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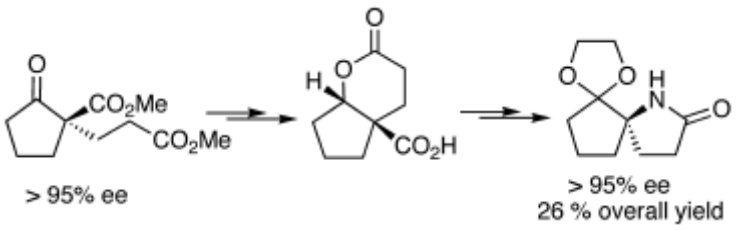
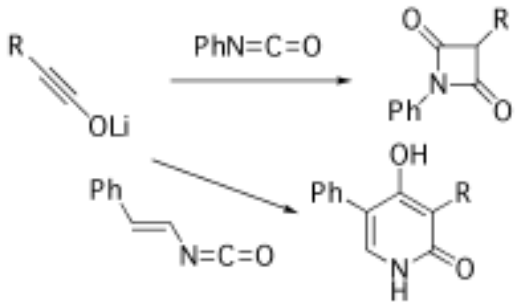
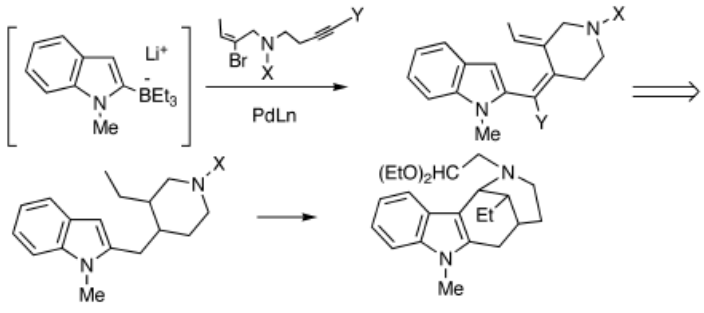


Cephalotaxine Asymmetric Michael Reaction Curtius Rearrangement Chiral Enaminoester Stereoselective Reduction



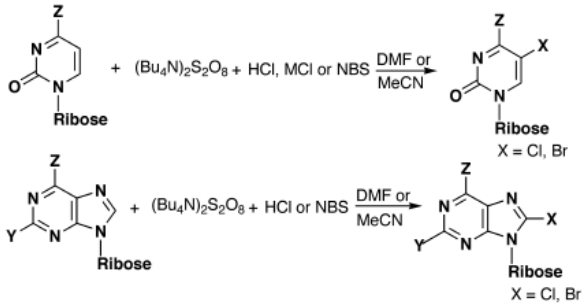
Azetidinedione Pyridone Ketene Ynolate



Tandem Cyclization-Cross-Coupling Reaction Indolylborate Uleine Catalytic Hydrogenation Cyclization

51 **Practical Halogenations of Nucleosides Using Tetrabutylammonium Peroxydisulfate**

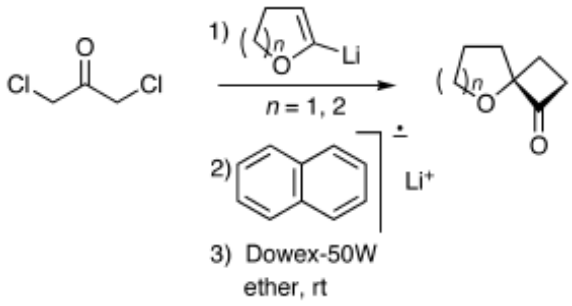
Vasu Sampath, Vidyadhar Jadhav, Hee Yoon Lee,* and Yong Hae Kim*



Chlorination Bromination *N*-Bromosuccinimide Regioselectivity Pyrimidine

57 **Direct Access to Heteropolycyclic Spiroketones. 1,3-Dichloroacetone as a Cyclopropanone Equivalent**

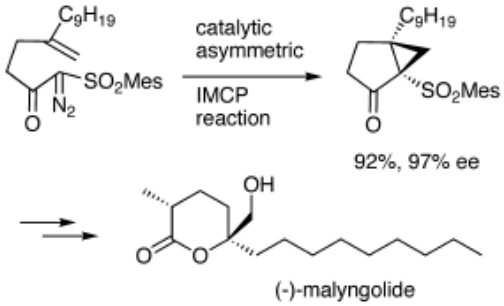
Leo A. Paquette,* David G. Hilmey, and Peter R. Selvaraj



Oxonium Ion Pinacolic Ring Expansion Cyclopropanone Equivalent Spirocyclic Ketone Acid-catalyzed Rearrangement

61 **A New Asymmetric Total Synthesis of Enantiopure (-)-Malyngolide**

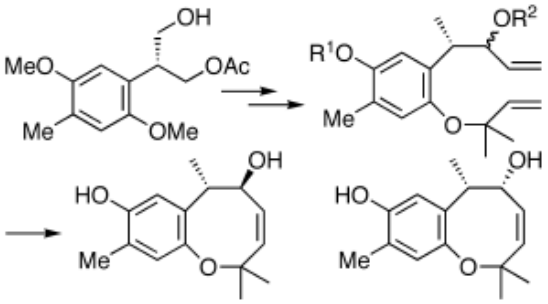
Hidetoshi Miyamoto, Mitsuhiro Iwamoto, and Masahisa Nakada*



Asymmetric Catalysis Cyclopropanation Enantioselective Intramolecular Reaction Stereoselective

69 **Enantioselective Syntheses of Heliannuols G and H**

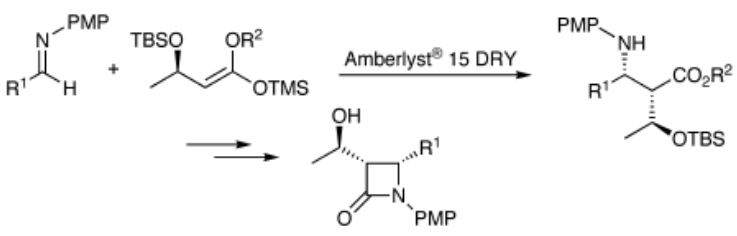
Sachie Morimoto, Mitsuru Shindo, and Kozo Shishido*



Sesquiterpene Lipase Desymmetrization Metathesis Palladium-catalyzed Allylation

75 **A Cation-Exchange Resin Promoted Imino Aldol Reaction of Chiral Alkoxyketene Silyl Acetals with α,β-Unsaturated Imines, Leading to a Facile Synthesis of β-Lactams**

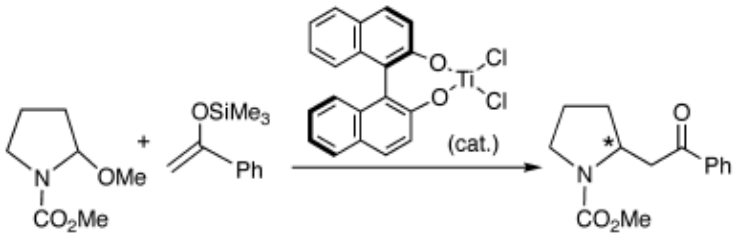
Makoto Shimizu,* Masanori Tachi, Shiho Fukushima, and Iwao Hachiya



β-Lactam Cation-Exchange Resin β-Amino Ester Chiral Ketene Silyl Acetal α,β-Unsaturated Imine

81 **Asymmetric Introduction of Nucleophiles to the 2-Position of Pyrrolidine Ring through *N*-Acylpyrrolidinium Ion**

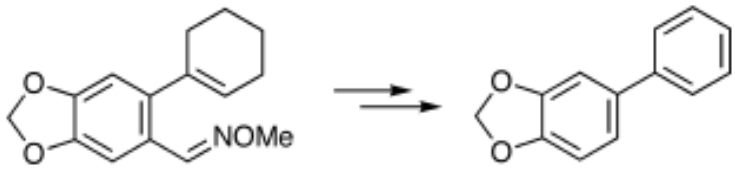
Osamu Onomura, Takashi Ikeda, and Yoshihiro Matsumura*



Alkylation Asymmetric Reaction Iminium Ion Pyrrolidine

87 **A Highly Efficient Synthesis of Trispheridine through a Construction of Tetrahydrophenanthridine Based on a Microwave-assisted Thermal Electrocyclic Reaction of an Aza 6π-Electron System**

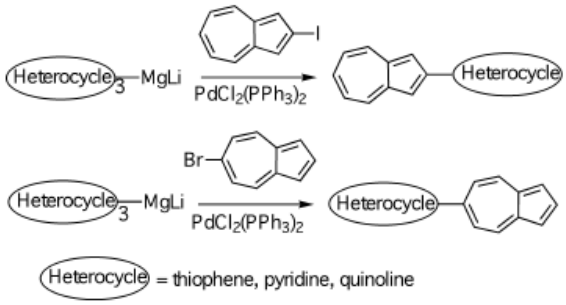
Teppei Kumemura, Tominari Choshi, Junko Yukawa, Aya Hirose, Junko Nobuhiro, and Satoshi Hibino*



Microwave Electrocyclic Reaction Tetrahydrobenzo[*c*]isoquinoline Trispheridine Phenanthridine Alkaloid

91 **The Synthesis of Heteroarylazulene**

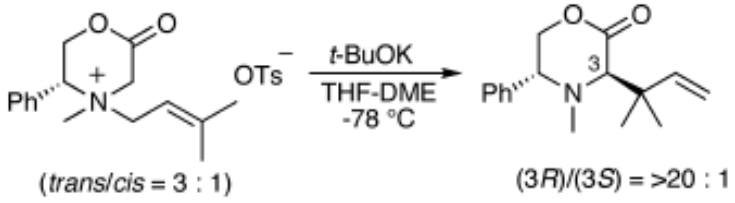
Taku Shoji, Shigeru Kikuchi, Shunji Ito, and Noboru Morita*



Azulene Lithium Magnesate Thiophene Pyridine Quinoline

95 **Kinetic Resolution *via* the [2,3] Stevens Rearrangement of Epimeric Six-membered Ammonium Ylides: A New Entry to Enantio-enriched α-Amino Acid Derivatives**

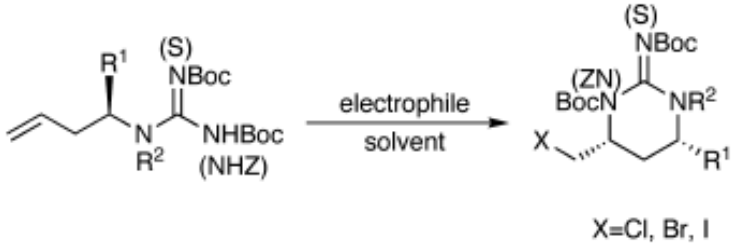
Eiji Tayama,* Hiroyuki Tanaka, and Takeshi Nakai



Stevens Rearrangement Kinetic Resolution Chirality Transfer Ammonium Ylide Unnatural Amino Acid

101 **New Utilizations of Optically Active Homoallylamines: Highly Stereoselective Synthesis of Cyclic Guanidine and Thiourea**

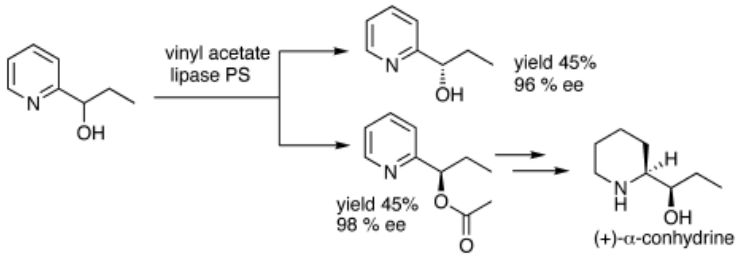
Reiko Yanada, Akira Kaieda, Kazuo Yanada, and Yoshiji Takemoto*



Homoallylamine Halocyclization Imine Indium Guanidine

107 **A Concise Enantioselective Synthesis of (+)-α-Conhydrine**

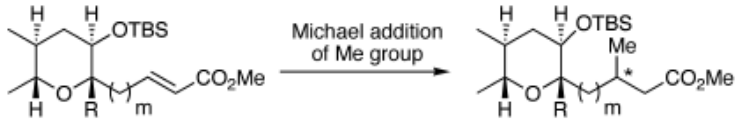
Kazuhiro Nagata, Yosuke Toriizuka, and Takashi Itoh*



(+)-α-Conhydrine Enantioselective Synthesis Kinetic Resolution Diastereoselective Reduction 2-(1-Hydroxypropyl)pyridine

111 **Cu(II)-mediated Stereoselective Michael Addition of a Methyl Group to an α,β-Unsaturated Ester as the C2-Side Chain in 3-(*t*-Butyldimethylsilyloxy)tetrahydropyrans**

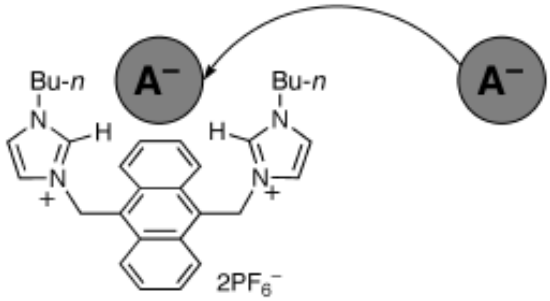
Keisuke Suzuki, Ulrike Jannsen, Hiroko Matsukura, and Tadashi Nakata*



Michael Addition Methylation α,β-Unsaturated Ester Methylmagnesium Bromide Cyclic Ether

119 **Anion-induced Fluorescence Quenching and Excimer Formation of Anthracene-Imidazolium Receptor**

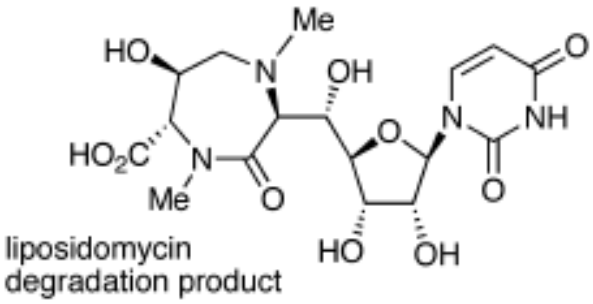
Kiyoshi Sato,* Yuichi Sadamitsu, Sadao Arai, Tetsuya Shimada, Haruo Inoue, and Takamichi Yamagishi



C-H···X Hydrogen Bonding Anion Recognition Fluorescence Quenching Imidazolium Anthracene Excimer

129 **Synthetic Studies of Liposidomycin Degradation Product: Attempt for Introduction of an Uracil Group**

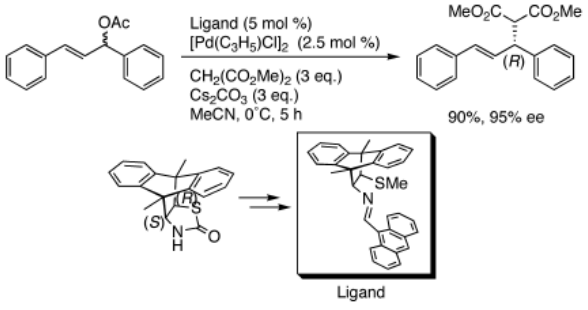
Shouhei Fukunishi, Makoto Ubukata, and Noriyuki Nakajima*



Nucleoside Antibiotics Peptidoglycan Synthesis Inhibitor *O*-Nitrobenzenesulfonyl Group Synthesis Caprazamycin

135 **Sterically Congested "Roofed" 2-Iminothioethers as New Chiral Ligands for Palladium-catalyzed Asymmetric Allylic Alkylation**

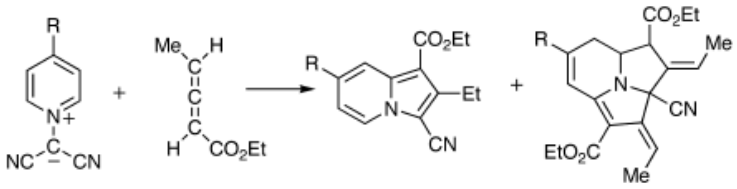
Ryoh Tokuda, Hirofumi Matsunaga,* Tadao Ishizuka, Makoto Nakajima, and Takehisa Kunieda*



2-Thiazolone 2-Thiazolidinone 2-Aminothiol Electron Acceptor Steric Factor

175 **1,3-Dipolar Cycloaddition of Ethyl 2,3-Pentadienoate with Pyridinium Dicyanomethylides: Regiospecific Formation of Ethyl 3-Cyano-2-ethylindolizine-1-carboxylates and a Novel Formation of Tricyclic Compounds**

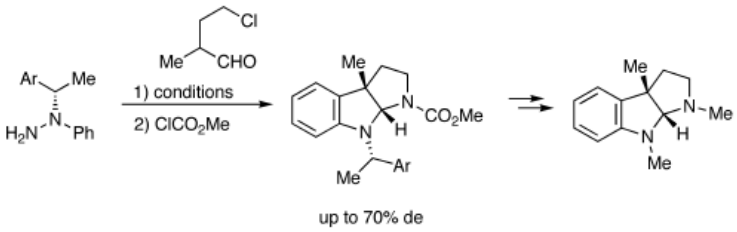
Naoto Hayashi, Naoto Kawajiri, Takane Uchida, and Kiyoshi Matsumoto*



Pyridinium Ylide 1,3-Dipolar Cycloaddition Allene Indolizine Regioselectivity

181 **Diastereoselective Fischer-Type Pyrroloindole Synthesis and Its Application to the Synthesis of Chiral Pyrrolo-indole Alkaloids**

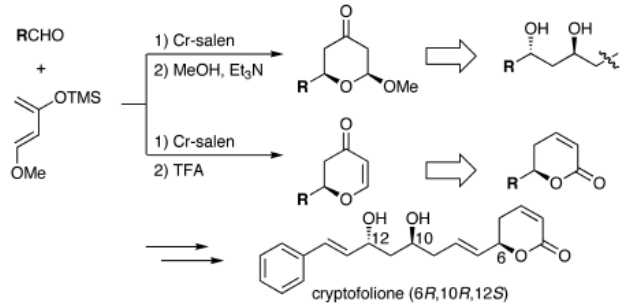
Atsushi Nishida,* Satoru Ushigome, Ayako Sugimoto, and Shigeru Arai



Asymmetric Synthesis Esermethole Fischer Indole Synthesis Physostigmine Pyrroloindole

187 **Asymmetric Synthesis of Crypto-folione and Determination of Its Absolute Configuration**

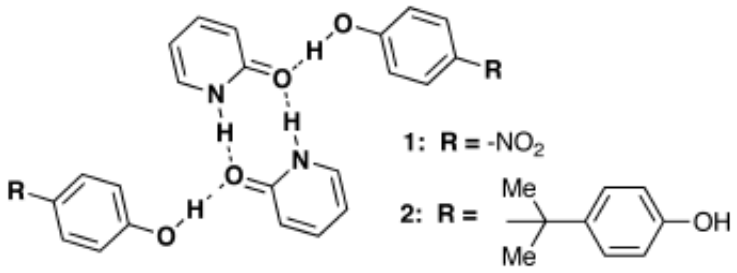
Yuko Matsuoka, Kohsuke Aikawa, Ryo Irie, and Tsutomu Katsuki*



Asymmetric Hetero-Diels-Alder Reaction (Salen)chromium Complex Cryptocarya Species 6-Substituted 5,6-Dihydro-α-pyrone *anti*-1,3-Diol

195 **Regression Analysis in the Characterization of Hydrogen-bonded Complex System Involving 2-Pyridone in Terms of Melting Points before and after Complexation**

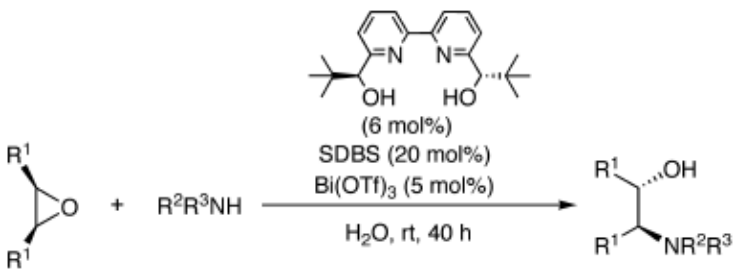
Ichiro Takahashi,* Masahiro Takahashi, Hidehiko Kitajima, Masami Wagi, Yumi Takahashi, Machiko Sabi, Atsushi Hishida, Minoru Hatanaka, Kimio Isa, Akihito Yamano, Akiyo Sakushima, and Shinzo Hosoi



Molecular Recognition Hydrogen Bonding Construction Module Regression Analysis Melting Poing

201 **Bismuth Triflate-Chiral Bipyridine Complex Catalyzed Asymmetric Ring Opening Reactions of *meso*-Epoxide in Water**

Chikako Ogawa, Stéphane Azoulay, and Shū Kobayashi*

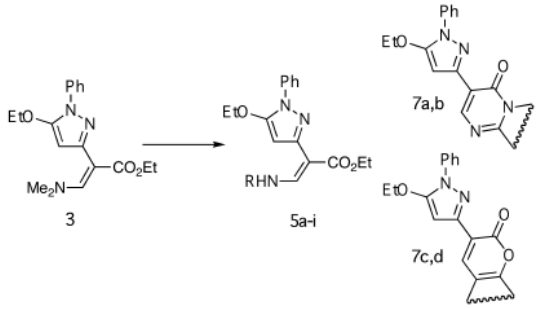


Bismuth Triflate Chiral Bipyridine Ligand Water *meso*-Epoxide Ring Opening Reaction

■ **PAPERS**

207 **Synthesis and Transformations of Ethyl (2*E*)-3-*N*,*N*-Dimethylamino-2-(5-ethoxy-1-phenyl-1*H*-pyrazol-3-yl)-propenoate**

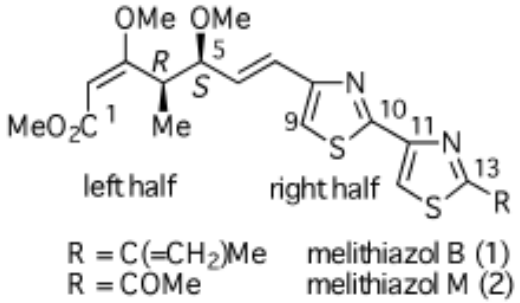
David Bevk, Ljubo Golič, Amalija Golobič, Jurij Svete, and Branko Stanovnik*



3-Pyrazol-3-ylpropenoate 1*H*-Pyrazole 3-Heteroaryl-1*H*-pyrazole

219 **Synthesis of (4*R*,5*S*)-Melithiazols B and M**

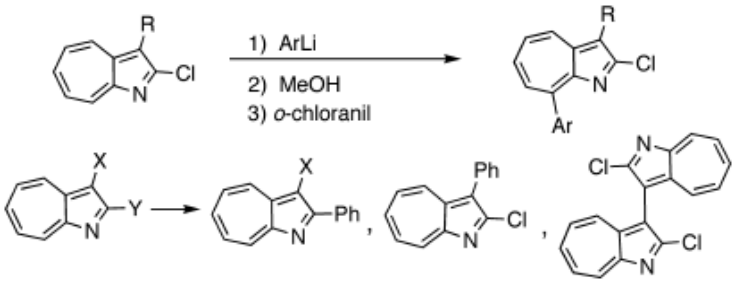
Hiroyuki Akita,* Takamitsu Sasaki, Hiroyuki Takayama, and Keisuke Kato



Melithiazol β-Methoxyacrylate Bithiazole Natural Product Synthesis Anitibiotics

229 **Effective Methods for Introducing Some Aryl and Heteroaryl Substituent onto 1-Azaazulene Nuclei**

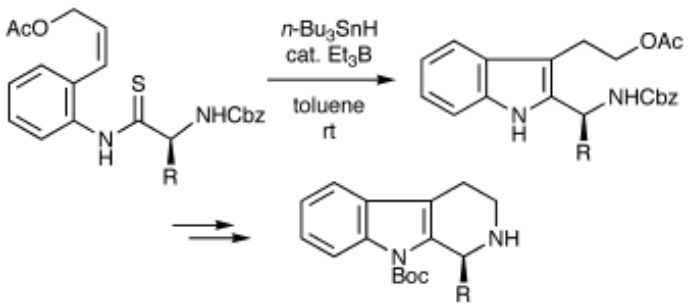
Noritaka Abe,* Megumi Tanaka, Takeshi Maeda, Hiroyuki Fujii, and Akikazu Kakehi



1-Azaazulene Aryllithium Addition-Elimination Suzuki Coupling X-Ray Structure Analysis

241 **Synthesis of Tetrahydro-β-carbolines *via* Radical Cyclization of 2-Alkenylthioanilides**

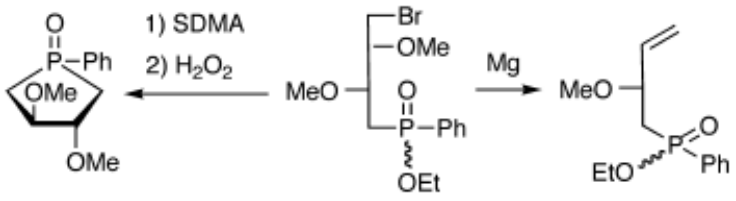
Manami Iwadate, Tohru Yamashita, Hidetoshi Tokuyama, and Tohru Fukuyama*



β-Carboline Indole Thioamide Radical Cyclization Lawesson's Reagent

251 **Synthesis of Phospholane 1-Oxide Having Oxygen Functional Groups from a 4-Bromobutylphoshinate Derivative**

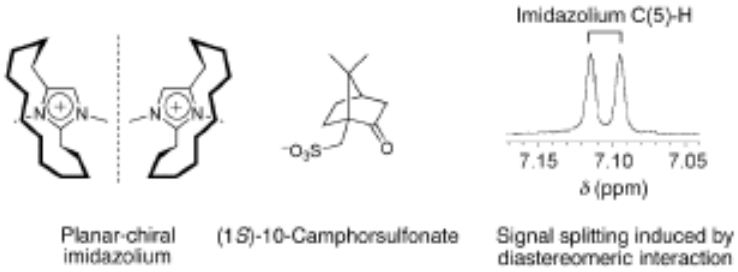
Tadashi Hanaya,* Shigeru Kawase, and Hiroshi Yamamoto



Phospholane 1-Oxide Phospha Sugar Grignard Reaction Michaelis-Arbuzov Reaction SDMA

263 **Planar-Chiral Ionic Liquids. Cyclophane-Type Imidazolium Salts with a C(2)-C(4) Bridge**

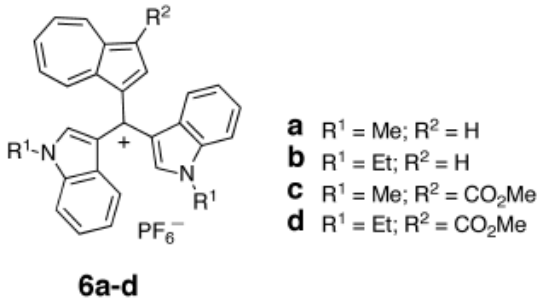
Yasuhiro Ishida, Hiroyuki Miyauchi, and Kazuhiko Saigo*



Chiral Recognition Cyclophane Imidazolium Ionic Liquid Planar Chirality

275 **Synthesis and Properties of (1-Azulenyl)di(3-indolyl)-methylium Hexafluorophosphates**

Shigeru Kikuchi,* Makiko Iki, Chizu Ikeda, and Kimiaki Imafuku*



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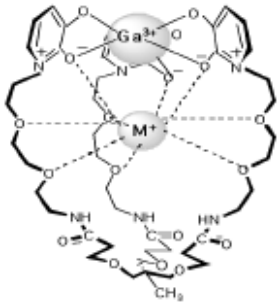
Indole Azulene (1-Azulenyl)di(3-indolyl)methyl Cation pK_R+ Value Stability

285 **Allosteric Binding of Alkali Metal Ions to a Pseudo-cryptand Formed by a C-Pivot Tripodal Ligand Containing 3-Hydroxy-2(1*H*)-pyridinone and Ga(III)**

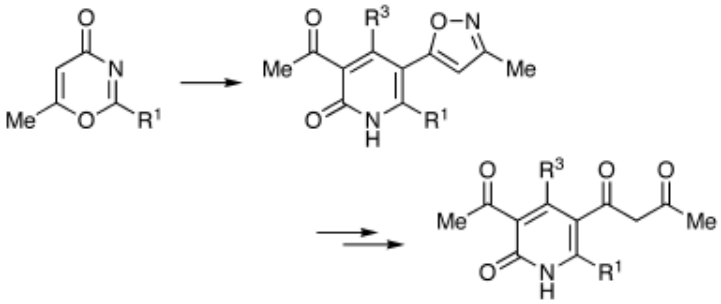
Akira Katoh,* Hidenori Kudo, and Ryota Saito



Allosteric Binding Hexadentate Ligand 3-Hydroxy-2(1*H*)-pyridinone Pseudocryptand Alkali Metal Recognition

299 **Synthesis of Novel 5-Acetoacetyl-3-acetyl-2-pyridone Derivatives by the Ring-Transformation of 6-Methyl-1,3-oxazin-4-ones**

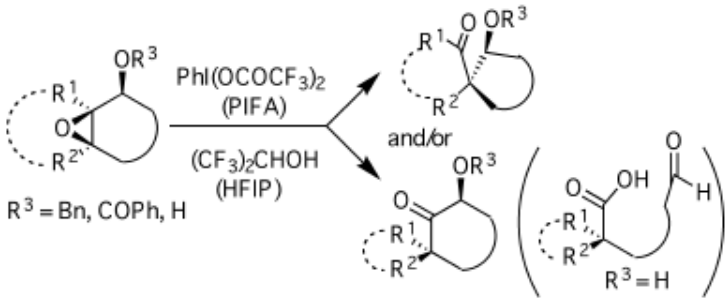
Hidekazu Ouchi,* Hisao Saito, Yutaka Yamamoto, and Hiroki Takahata*



Ring Transformation 6-Methyl-1,3-oxazin-4-one Isoxazole 5-Acetoacetyl-3-acetyl-2-pyridone Poly-functionalized Pyridone

309 **Hypervalent Iodine(III) Reagent-promoted Rearrangement and Subsequent Oxidative Ring Cleavage of Cyclic 2,3-Epoxy-1-alcohol Derivatives**

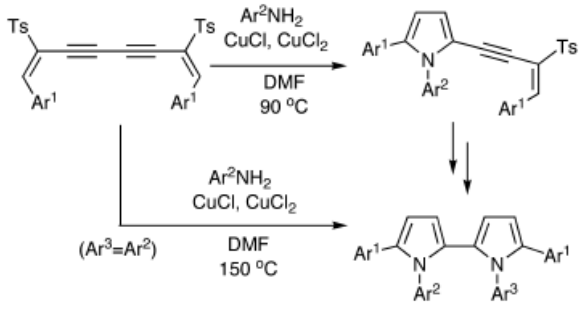
Yasuyuki Kita,* Satoshi Matsuda, Eri Fujii, Shinji Kitagaki, Ryoko Inoguchi, Kayoko Hata, and Hiromichi Fujioka



Tandem Reaction α-Hydroxy Ketone Derivative β-Hydroxy Ketone Derivative ω-Formylalkanoic Acid Spirocyclic Lactone

319 **Novel 1,1',5,5'-Tetraaryl-2,2'-bipyrroles: Their Synthesis and Physical Properties**

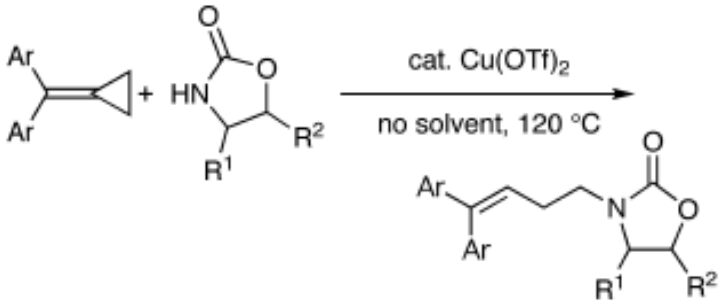
Shoji Matsumoto, Takamitsu Kobayashi, and Katsuyuki Ogura*



Pyrrole 2,2'-Bipyrrole CuCl-catalyzed Cyclization Reaction Flat Conformation Twisted Conformation

333 **Addition of 2-Oxazolidinones to Arylidenecyclopropanes: A Highly Efficient Method for the Preparation of *gem*-Aryl Disubstituted Homoallylic Oxazolidinones**

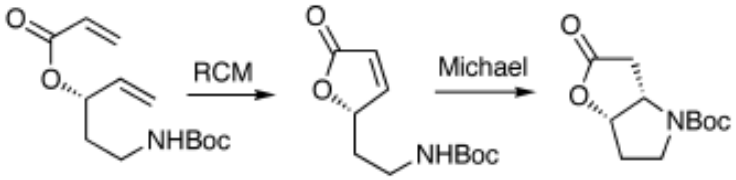
Amal I. Siriwardana, Kalum K. A. D. S. Kathriarachchi, Itaru Nakamura, and Yoshinori Yamamoto*



Hydroamination Methylenecyclopropane Oxazolidinone Copper Catalyst Homoallylation

341 **Alternative Synthesis of (-)-Geissman-Waiss Lactone, a Key Intermediate of Necine Bases**

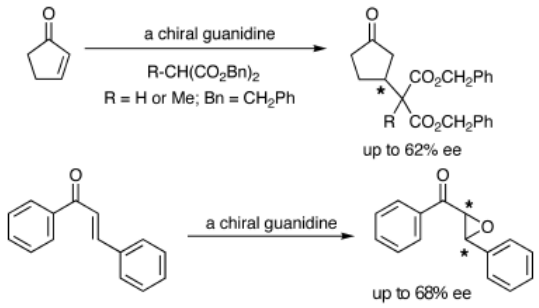
Toshio Honda* and Sae Matsumoto



Ring-closing Metathesis Intramolecular Michael Reaction Pyrrolizidine Alkaloid Anti-malarial Piperidine Alkaloid

347 **Guanidine-catalyzed Asymmetric Addition Reactions: Michael Reaction of Cyclopentenone with Dibenzyl Malonates and Epoxidation of Chalcone**

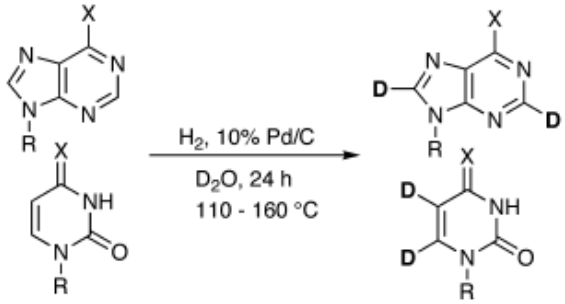
Takuya Kumamoto, Keiko Ebine, Yukari Araki, Miyuki Endo, Yuji Fushimi, Ikue Miyamoto, Tsutomu Ishikawa,* Toshio Isobe, and Keiko Fukuda



Guanidine Michael Reaction Epoxidation Enantioselective Green Chemistry

361 **Synthesis of Base-selectively Deuterium-labelled Nucleosides by the Pd/C-catalyzed H-D Exchange Reaction in Deuterium Oxide**

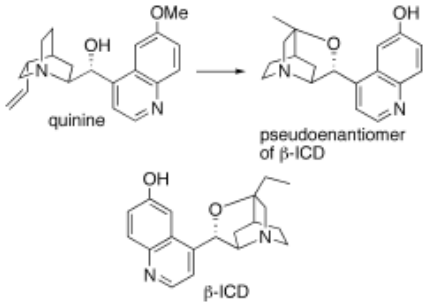
Hiroyoshi Esaki, Fumiyo Aoki, Tomohiro Maegawa, Kosaku Hirota, and Hironao Sajiki*



Deuterium Nucleoside Palladium Deuterium Oxide

371 **Synthesis of a Pseudoenantiomer of β-Isocupreidine (β-ICD), a Chiral Amine Catalyst for Asymmetric Baylis-Hillman Reactions**

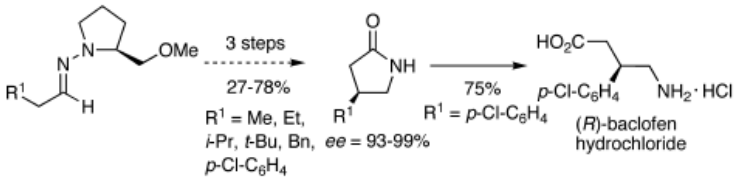
Ayako Nakano, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama*



Organic Catalysis Asymmetric Catalysis Baylis-Hillman Reaction β-Isocupreidine (β-ICD) Quinine

385 **Asymmetric Synthesis of β-Substituted γ-Lactams Employing the SAMP-/RAMP-Hydrazone Methodology. Application to the Synthesis of (*R*)-(-)-Baclofen**

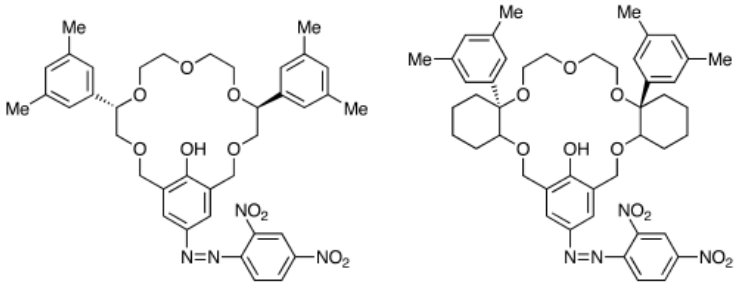
Dieter Enders* and Oliver Niemeier



Lactam Hydrazone Nitrile Alkylation GABA Agonist

405 **Remarkable Effect of Subtle Structural Change of Chiral Pseudo-18-Crown-6 on Enantiomer-Selectivity in Complexation with Chiral Amino Alcohols**

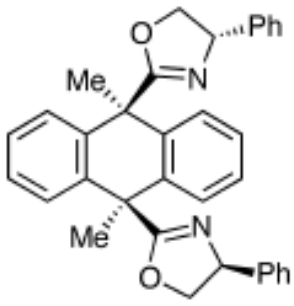
Keiji Hirose,* Pakatip Aksharanandana, Michiko Suzuki, Kiyoshi Wada, Koichiro Naemura, and Yoshito Tobe



Chiral Recognition Crown Ether Amine Enthalpy and Entropy Thermodynamics

433 **Synthesis of New Chiral Bis-oxazoline Ligand with Zinc Triflate-Selective Chelating Ability and Its Applications**

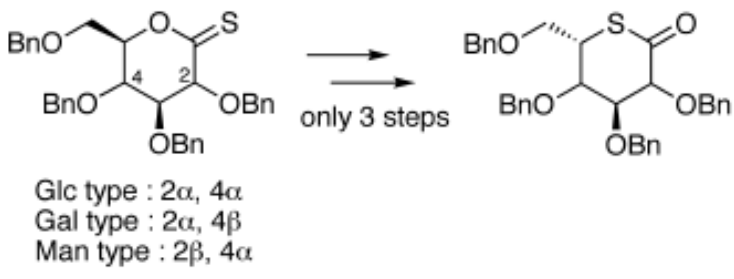
Kazuishi Makino, Ikuko Ogawa, and Yasumasa Hamada*



Chiral Bis-oxazoline Ligand Dihydroanthracene Enantioselective Diels-Alder Reaction Henry Reaction Zinc Triflate

441 **Short-Step Synthesis of 5-Thio-L-hexopyranoses from D-Glyconothio-*O*-lactones**

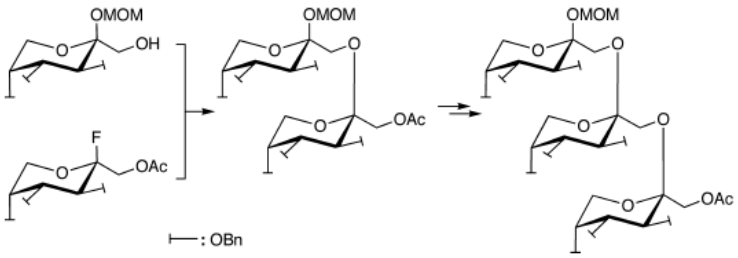
Daisuke Sawada, Shinya Sasayama, Hideyo Takahashi, and Shiro Ikegami*



L-Sugar Thiosugar Mitsunobu Cyclization Thiosugar Lactone Sugar Oxime

453 **Synthesis of Di- and Trisaccharides Comprising D-Fructopyranose with β2 → 1 Glycosidic Linkage Using β-D-Fructopyranosyl Fluoride as the Fructosyl Donor**

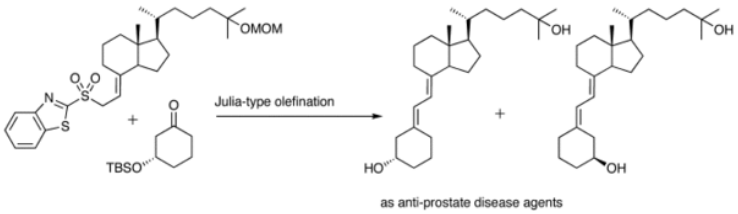
Eisuke Kaji,* Emiko Kurimoto, Reiko Saiga, Ayako Matsuura, Kazuho Harada, and Takashi Nishino



β-D-Fructopyranosyl Fluoride Methoxymethyl β-D-Fructopyranoside β(2 → 1)-Fructosylation Fructooligosaccharide

469 **Synthesis of 25-Hydroxy-19-norvitamin D_3 Analogs and Their Antiproliferative Activities on Prostate Cells**

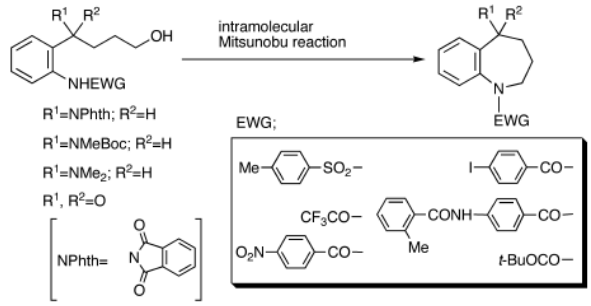
Midori A. Arai, Ryuji Tsutsumi, Hideki Hara, Tai C. Chen, Toshiyuki Sakaki, Naoko Urushino, Kuniyo Inouye, and Atsushi Kittaka*



19-Norvitamin D Julia-Type Olefination 1α-Hydroxylase (CYP27B1) Antiproliferative Activity Prostate Cell

481 **Efficient Synthesis of Functionalized Benzazepine Derivatives Utilizing Intramolecular Mitsunobu Reaction**

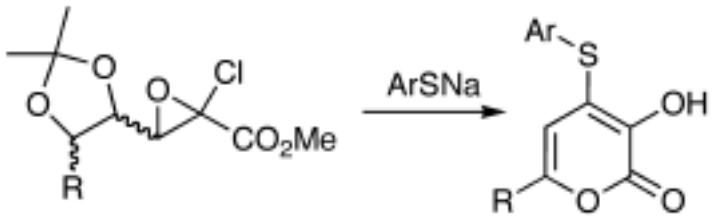
Tadaaki Ohtani,* Yoshikazu Kawano, Kazuyoshi Kitano, Jun Matsubara, Makoto Komatsu, Minoru Uchida, Fujio Tabusa, and Yoshimitsu Nagao



Cyclization Mild Condition Electron-withdrawing Group

503 **Novel Synthesis of 4-Arylsulfenyl-3-hydroxy-2-pyrone: One Pot Substitution-Rearrangement-Cyclization Reaction of Acetonide Protected 4,5-Dihydroxy-2-chloroglycidic Ester by Sodium Arylthiolate**

Takuzo Komiyama, Yutaka Takaguchi, and Sadao Tsuboi*



One Pot Reaction 3-Hydroxy-2-pyrone Cyclization Darzens Condensation Dichloroacetate

511 **Stereoselective Synthesis of 2,5-Di- and 2,2,5-Trisubstituted Pyrrolidines by Allylation Reaction of Acyliminium Ion**

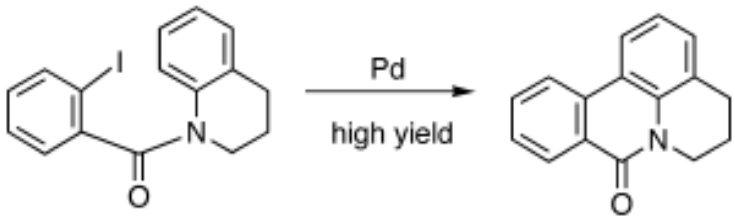
Tetsuro Shinada,* Makoto Hamada, Masanori Kawasaki, and Yasufumi Ohfune*

Acyliminium Ion Allylation Pyrrolidine Stereoselectivity

■ NOTES

527 **Palladium-assisted Biaryl Coupling Reaction of 1-(2-Iodobenzoyl)-1,2,3,4-tetrahydroquinoline**

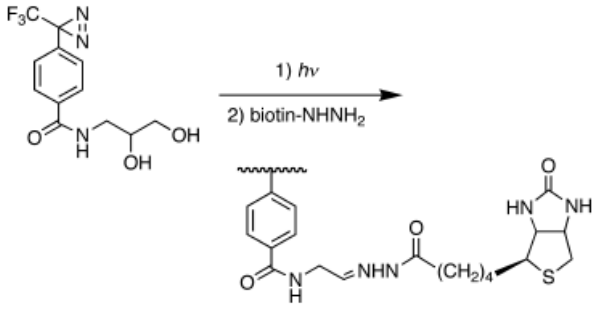
Takashi Harayama,* Tomonori Sato, Akihiro Hori, Hitoshi Abe, and Yasuo Takeuchi



Pyrido[3,2,1-*de*]phenanthridin-8-one Biaryl Coupling Pd Reagent Benzoyltetrahydroquinoline Benzoyldihydroindoline

531 **Diol Derivative of (3-Trifluoromethyl)phenyldiazirine for Post-labeling of Photocrosslink**

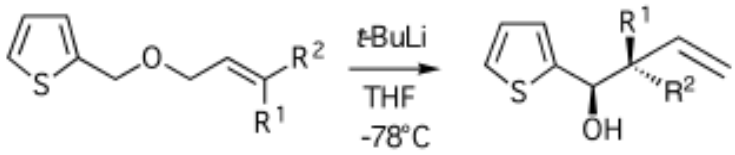
Makoto Hashimoto* and Yasumaru Hatanaka



Diazirine Photocrosslink Diol Avidin-Biotin Schiff Base

535 **Wittig Rearrangement of Ally 2-Thiophenemethyl Ethers: Facile Synthesis of Thiophenemethanol and -ethanol Derivatives**

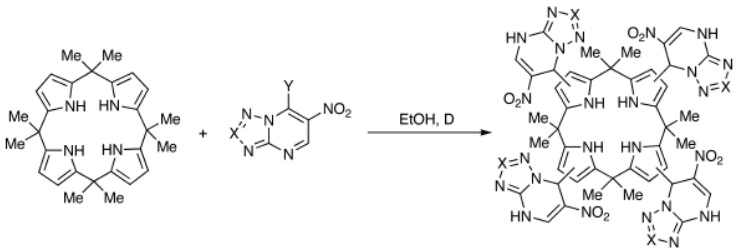
Masayoshi Tsubuki,* Sohichiro Matsuo, and Toshio Honda*



Wittig Rearrangement 2-Thiophenemethyl Ether 2-Thiophenemethanol 2-Thiopheneethanol

543 **Direct C-C Coupling of *meso*-Octamethylcalix[4]pyrrole with 6-Nitroazolopyrimidines**

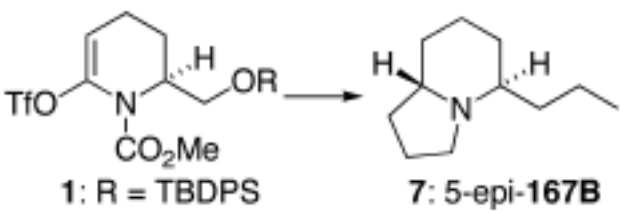
Oleg N. Chupakhin,* Nadezhda A. Itsikson, Sergey Sh. Bashirov, Dmitry G. Beresnev, and Gennady L. Rusinov



6-Nitroazolopyrimidine *meso*-Octamethylcalix[4]pyrrole Nucleophilic Addition σ^H-Adduct $S_N{}^H$--Process

549 **Synthesis of (-)-5-Epiindolizidine 167B and Formal Synthesis of 5*E*,9*Z*-Indolizidine 223AB**

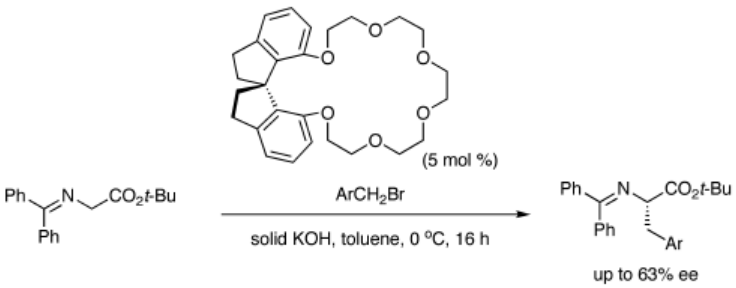
Naoki Toyooka* and Hideo Nemoto



(-)-5-Epiindolizidine **167B** 5*E*,9*Z*-Indolizidine **223AB** Amphibian Skin Enol Triflate 5-*epi*-**167B**

639 **Spiro Crown Ethers Bearing (*S*)-1,1'-Spirobiindanes as Chiral Backbones**

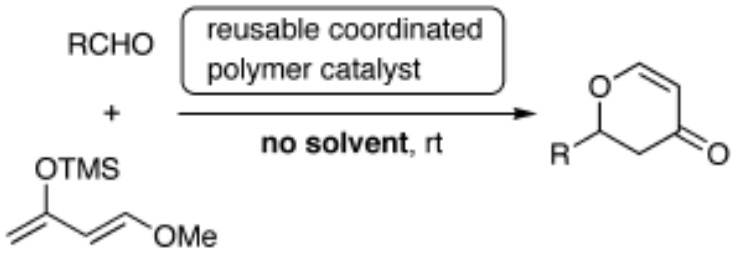
Kohji Yonezawa, Mahesh L. Patil, Hiroaki Sasai, and Shinobu Takizawa*



Spiro Skeleton Crown Ether Chiral Phase Transfer Catalyst Enantioselective Alkylation Asymmetric Synthesis

645 **Hetero-Diels-Alder Reaction Catalyzedby Self-organized Polymeric Rare Earth Complexes under Solvent-free Conditions**

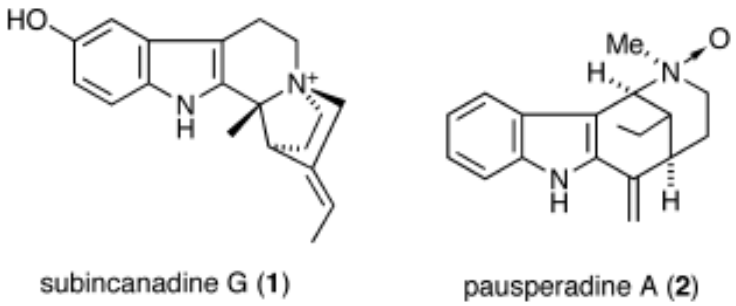
Shuichi Ishida, Tetsuji Hayano, Hiroshi Furuno, and Junji Inanaga*



Coordinated Polymer Complex Self-oraganized Catalyst Reusable Lweis Acid Catalyst Scandium Sulfonate Dihydropyranone

651 **Two New Indole Alkaloids from *Aspidosperma subincanum* and *Geissospermum vellosii***

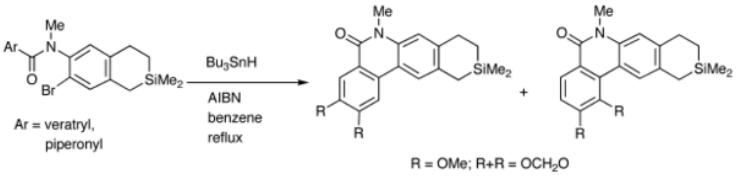
Haruaki Ishiyama, Miyako Matsumoto, Mitsuhiro Sekiguchi, Hideyuki Shigemori, Ayumi Ohsaki, and Jun'ichi Kobayashi*



Aspidosperma subincanum Quaternary Indole Alkaloid Subincanadine G *Geissospermum vellosii* Pausperadine A

659 **Synthesis of *N*-Methylphenanthridinone Derivatives Fused with a Silacyclohexane Ring by Radical Reaction Using Tributyltin Hydride**

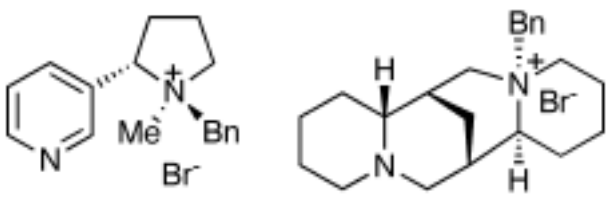
Yuya Hoshino and Osamu Hoshino*



Phenanthridinone Derivative 2-Silatetralin Radical Reaction Cyclization Tributyltin Hydride

667 **The Structural Information of the Quaternary Ammonium Salts Derived from Nicotine and Sparteine in the Solid State**

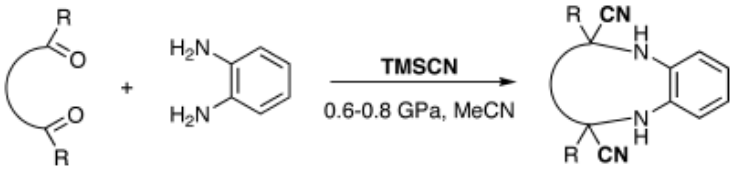
Kazuhiro Yoshizawa, Yasuko In, Toshimasa Ishida, and Takayuki Shioiri*



Nicotine Sparteine Quaternary Ammonium Salt X-Ray Crystallography Benzylation

675 **Are Multicomponent Strecker Reactions of Diketones with Diamines under High Pressure Amenable to Heterocyclic Synthesis?**

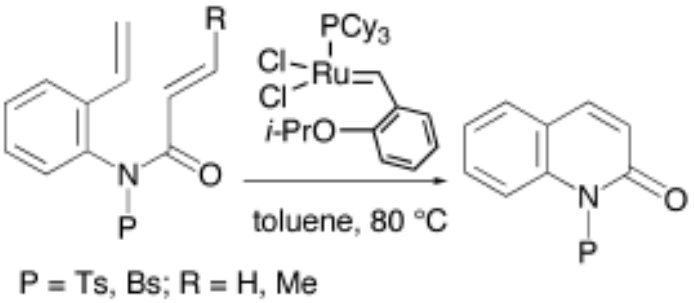
Koji Kumamoto, Hirokazu Iida, Hiroshi Hamana, Hiyoshizo Kotsuki, and Kiyoshi Matsumoto*



High Pressure Reaction Strecker Reaction Multicomponent Reaction Tetrahydrophenazine Tetrahydrodibenzo[*b*,f][1,4]diazocine

683 **Preparation of *N*-Sulfonyl-2-quinolinone Using Ring-closing Metathesis (RCM)**

Mitsuhiro Arisawa,* Chumpol Theeraladanon, and Atsushi Nishida*

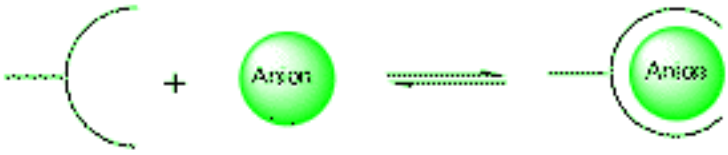


Ruthenium Diels-Alder Reaction 2-Quinolinone Metathesis

■ REVIEWS

689 **Anion Receptors**

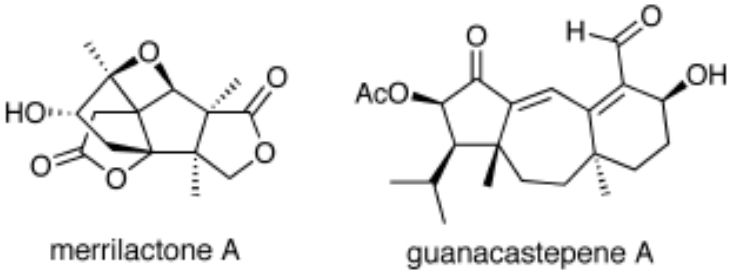
Oleg N. Chupakhin,* Nadezhda A. Itsikson, Yuri Yu. Morzherin, and Valery N. Charushin



Anion Receptor Supramolecular Chemistry Macrocycle Calixpyrrole Urea

711 **Enantiotopic Synthesis of Natural Products: Merrilactone and Guanacastepene**

Heedong Yun, Zhaoyang Meng, and Samuel J. Danishefsky*



Total Synthesis Enantioselective Merrilactone A Guanacastepene A Natural Product