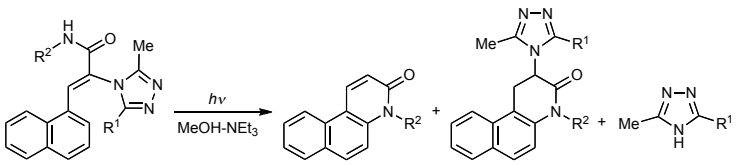
■ REVIEWS

■ COMMUNICATIONS

739 **Novel Photoinduced Electorn Transfer-initiated Cyclization of 1,2,4-Triazole-substituted α-Dehydro-naphthylalaninamides in the Presence of Triethylamine**

Kei Maekawa, Atsushi Tomoda, Tetsutaro Igarashi, and Tadamitsu Sakurai*

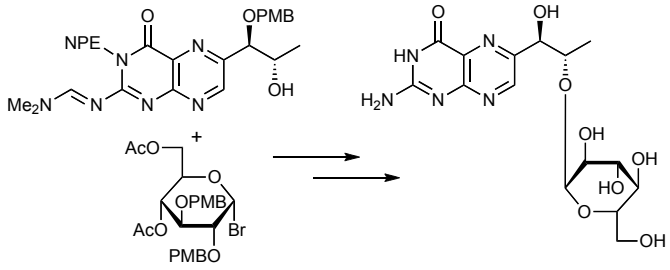


R^1= H, Me, $PhCH_2$, Ph, 4-$MeOC_6H_4$, 4-NCC_6H_4
R^2= H, Me , $PhCH_2$

Triazole α-Dehydroamino Acid Photochemistry Electron Transfer Benzoquinolinone

747 **First Synthesis of Biopterin α-D-Glucoside**

Tadashi Hanaya,* Hiroki Baba, and Hiroshi Yamamoto

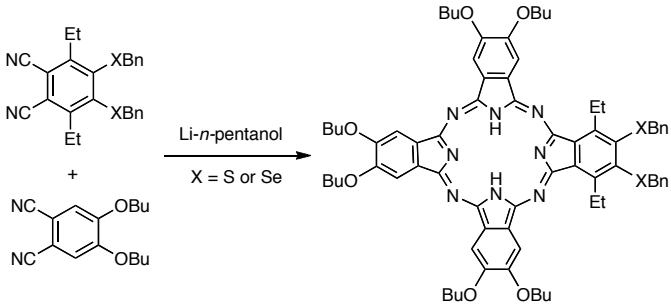


NPE: *p*-nitrophenylethyl

Pterine Glycoside Biopterin D-Glucoside Pteridine Selective α-Glycosylation Protecting Group

755 **Preparation of Unsymmetric Phthalocyanines with Benzylchalcogeno and Butoxy Groups**

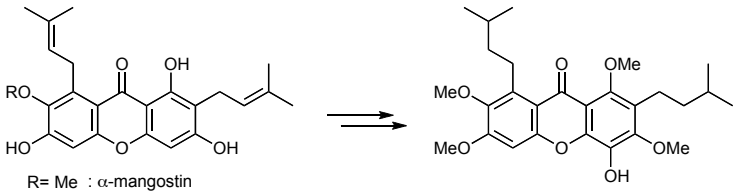
Takeshi Kimura,* Takeru Obonai, and Toshiharu Namauo



Phthalocyanine Sulfur Selenium UV-Vis Spectra Electrochemistry

759 **Synthetic Studies of Mangostin Derivatives with an Inhibitory Activity on PDGF-Induced Human Aortic Smooth Cells Proliferation**

Yuko Nishihama, Takahisa Ogamino, Wen Lei Shi, Byung-Yoon Cha, Takayuki Yonezawa, Toshiaki Teruya, Kazuo Ngai, Kiyotake Suenaga, Je-Tae Woo, and Shigeru Nishiyama*



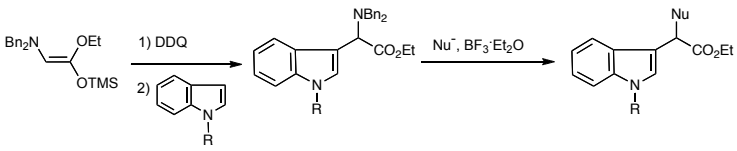
R= Me : α-mangostin
H : γ-mangostin

IC_{50}= 0.1 μM

Mangostin Human Aortic Smooth Muscle Cell *m*CPBA Oxidation Electrochemical Oxidation Xanthone

767 **Friedel-Crafts Reaction of Indole Derivatives Using the Iminium Salt Generated by the Oxidation of Amino Ketene Silyl Acetal**

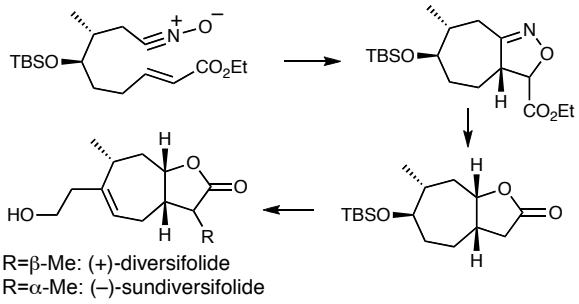
Takuya Iwao and Makoto Shimizu*



Friedel-Crafts Reaction Indole Iminium Salt Amino Ketene Silyl Acetal Double Addition

773 **Synthesis of Sundiversifolide and Diversifolide *via* a Diastereoselective [3+2] Nitrile Oxide Cycloaddition Reaction**

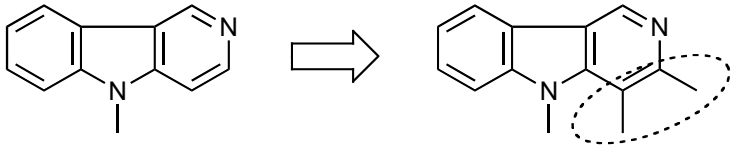
Hiroyuki Sasaki, Hiromasa Yokoe, Mitsuru Shindo, Masahiro Yoshida, and Kozo Shishido*



Sesquiterpene Diastereoselective Synthesis 1,3-Dipolar Cycloaddition Allelopathy Kinetic Protonation

779 **Polymethylated γ-Carbolines with Potent Anti-Bovine Viral Diarrhea Virus (BVDV) Activity**

Hiroshi Aoyama,* Kumiko Sako, Shinichi Sato, Masahiko Nakamura, Hiroyuki Miyachi, Yukinori Goto, Mika Okamoto, Masanori Baba, and Yuichi Hashimoto



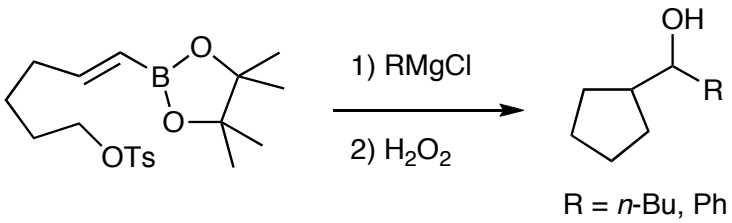
SK5M (**2**)
EC_{50}: 0.26 μM
CC_{50}: 29 μM
SI = 111

SK3M4M5M (**20**)
EC_{50}: **0.0035** μM
CC_{50}: 7.2 μM
SI = **2057**

Anti-BVDV Agent γ-Carboline Quantitative Structure-Activity Relationship (QSAR) Buchwald-Hartwig Amination Palladium-Catalyzed

787 **Construction of Cyclopentyl Carbinols from ω-Tosyloxy-1-alkenyl Boronate Esters and Grignard Reagents**

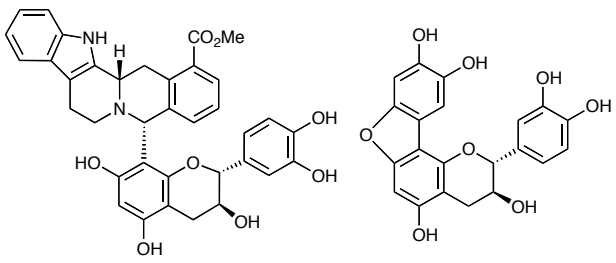
Yuichi Kobayashi,* Moriteru Asano, and Yohei Kiyotsuka



Borate Cyclization Migration Magnesium Pinacol

793 **Uncariagambiriine and Gambircatechol: Novel Constituents of *Uncaria gambir* Leaves**

Naomi Yoshikado, Shoko Taniguchi, Naoki Kasajima, Fumiaki Ohashi, Kou-ichi Doi, Takashi Shibata, Takashi Yoshida, and Tsutomu Hatano*

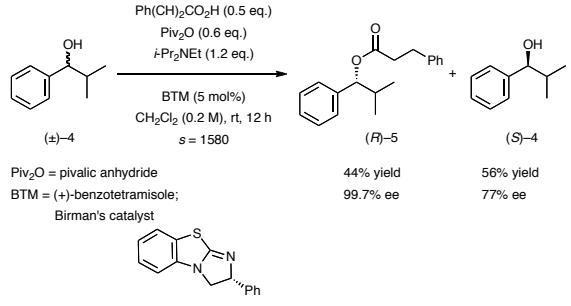


uncariagambiriine (**1**) gambircatechol (**2**)

Uncaria gambir Rubiaceae Catechin Indole Alkaloid Polyphenol

801 **2,2-Disubstituted Propionic Anhydrides: Effective Coupling Reagents for the Kinetic Resolution of Secondary Benzylic Alcohols Using BTM**

Isamu Shiina,* Kenya Nakata, Masuhiro Sugimoto, Yu-suke Onda, Takashi Iizumi, and Keisuke Ono

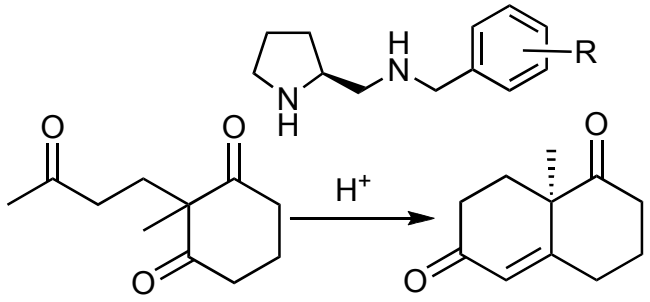


2,2-Disubstituted Propionic Anhydride Pivalic Anhydride Asymmetric Esterification Kinetic Resolution BTM

■ **PAPERS**

1065 **A New Chiral Synthesis of Wieland-Miescher Ketone Catalyzed by a Combination of (*S*)-*N*-Benzyl-*N*-(2-pyrrolidinylmethyl)amine Derivative and Brønsted Acid**

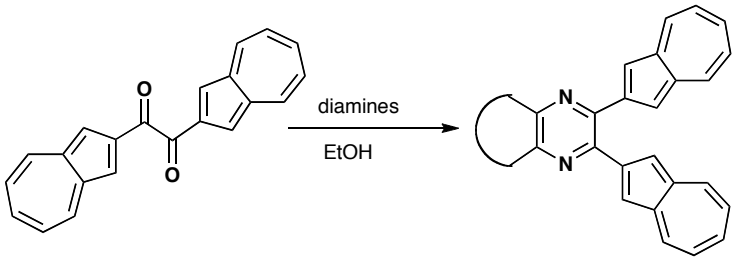
Yuichi Akahane, Kohei Inomata,* and Yasuyuki Endo



Organocatalysis Wieland-Miescher Ketone *N*-Benzyl-*N*-(2-pyrrolidinyl)amine Chiral Synthesis Brønsted Acid

1079 **Preparation of Azulene Substituted Pyrazine and Quinoxaline Derivatives**

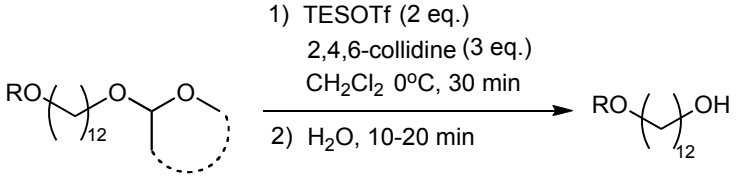
Nozomi Furuta, Takuo Mizutani, Akira Ohta, and Kunihide Fujimori*



Azulene Pyrazine Quinoxaline Phenazine Di(2-azulenyl)ethanedione

1089 **Mild and Efficient Deprotection of Acetal-Type Protecting Groups of Hydroxyl Functions by Triethylsilyl Triflate — 2,4,6-Collidine Combination**

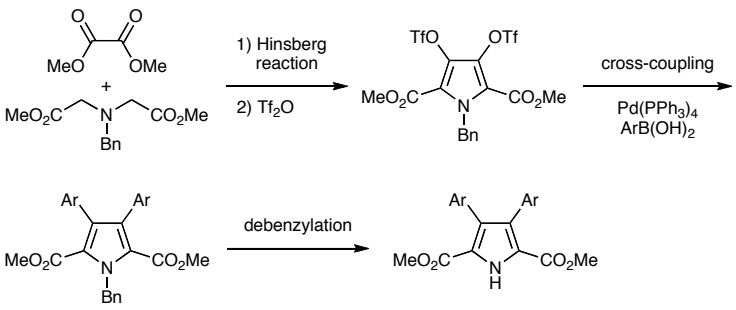
Hiromichi Fujioka,* Ozora Kubo, Kazuhisa Okamoto, Kento Senami, Takashi Okitsu, Takuya Ohnaka, Yoshinari Sawama, and Yasuyuki Kita*



Deprotection Acetal-Type Protecting Group of Hydroxyl Function Chemoselective Weakly Basic Condition Acid-Labile Functional Group

1105 **A General Method for the Synthesis of *N*-Unsubstituted 3,4-Diarylpyrrole-2,5-dicarboxylates**

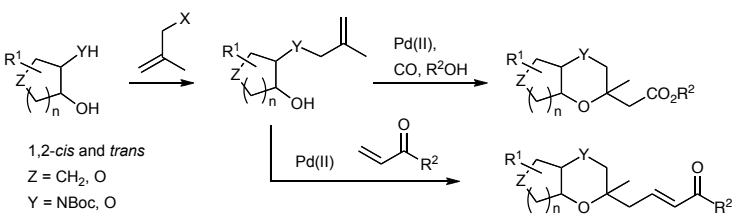
Tsutomu Fukuda, Yukie Hayashida, and Masatomo Iwao*



N-Unsubstituted 3,4-Diarylpyrrole-2,5-dicarboxylate Hinsberg Reaction Suzuki-Miyaura Coupling 3,4-Diarylpyrrole Marine Alkaloid

1123 **Synthesis of Annulated 1,4-Dioxanes and Perhydro-1,4-oxazines by Domino-Wacker-Carbonylation and Domino-Wacker-Mizoroki-Heck Reactions**

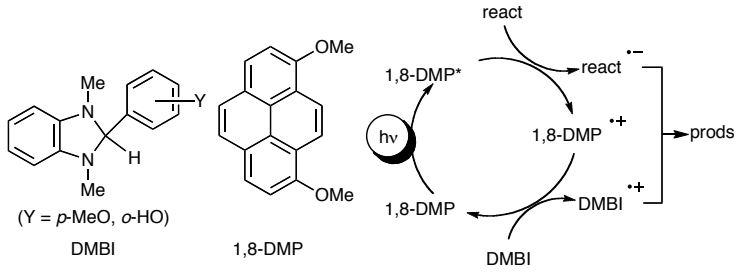
Lutz F. Tietze,* Arne Heins, Mohammad Soleiman-Beigi, and Christian Raith



Domino Reaction Dioxane Heck Reaction Oxazine Palladium Wacker Reaction

1147 **Benzimidazoline-Dimethoxypyrene. An Effective Promoter System for Photoinduced Electron Transfer Promoted Reductive Transformations of Organic Compounds**

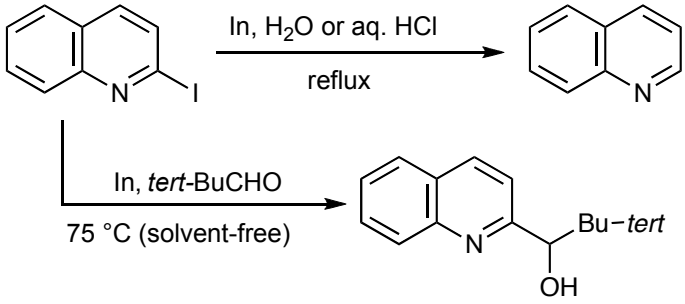
Eietsu Hasegawa,* Harumi Hirose, Kosuke Sasaki, Shinya Takizawa, Takayuki Seida, and Naoki Chiba



Benzimidazoline Dimethoxypyrene Photoinduced Electron Transfer Radical Ion Reductive Transformation

1163 **Dehalogenation and Barbier-Type Hydroxyalkylation of π-Deficient Haloheterocycles Using Indium**

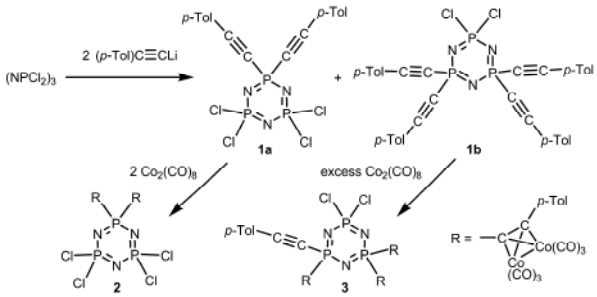
Eri Fukuda, Yukiko Takahashi, Natsumi Hirasawa, Osamu Sugimoto,* and Ken-ichi Tanji*



Indium Dehalogenation π-Deficient Heterocycle Reduction Barbier Reaction

1171 **Synthesis and Structures of Alkynylchlorocyclophosphazenes and Their Cluster-forming Reactions with Octacarbonyldicobalt**

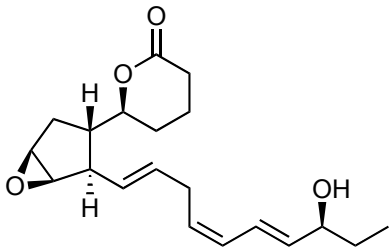
Takashi Komuro, Kenichi Mori, and Hiromi Tobita*



Cyclotriphosphazene Alkynyl Substituent Multidentate Ligand Cobalt Cluster Crystal Structure

1185 **Synthesis of Marine Oxylipin Agardhilactone and its Analogues: A Structural Revision**

Hiroaki Miyaoka,* Yoshinori Hara, Ikuo Shinohara, Takao Kurokawa, Etsuko Kawashima, and Yasuji Yamada

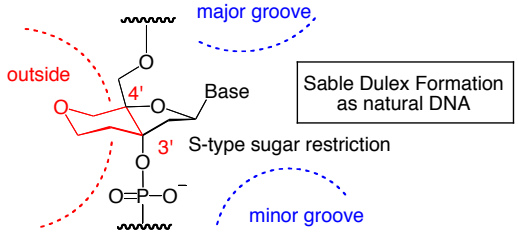


agardhilactone (revised structure)

Eicosanoid Red Alga Ring-Closing Metathesis Fatty Acid

1209 **Synthesis and Properties of 2'-Deoxy-*trans*-3',4'-BNA with S-Type Sugar Puckering**

Tetsuya Kodama, Kensaku Sugaya, Yasuki Harada, Yasunori Mitsuoka, Takeshi Imanishi, and Satoshi Obika*

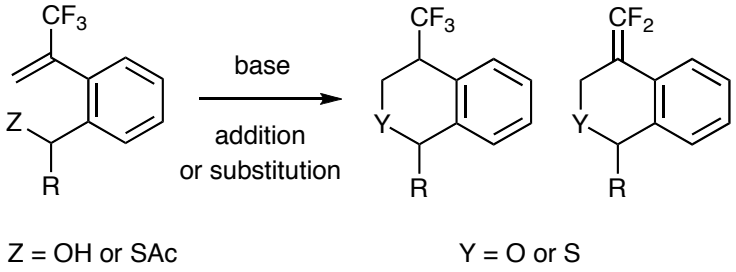


2'-deoxy-*trans*-3',4'-BNA

BNA DNA Mimic Conformational Restriction Oligonucleotide S-Type Sugar Pucker

1285 **Synthesis of Isochromanes and Isothiochromanes Bearing Fluorinated One-Carbon Units *via* Intramolecular Cyclizations of *ortho*-Substituted α-(Trifluoromethyl)-styrenes**

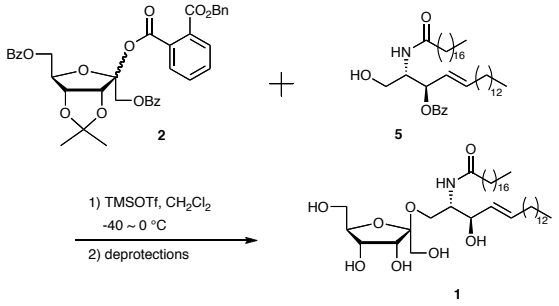
Junji Ichikawa,* Masahiro Ikeda, and Masahiro Hattori



Trifluoromethyl Group Difluorormethylene Group Addition Substitution

1297 **Stereoselective β-D-Psicofuranosylation and Synthesis of β-D-Psicofuranosylceramide**

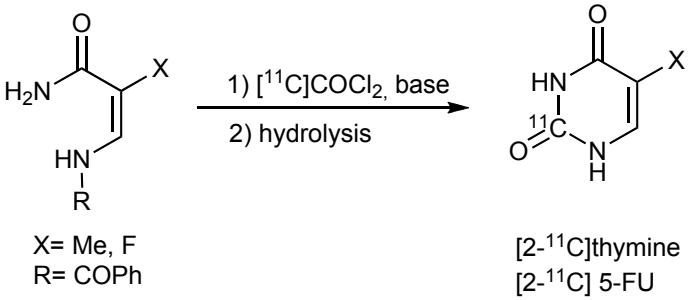
Jun'ichi Uenishi* and Atsushi Ueda



Psicose Glycosidation Psicosylceramide Cerebroside Stereoselective Reaction

1307 **New [^{11}C]Phosgene Based Synthesis of [^{11}C]Pyrimidines for Positron Emission Tomography**

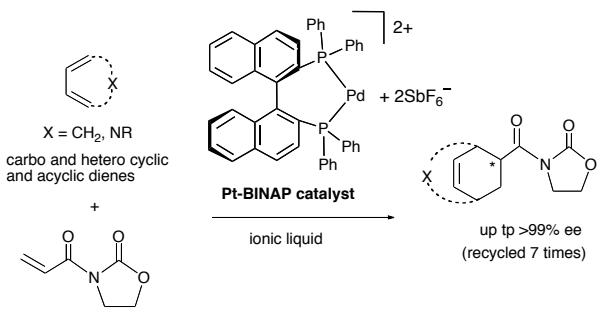
Koh-ichi Seki,* Ken-ichi Nishijima, Kimihito Sanoki, Yuji Kuge, Masayuki Takahashi, Hiromichi Akizawa, Nagara Tamaki, Leonard I. Wiebe, and Kazue Ohkura*



^{11}C-Labeling Synthesis [^{11}C]Pyrimidine [^{11}C]Phosgene PET Thymidine Phosphorylase

1323 **Reactivity and Efficient Recycling of a Chiral Pd-BINAP Catalyst for Catalytic Asymmetric Diels-Alder Reaction in Ionic Liquid**

Yasuhiro Nishiuchi, Hiroto Nakano,* Yuta Araki, Rina Sato, Reiko Fujita, Koji Uwai, and Mitsuhiro Takeshita*

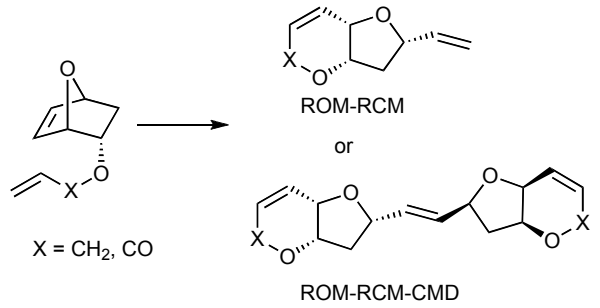


Pd-BINAP Diels-Alder Reaction Ionic Liquid Asymmetric Catalyst Chiral Lewis Acid

■ **NOTE**

1333 **Tandem Metathesis Reactions Cascade Ring-Opening Metathesis (ROM)-Ring-Closing Metathesis (RCM)-Cross Metathesis Dimerization (CMD) in 7-Oxabicyclo[2.2.1]-hept-5-one (7-Oxanorbornene) Derivatives**

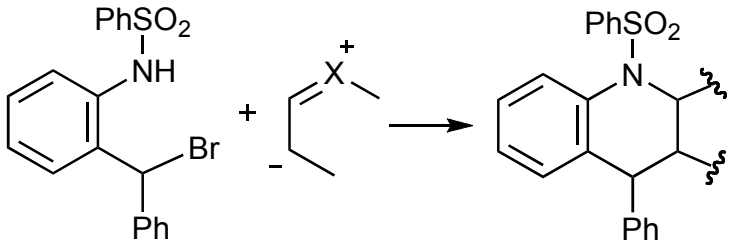
Ana Aljarilla and Joaquín Plumet*



Metathesis Reaction Oxabicyclic Compound Tandem Reaction 2,6-Dioxabicyclo[4.3.0]nonane Skeleton Cross Metathesis Dimerization

1341 **Quinoline Derivatives by Cyclocondensation of *N*-(2-Bromophenylmethylphenyl)benzenesulfonamide with Enol Ethers and Enamines**

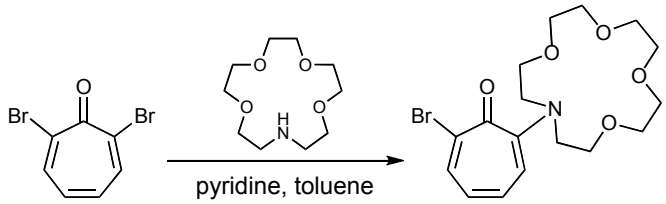
Giuseppe Cremonesi, Piero Dalla Croce,* Francesco Fontana, and Concetta La Rosa



Quinoline Derivative Aza-Diels-Alder Reaction *o*-Azaxylylene Cyclocondensation Enol Ether

1347 **Synthesis and Properties of 2-Bromo-7-(1,4,7,10-tetraoxa-13-azacyclopentadec-13-yl)-2,4,6-cycloheptatrine-1-one**

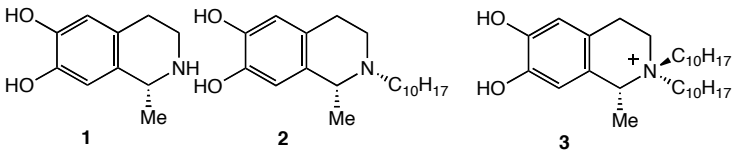
Kanji Kubo,* Akira Mori, and Hitoshi Takeshita



Tropone Aza-Crown Ether Liquid Membrane Chromoionophore Mercury(II) Ion Transport

1355 **Geranyl Derivatives of Salsolinol Show Increased Biological Activities**

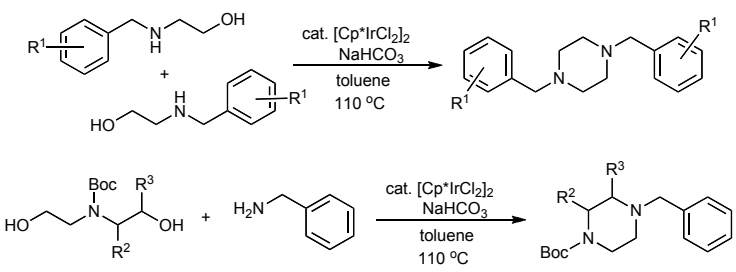
Kinuko Iwasa,* Suguru Okada, Yumi Nishiyama, Sousuke Takeuchi, Masayasu Moriyasu, Chisato Tode, Makiko Sugiura, Atsuko Takeuchi, Harukuni Tokuda, Kazuyoshi Takeda, Yi-Nan Liu, Pei-Chi Wu, Kenneth F. Bastow, Toshiyuki Akiyama, and Kuo-Hsiung Lee



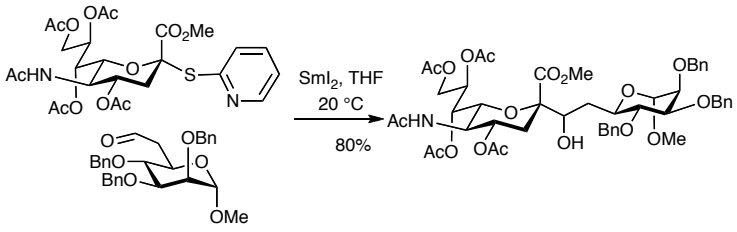
Simple Isoquinoline *N*-Geranylation Antimicrobial Activity Cytotoxicity

1371 **Synthesis of Piperazine Derivatives by Cp*Ir Complex-catalyzed *N*-Alkylative Reactions of Ethanolamines**

Ken-ichi Fujita, Yasushi Kida, and Ryohei Yamaguchi*



Iridium Catalyst Ethanolamine Piperazine C-N Bond Formation Hydrogen Transfer



Carbohydrate Reductive Metallation Samarium Sialic Acid

■ **INDEXES**

Contributors To This Issue