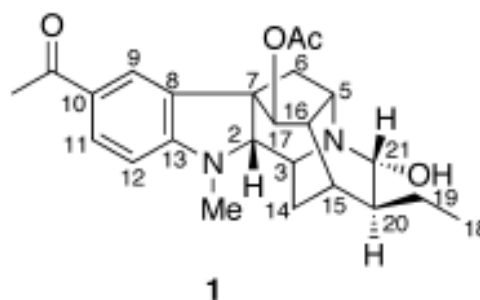
Yukiko Mihara, Hidetomo Ojima, Tatsushi Imahori, Yuichi Yoshimura, Hidekazu Ouchi, and Hiroki Takahata\*


 Isofagomine    [2,3]-Wittig Rearrangement    Asymmetric Synthesis    1-*N*-Azasugar    All Stereoisomers of Isofagomine

## ■ NOTES

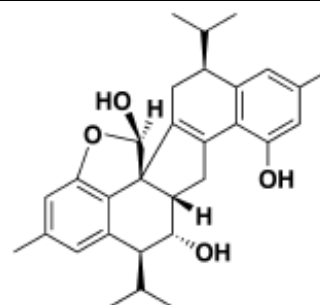
 647 **Ajmalinimine Is an Artifact Not an Alkaloid**

Mauri Lounasmaa\* and Pirjo Sainio (née Hanhinen)


 Ajmalinimine    Artifact    Formation    <sup>13</sup>C NMR Spectral Data    Rectification

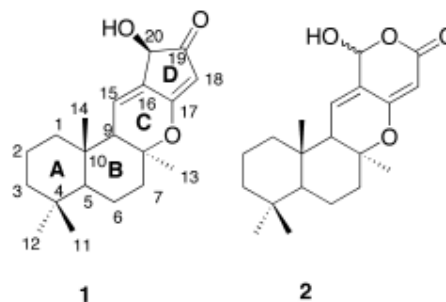
 649 **Parviflorene J, a Cytotoxic Sesquiterpene Dimer with a New Rearranged Skeleton from *Curcuma parviflora***

Mayu Tamaki, Samir Kumar Sadhu, Takashi Ohtsuki, Kazufumi Toume, Takashi Koyano, Thaworn Kowithayakorn, Masahiko Hayashi, Kanki Komiya, and Masami Ishibashi\*


*Curcuma parviflora*    Zingiberaceae    Parviflorene J    Sesquiterpene Dimer    Cytotoxicity

 655 **Cytotoxic Haterumadienone Congeners from the Okinawan Marine Sponge *Dysidea* Sp.**

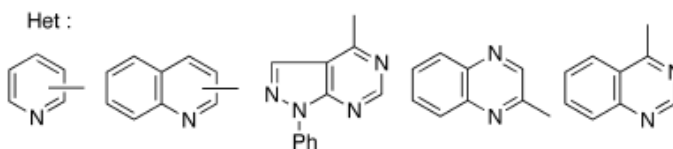
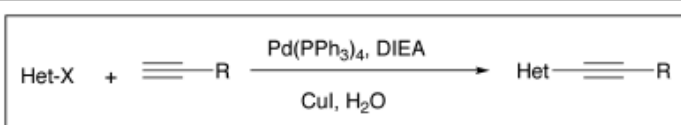
Katsuhiko Ueda,\* Takayuki Ogi, Atsushi Sato, Eric R. O. Siwu, Masaki Kita, and Daisuke Uemura



Puupehenone Congener    Sea Urchin Egg Assay    Structure-Activity Relationship    Absolute Stereochemistry    Marine Sponge

 665 **Palladium-Catalyzed Coupling Reaction of Haloheteroaromatic Compounds in Water**

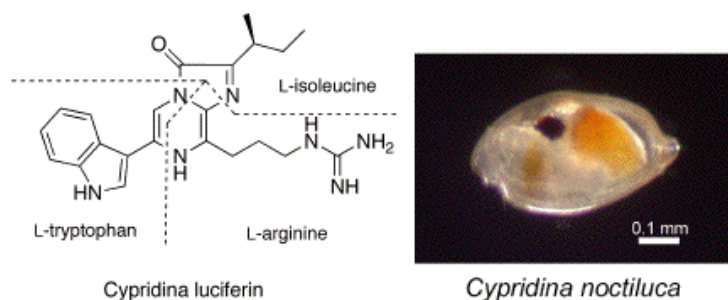
Naoki Inoue, Osamu Sugimoto,\* and Ken-ichi Tanji\*



Palladium    Coupling Reaction    Water    Heterocycle    Sonogashira Reaction

 673 **Biosynthesis of Cyridina Luciferin in *Cyridina noctiluca***

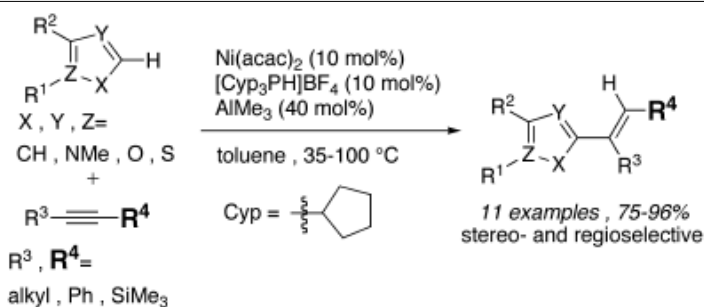
Shin-ichi Kato, Yuichi Oba,\* Makoto Ojika, and Satoshi Inouye



Bioluminescence    Biosynthesis    Imidazopyrazinone    Luciferin    Isotope Labeled

**677 Practical Approach for Hydroheteroarylation of Alkynes Using Bench-Stable Catalyst**

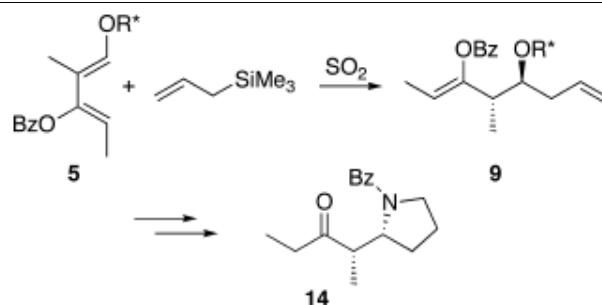
Kyalo Stephen Kanyiva, Yoshiaki Nakao,\* and Tamejiro Hiyama\*



Nickel Hydroarylation Alkyne C-H Bond Activation Atom Economy

**681 Synthesis of Enantiomerically Enriched 2-Substituted Pyrrolidine Analogues of Norhygrine. Application of the Hetero-Diels-Alder Addition of Sulfur Dioxide**

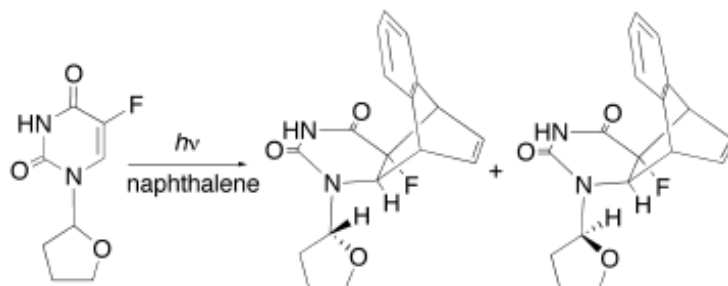
Māris Turks and Pierre Vogel\*



Hetero-Diels-Alder Addition Sulfur Dioxide Vogel's Reaction Cascade Pyrrolidine Silyl Sulfinate

**691 Diastereodifferentiating [4+2]-Photocycloaddition of Tegafur with Naphthalene**

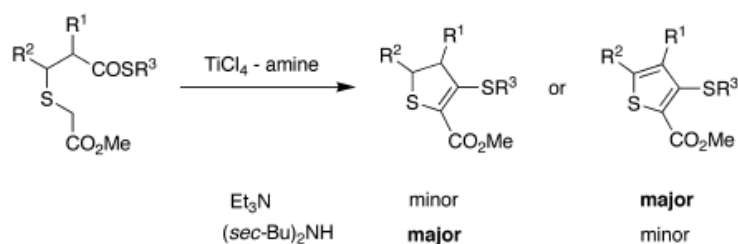
Kazue Ohkura,\* Tatsuyuki Sugaoi, Masayuki Takahashi, and Koh-ichi Seki\*



[4+2]-Photocycloaddition Diastereoselectivity Tegafur Naphthalene Ethenobenzoquinazoline

**697 Regioselective Synthesis of Methyl 3-Thiothiophene-2-carboxylate Derivatives Utilizing a Dehydration-Type Ti-Dieckmann Condensation**

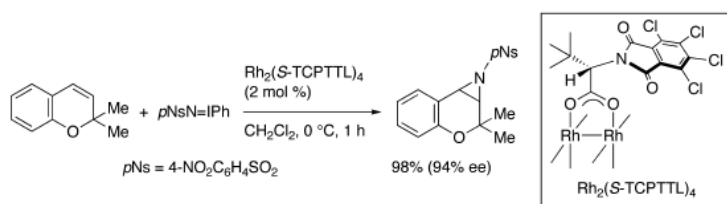
Ryohei Nagase, Hideki Gotoh, Mayumi Katayama, Naoki Manta, and Yoo Tanabe\*



Thiophene Ti-Claisen Condensation Regioselective Dehydration Amine Reagent

**709 Catalytic Enantioselective Aziridination of Alkenes Using Chiral Dirhodium(II) Carboxylates**

Minoru Yamawaki, Masahiko Tanaka, Takumi Abe, Masahiro Anada, and Shunichi Hashimoto\*



Asymmetric Catalysis Enantioselection Dirhodium(II) Complex Aziridination [N-(Arylsulfonyl)imino]phenyliodine

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