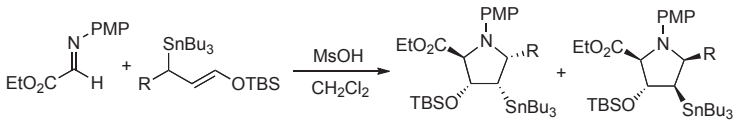
■ REVIEWS

■ COMMUNICATIONS

773 **Facile Synthesis and Ring-Opening of 4-(Tributylstannyl)-pyrrolidine-2-carboxylates**

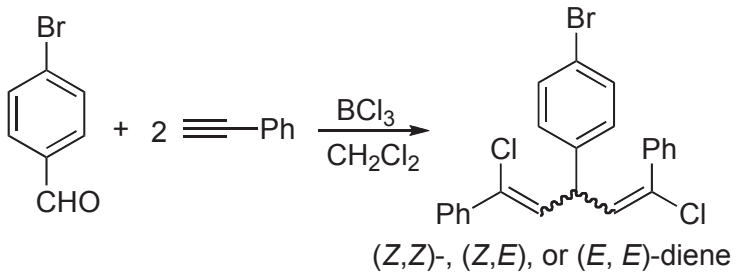
Makoto Shimizu,* Hiromi Ando, Hitoshi Shibuya, and Iwao Hachiya



Pyrrolidine-2-carboxylate Cyclization Allylstannane α-Iminoacetate Methanesulfonic Acid

779 **Boron Trichloride Mediated Alkyne-Aldehyde Coupling Reactions**

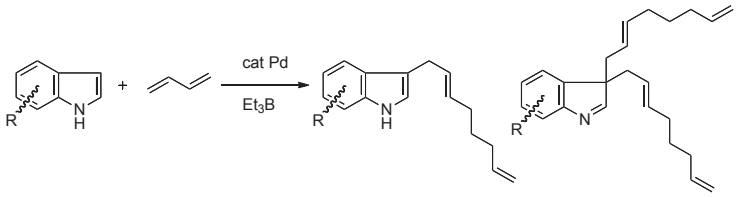
Min-Liang Yao, Michael P. Quinn, and George W. Kabalka*



Boron Halide Diene Aldehyde Reaction Synthesis

787 **Allylic Alkylation of Indoles with Butadiene Promoted by Palladium Catalyst and Triethylborane**

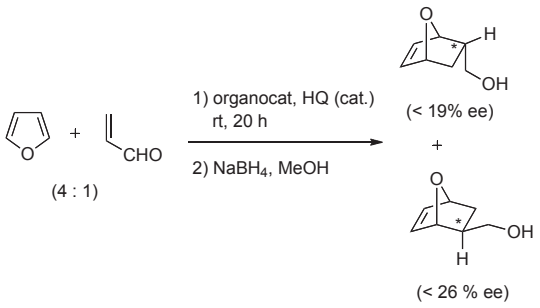
Masanari Kimura,* Katsumi Tohyama, Yumi Yamaguchi, and Tomohiko Kohno



Indole Butadiene Palladium Triethylborane Allylation

799 **Organocatalytic Asymmetric Diels-Alder Reaction of Furan under High Pressure**

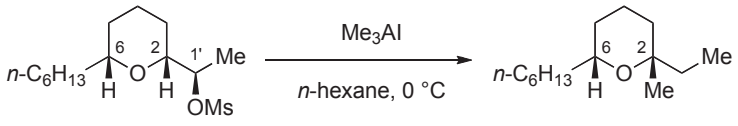
Akiko Mimoto, Keiji Nakano, Yoshiyasu Ichikawa, and Hiyoshizo Kotsuki*



Organocatalyst Asymmetric Diels-Alder Reaction Furan Acrolein High Pressure Reaction

805 **Methyl Insertion Reactions of Tetrahydropyrans Having a C1'-Mesyloxy Group on the C2-Side Chain with Trimethylaluminum**

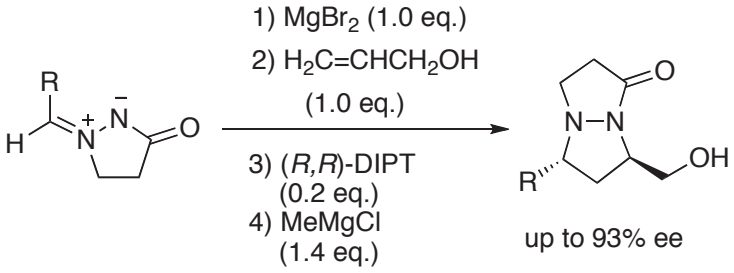
Keigo Nakamura, Atsushi Kimishima, and Tadashi Nakata*



Trimethylaluminum Tetrahydropyran Methyl Insertion Antiperiplanar 1,2-Hydride Shift

887 **Catalytic Asymmetric 1,3-Dipolar Cycloaddition of Azomethine Imines to Allyl Alcohol Utilizing Tartaric Acid Ester as a Chiral Auxiliary**

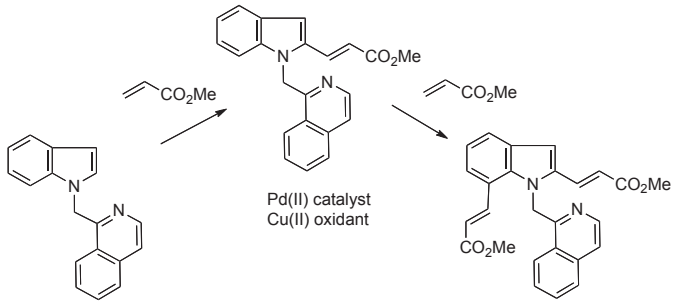
Katsuyoshi Tanaka, Tomomitsu Kato, Yutaka Ukaji,* and Katsuhiko Inomata*



Enantioselective 1,3-Dipolar Cycloaddition Azomethine Imine Optically Active Pyrazolidine Magnesium Bromide Diisopropyl (*R,R*)-Tartrate

895 **Observation of 2,7-Disubstitution in Palladium Catalysed Directed C-H Activation of Indoles**

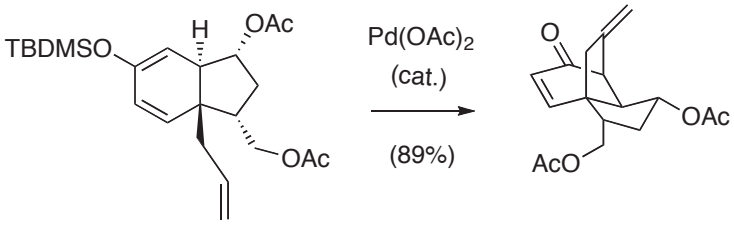
Guilia Fanton, Nicola M. Coles, Andrew R. Cowley, Jonathan P. Flemming, and John M. Brown*



Palladium (II) Alkenylation Indole Directing Group X-Ray

903 **Synthetic Studies toward Antitumor Sesquiterpenoid Quadrone**

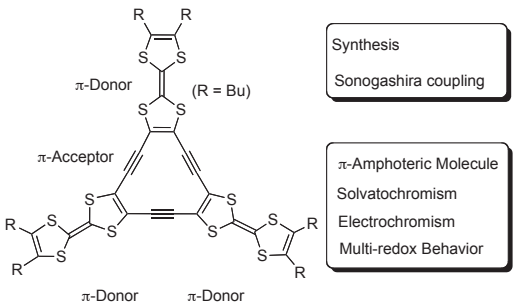
Akihiro Ishihata, Megumi Saeki, Masaru Watanabe, Masataka Ihara, and Masahiro Toyota*



Quadrone *Aspergillus terreus* Cycloalkenylation Palladium Acetate Intramolecular Michael Addition

909 **Synthesis and π-Amphoteric Properties of Tris(tetrathiafulvaleno)hexadehydro[12]annulene**

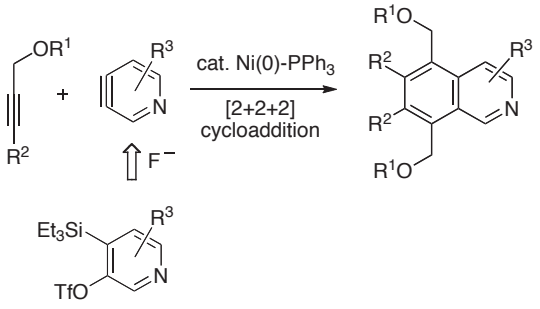
Kenji Hara, Masashi Hasegawa, Yoshiyuki Kuwatani, Hideo Enozawa, and Masahiko Iyoda*



Annulene Cation Radical π-π Interaction Redox Behavior Tetrathiafulvalene

917 **Synthesis of Substituted Isoquinolines *via* Nickel-Catalyzed [2+2+2] Cycloaddition of Alkynes and 3,4-Pyridynes**

Toshihiko Iwayama and Yoshihiro Sato*

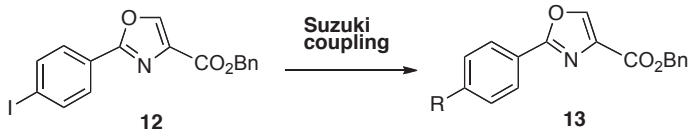


[2+2+2] Cycloaddition Nickel 3,4-Pyridyne 1,3-Diyne Isoquinoline

■ PAPERS

977 **Utilization of the Suzuki Coupling to Enhance the Antituberculosis Activity of Aryloxazoles**

Garrett C. Moraski, Scott G. Franzblau, and Marvin J. Miller*

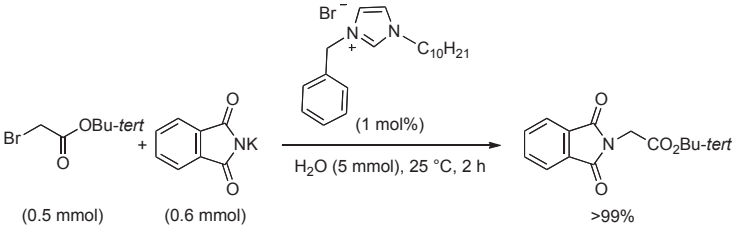


R = 2-chlorophenyl (**14**), 3-chlorophenyl (**15**), 4-chlorophenyl (**16**), 2-methoxyphenyl (**17**), 3-methoxyphenyl (**18**), 4-methoxyphenyl (**19**), 4-trifluoromethoxyphenyl (**20**), 4-cyanophenyl (**21**), 3-benzyloxyphenyl (**22**)

Antituberculosis Agent Suzuki Coupling Reaction Aryloxazole Palladium Catalyzed Cross Coupling Reaction

989 **Design of Reaction Media for Nucleophilic Substitution Reactions by Using a Catalytic Amount of an Amphiphilic Imidazolium Salt in Water**

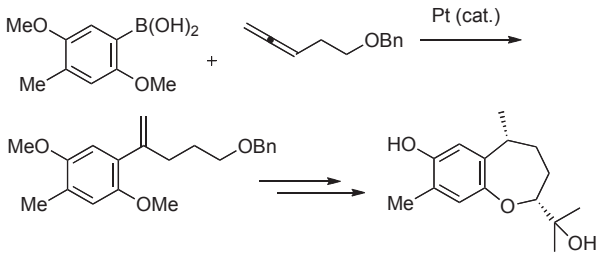
Keisuke Asano and Seijiro Matsubara*



Imidazolium Salt Amphiphilicity Water Self-Assembly Hydrophobic Effect

1003 **Synthesis of (±)-Heliannuol D Based on Platinum Catalyzed Regioselective Addition of Arylboronic Acids to Allenes**

Mayu Osaka, Makoto Kanematsu, Masahiro Yoshida, and Kozo Shishido*

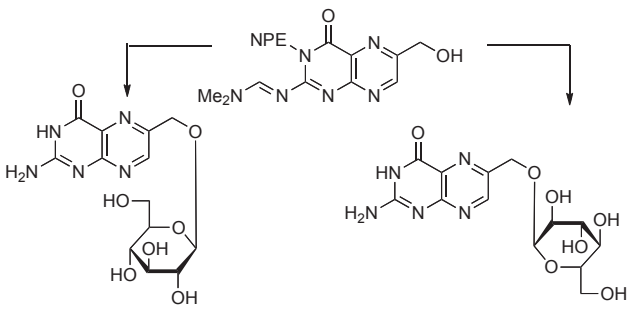


(±)-heliannuol D

(±)-Heliannuol D (±)-10-*epi*-Heliannuol D Total Synthesis Platinum Catalyzed Addition Allene

1013 **Synthesis of 6-Hydroxymethylpterin α- and β-D-Glucosides**

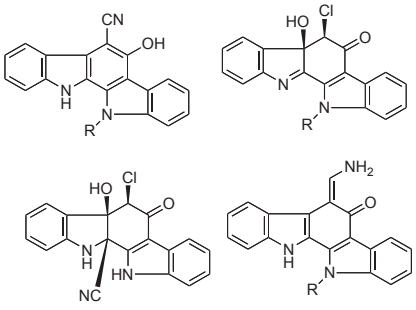
Tadashi Hanaya,* Hiroki Baba, Kazumasa Ejiri, and Hiroshi Yamamoto



Pterin Glycoside Selective Glycosylation Pteridine D-Glucopyranosyl Bromide Protecting Group

1027 **Synthetic Study Directed toward Derivatives of Biologically Active Indolo[2,3-*a*]carbazole**

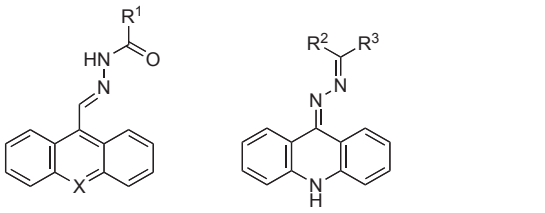
Masako Sato, Yoshiaki Suzuki, Fumio Yamada, and Masanori Somei*



Reductive Cyanation Blood Platelet Aggregation Inhibitor α_2-Blocker

1047 **Novel Carbohydrazide and Hydrazone Biomarkers Based on 9-Substituted Acridine and Anthracene Fluorogens**

Zdenka Bedlovičová, Ján Imrich,* Pavol Kristian, Ivan Danihel, Stanislav Böhm, Danica Sabolová, Mária Kožurková, Helena Paulíková, and Karel D. Klika



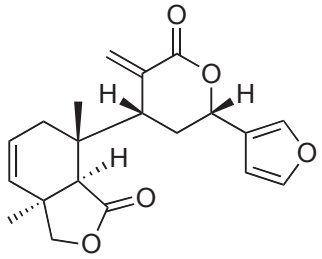
X = N, CH
R^1 = Me, C_6H_2, 3-Py, 4-Py, 9-oxoacridin-4-yl

R^2 = H, Me
R^3 = Me, Ph, 4-BrC_6H_4, 4-$MeOC_6H_4$, 2,4,6-triMeC_6H_2, 2,4,6-tri$MeOC_6H_2$

Acridine Carbohydrazide Hydrazone Fluorescence DFT

1067 **Synthetic Study on Clutiolide Based on a Remote Chelation Controlled Ireland-Claisen Rearrangement**

Jun Ishihara,* Okihisa Tokuda, Kazunori Shiraishi, Yukihiro Nishino, Keisuke Takahashi, and Susumi Hatakeyama*

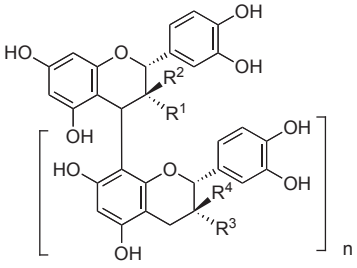


clutiolide

Clutiolide Diterpene Ireland-Claisen Rearrangement Chelation Control Diels-Alder Reaction

1081 **Structure-Activity Relationships of Synthesized Procyanidin Oligomers: DPPH Radical Scavenging Activity and Maillard Reaction Inhibitory Activity**

Akiko Saito and Noriyuki Nakajima*

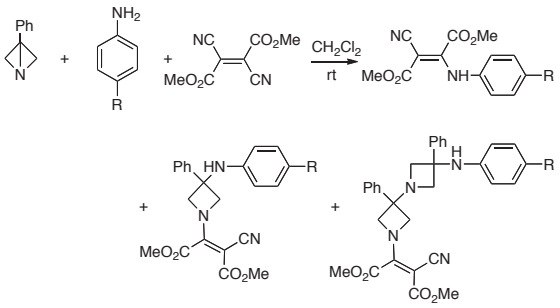


R^1 = R^2 = R^3 = R^4: H, OH or *O*-Galloyl, n = 0 - 4

Condensed Tannin Antioxidant Tea Catechin Polyphenol Artificial Procyanidin Oligomer

1091 **Three-Component Reactions with 3-Phenyl-1-azabicyclo-[1.1.0]butane, Dimethyl Dicyanofumarate, and Primary Aromatic Amines**

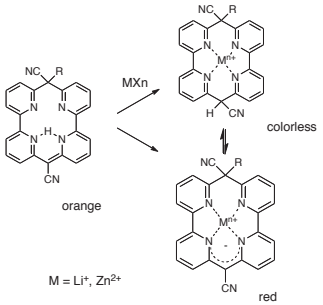
Grzegorz Mlostoń* and Heinz Heimgartner*



1-Azabicyclo[1.1.0]butane 2,3-Dicyanofumarate Zwitterionic Intermediate Three-Component Reaction Addition Reaction

1103 **Unusual Reactions of the Highly Strained Macrocycles with Lithium Salts: Anion Control for the Reaction Rates and Elucidation of the Properties of Their Lithium Complexes**

Junko Morita, Shinji Tsuchiya, Nao Yoshida, Nirei Nakayama, and Shojiro Ogawa*

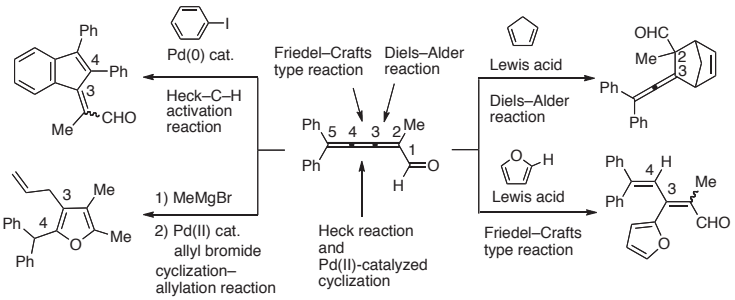


M = Li^+, Zn^{2+}

Tetraazamacrocycle Lithium Complex Unsymmetrical Structure Strained Molecule Anion Control

1125 **Reaction Behavior of Cumulene: Diels–Alder, Friedel–Crafts, and Pd-Catalyzed Domino Reactions**

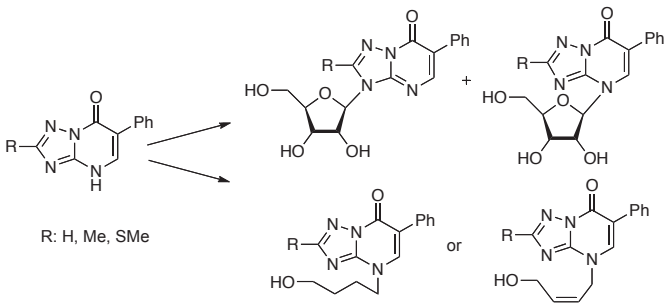
Tomohiro Asakawa, Mie Iinuma, Yuko Wakasugi, Mayumi Kuno, Takumi Furuta,* Satoshi Fujii, Kiyoshi Tanaka, and Toshiyuki Kan*



Cumulene Diels–Alder Reaction Friedel–Crafts Reaction Heck Reaction Domino Reaction

1149 **Non-Natural Nucleosides Based on 1,2,4-Triazolo-[1,5-*a*]pyrimidin-7-ones**

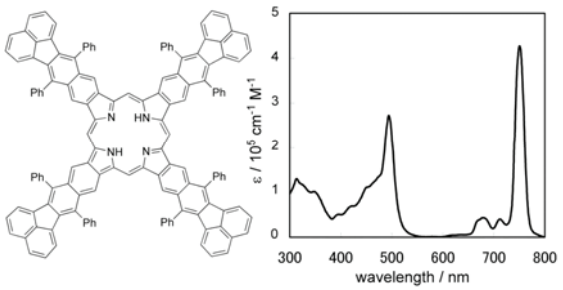
Oleg N. Chupakhin,* Tatiana S. Shestakova, Sergey L. Deev, Oleg S. Eltsov, and Vladimir L. Rusinov



Non-Natural Nucleoside Nucleoside Analog 1,2,4-Triazolo[1,5-*a*]pyrimidin-7-one Glycosylation Alkyl Fragment

1165 **Synthesis of Tetrabenzoporphyrins Fused with Fluoranthenes**

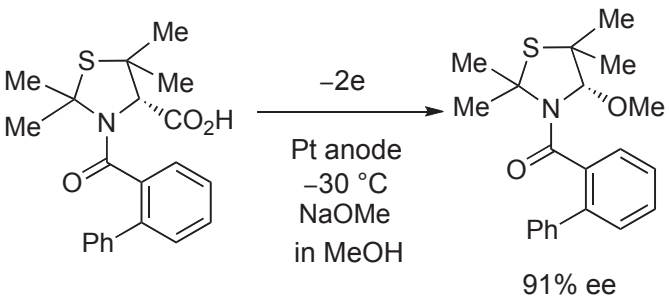
Jun Nakamura, Tetsuo Okujima,* Yuya Tomimori, Naoki Komobuchi, Hiroko Yamada, Hidemitsu Uno, and Noboru Ono



[2,3]Fluoranthobenzoporphyrin Retro Diels-Alder Reaction π-Expanded Porphyrin Strong Absorption in Near-IR Region

1177 **Memory of Chirality in the Electrochemical Oxidation of Thiazolidine-4-carboxylic Acid Derivatives**

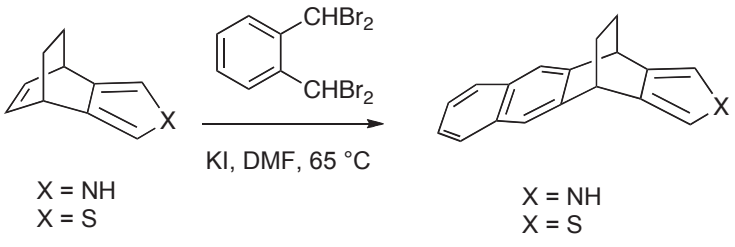
George Ng'aNg'a Wanyoike, Yoshihiro Matsumura, Masami Kuriyama, and Osamu Onomura*



Electrochemical Oxidation Memory of Chilarity Carbon-Carbon Bond Cleavage Chiral *N,O*-Acetal Thiazolidine-4-carboxylic Acid

1187 **Thermal Behavior of Bicyclo[2.2.2]octadiene-Installed Precursors for 2*H*-Anthra[2,3-*c*]pyrroles and Anthra[2,3-*c*]thiophene**

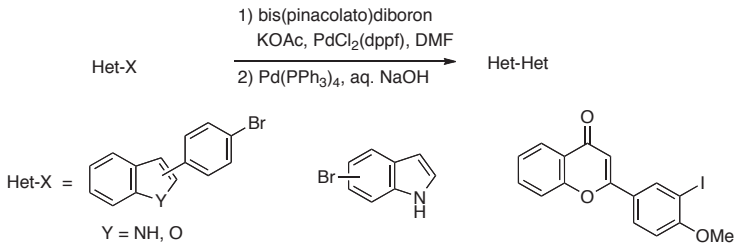
Hiroki Uoyama, Cai Chenxin, Hiroyuki Tahara, Yusuke Shimizu, Hideki Hagiwara, Yasuaki Hanasaki, Hiroko Yamada, Tetsuo Okujima, and Hidemitsu Uno*



Anthra[2,3-*c*]pyrrole Anthra[2,3-*c*]thiophene Diels-Alder Reaction X-Ray Structure *o*-Quinodimethane

1267 **Synthesis of Some New Biheterocycles by a One-Pot Suzuki-Miyaura Coupling Reaction**

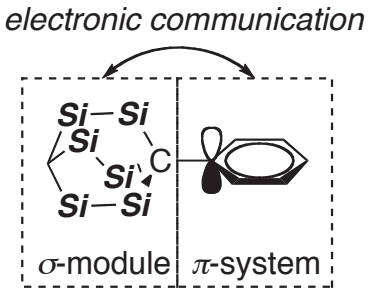
Mandar Deodhar, David StC. Black,* Daniel Shiu-Hin Chan, and Naresh Kumar*



Suzuki-Miyaura Coupling Reaction Biheterocycle Synthetic Methodology Biindole Bibenzofuran

1275 **Synthesis and Photophysical Properties of 2,3,5,6,7,8-Hexasilabicyclo[2.2.2]octan-1-yl-substituted Arenes**

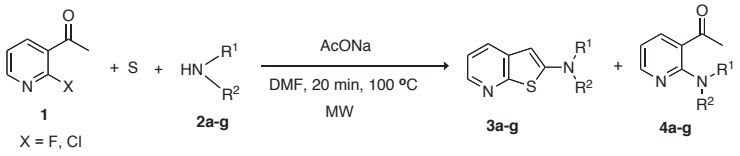
Masaki Shimizu,* Tomoaki Kawaguchi, Hisashi Nakagawa, Katsunari Oda, and Tamejiro Hiyama*



Silaheterocycle Bicyclo[2.2.2]octane Fluorescence Conjugation UV Absorption

1291 **Microwave-Assisted Synthesis of 3-Methylisothiazolo-[5,4-*b*]pyridine and Various 2-Amino Derivatives of Thieno[2,3-*b*]pyridine and 1-(2-Aminopyridin-3-yl)-ethanone**

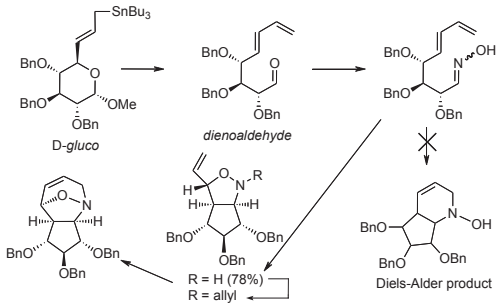
Haribabu Ankati and Edward R. Biehl*



Microwave Heating 1-(2-Aminopyridin-3-yl)ethanone 2-Amino Derivatives of 3-Methylisothizolo[5,4-*b*]pyridine and Thieno[2,3-*b*]pyridine

1303 **Application of Sugar Allyltin Derivatives for the Preparation of Heterocyclic Compounds**

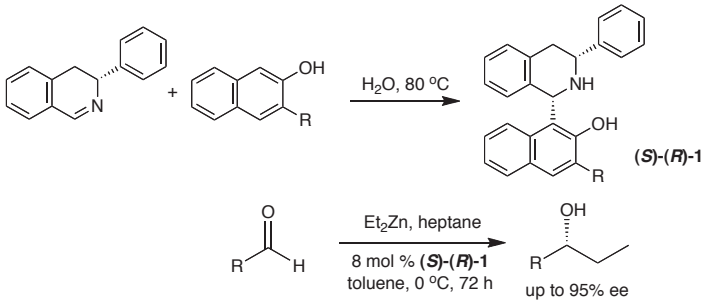
Marta Magdycz, Piotr Cmoch, and Sławomir Jarosz*



Oxime-Olefin Cyclization Nitrone Sugar Allyltin Ring Closing Metathesis

1319 **Synthesis of Chiral 1,3-Disubstituted Tetrahydroisoquinolines and Their Use in the Asymmetric Addition of Diethylzinc to Aldehydes**

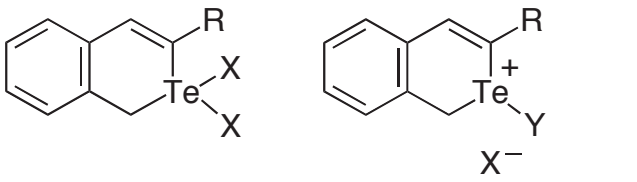
Patricia D. MacLeod, Amy M. Reckling, and Chao-Jun Li*



Chiral Tetrahydroisoquinoline Asymmetric Addition Diethylzinc Chiral Ligand Aza Friedel-Crafts Reaction

1339 **2-Substituted Isotellurochromenium Salt Derivatives: Preparations, Structures, Spectroscopic Properties**

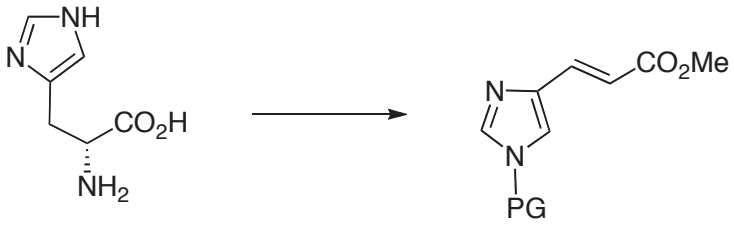
Haruki Sashida,* Shoko Nakabayashi, Mamoru Kaname, and Mao Minoura



Isotellurochromene Telluride Telluronium Salt Tellurane

1353 **Efficient Preparation of Urocanic Acid Derivatives from Histidine**

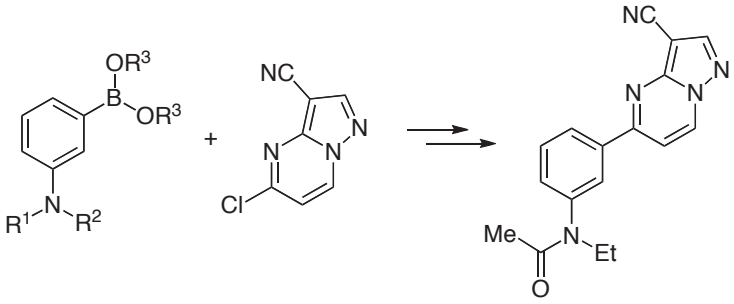
Carl J. Lovely,* Rasapalli Sivappa, Sabuj Mukherjee, Thomas Doundoulakis, Heather M. Lima, and Muhammed Yousufuddin



Imidazole Elimination X-Ray Structure Regioselective Diazotization

1359 **Synthetic Studies Connected with the Preparation of *N*-[3-(3-Cyanopyrazolo[1,5-*a*]pyrimidin-5-yl)phenyl]-*N*-ethylacetamide, a Zaleplon Regioisomer**

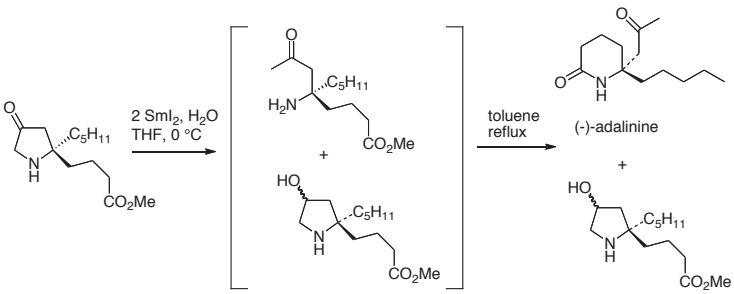
Stanislav Rádl,* Michaela Blahovcová, Marcela Tkadlecová, and Jaroslav Havlíček



Zaleplon Regioisomer Synthesis Spectral Property 5-Arylpyrazolo[1,5-*a*]pyrimidine-3-carbonitrile Suzuki-Miyaura Cross Coupling Reaction

1381 **Application of Samarium Diiodide-Promoted Reductive Carbon-Nitrogen Bond Cleavage Reaction to 3-Oxopyrrolidine Derivatives: Alternative Synthesis of a Coccinellid Alkaloid, (-)-Adalinine**

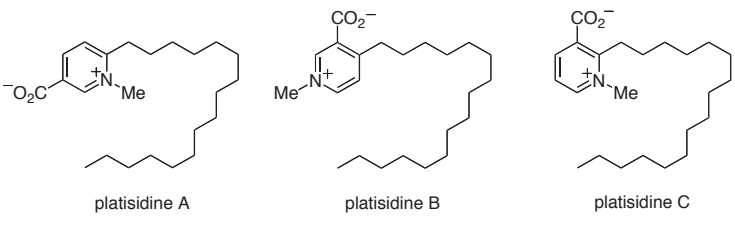
Toshio Honda* and Chihiro Hisa



Samarium Diiodide Adalinine Carbon-Nitrogen Bond Cleavage Reaction 4-Hydroxyproline Chiral Synthesis

1407 **Platisidines A-C, *N*-Methylpyridinium Alkaloids from an Okinawan Marine Sponge of *Plakortis* Species**

Takaaki Kubota, Yuichiro Ishiguro, Sunao Yamamoto, Jane Fromont, and Jun'ichi Kobayashi*

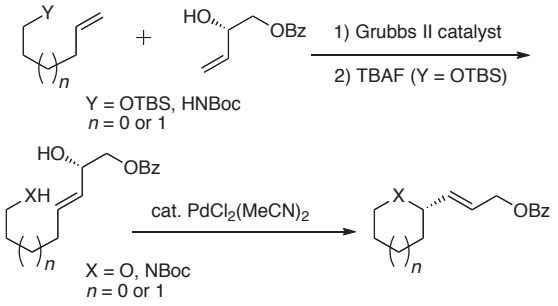


Sponge *Plakortis* species Pyridinium Alkaloid Platisidines A-C Acetylcholinesterase Inhibitor

■ NOTES

1463 **A Short Access to Chiral Non-Racemic Oxa- and Azaheterocycles by Cross-Metathesis and Pd-Catalyzed Cyclization Sequence**

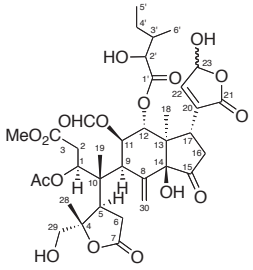
Jun'ichi Uenishi* and Yogesh S. Vikhe



Cyclization Palladium Catalyzed Reaction Cross Metathesis 1,3-Chirality Transfer Oxa- and Aza-Heterocycles

1471 **Gaudichaudysolin A, a New Limonoid from the Bark of *Dysoxylum gaudichaudianum***

Yuta Nagakura, Reiko Yamanaka, Yusuke Hirasawa, Takahiro Hosoya, Abdul Rahman, Idha Kusumawati, Noor Cholies Zaini, and Hiroshi Morita*

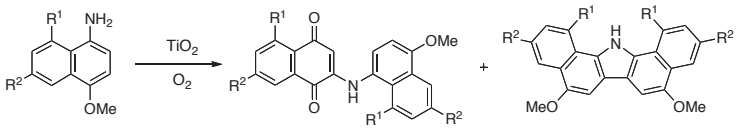


gaudichaudysolin A (**1**)

Gaudichaudysolin A Limonoid *Dysoxylum gaudichaudianum* Meliaceae

1479 **Oxidative Dimerization of 4-Methoxynaphthylamines in the Presence of Semiconductors**

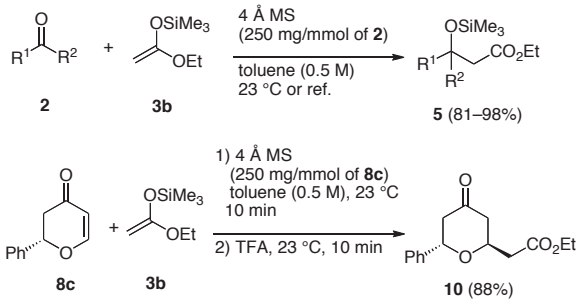
Tetsuya Takeya,* Yosuke Takahashi, Iwao Okamoto, and Osamu Tamura*



Molecular Oxygen Semiconductor 4-Methoxynaphthylamine Oxidative Dimerization Titanium Oxide

1489 **The Mukaiyama Aldol and Mukaiyama–Michael Reactions Promoted by Commercially Available Molecular Sieves**

Masahiro Anada, Takuya Washio, Yudai Watanabe, and Shunichi Hashimoto*



Mukaiyama Aldol Reaction Mukaiyama–Michael Reaction Molecular Sieves Silylketene Acetal Silyl Enol Ether

■ INDEXES

Contributors To This Issue