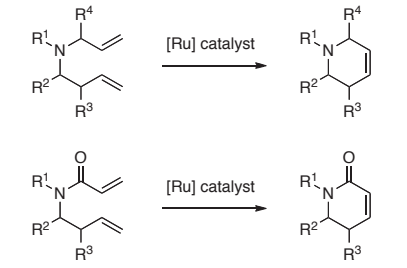
■ CELEBRATION OF DR. ALBERT PADWA

■ RESUME

■ PUBLICATIONS

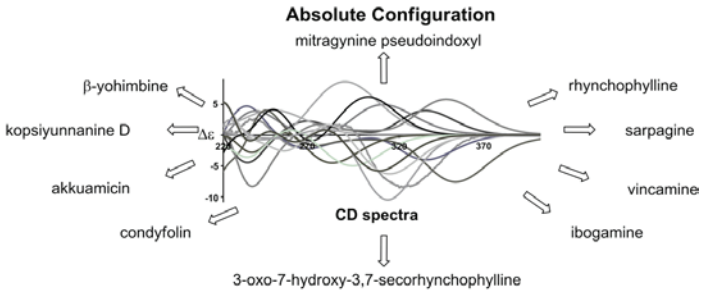
■ ESSAY

■ REVIEWS

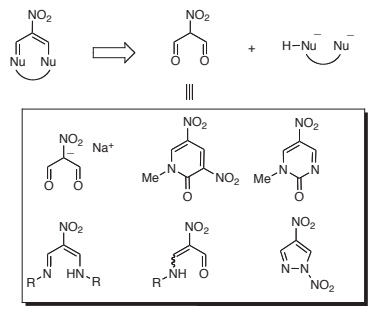


R^1 = Boc, Cbz, Ts, Bn R^2, R^3, R^4 = alkyl, aryl, hetaryl

Ring-Closing Metathesis Piperidine Nitrogen Heterocycle Alkaloid Indolizidine



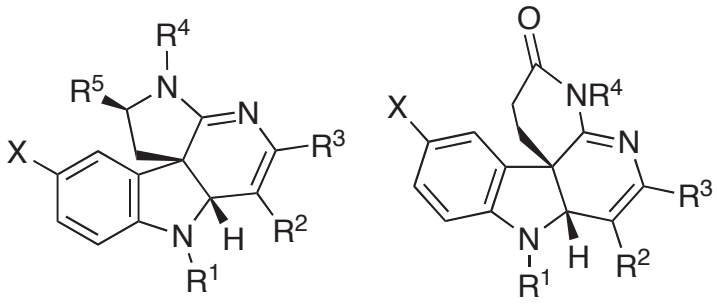
Cyclic Peptide Cyclopeptide Higher Plant



Nitromalonaldehyde Nitropyrimidinone Formylnitroenamine Azadienamine Dinitropyridone

135 **Truncated Aspidosperma Alkaloid-Like Scaffolds: Unique Structures for the Discovery of New, Bioactive Compounds**

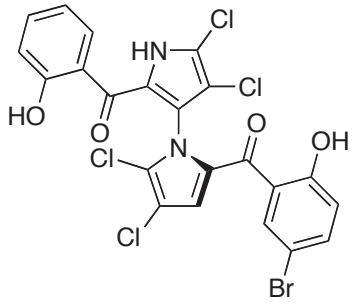
Scott C. Benson, Lily Lee, Wanguo Wei, Feng Ni, Julian David Janna Olmos, Kyle R. Strom, Aaron B. Beeler, Ken Chih-Chien Cheng, James Inglese, Smitha Kota, Virginia Takahashi, A. Donny Strosberg, John H. Connor, G. Guy Bushkin, and John K. Snyder*



Anti-Viral Activity Anti-Malarial Activity Hepatitis C Virus Tryptophan Dienophilicity Tryptamine Dienophilicity

157 **Recently Discovered Naturally Occurring Heterocyclic Organohalogen Compounds**

Gordon W. Gribble*

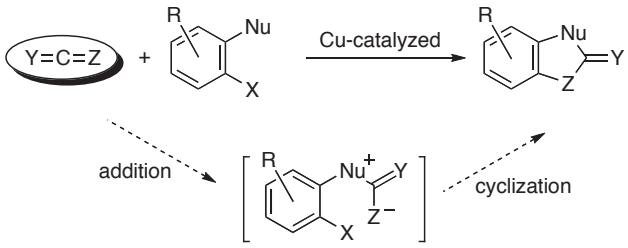


marinopyrrole E

Natural Organohalogen Organobromine Organochlorine Natural Heterocycle Natural Product

209 **Copper-Catalyzed Domino Reaction of Heteroallenes towards Benzo-Heterocycle Compounds**

Fei Wang, Peng Zhao, and Chanjuan Xi*

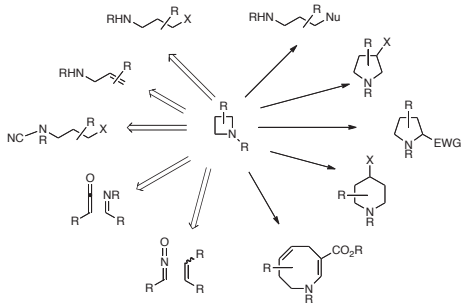


Nu = NH_2, OH, $C(O)NH_2$
Y, Z = NR^1, S

Carbodiimide Isothiocyanate Carbon Disulfide Domino Reaction Benzo-Heterocycle

223 **Preparation and Synthetic Applications of Azetidines**

Tina M. Bott and F. G. West*

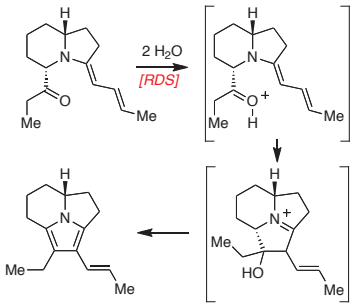


Azetidine Ring-Closure Reaction Ring-Opening Reaction Ring-Expansion Reaction Alkaloid

■ COMMUNICATIONS

265 **Mechanistic Investigations of the Cyclocondensation Step of the Knorr Pyrrole Synthesis**

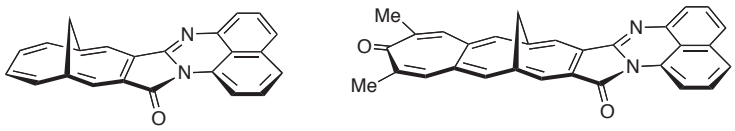
Scott A. Snyder,* Ferenc Kontes, and Adel M. ElSohly



Pyrrole Knorr Reaction Mechanism Myrmicarin Total Synthesis

275 **Synthesis and Spectroscopic Properties of 1,6-Methano-[10]annulene-Fused and 2,4-Dimethyl-7,12-methano-3*H*-cyclohepta[10]annulen-3-one-Fused 10*H*-Pyrrolo[1,2-*a*]-perimidin-10-ones**

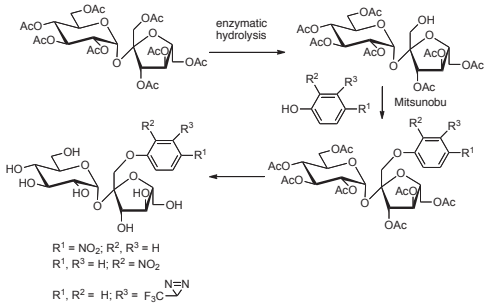
Shigeyasu Kuroda,* Naoko Matsumoto, Yanmei Zhang, Takako Abe, Yoshikazu Horino, Yurie Fujiwara, and Mitsunori Oda*



Tropone Methano[10]annulene Protonation [4+3] Cycloaddition Emission Behavior

283 **Chemo-Enzymatic Synthesis of 1'-Photoreactive Sucrose Derivatives *via* Ether Linkage**

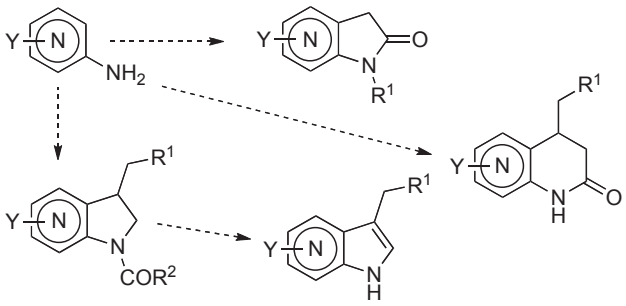
Yuka Tsunekawa, Katsuyoshi Masuda, Miho Muto, Yasuyuki Muto, Yuta Murai, Yasuyuki Hashidoko, Yoshitake Orikasa, Yuji Oda, Yasumaru Hatanaka, and Makoto Hashimoto*



Sucrose Photoaffinity Label Diazirine Mitsunobu Reaction Sweet Receptor

291 **A Flexible Convergent Route to Azaoxindoles, Azaindolines, Azaindoles, and Tetrahydroazaquinolones**

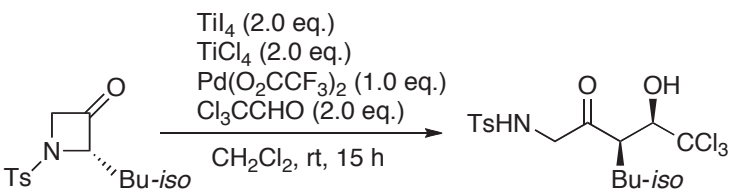
Eric Bacqué, Myriem El Qacémi, and Samir Z. Zard*



Azaoxazole Azaindoline Azaindole Radical Addition Xanthate

301 **Regioselective Ring-Opening Reaction of 2-Mono-Substituted Azetidin-3-ones Promoted by the Combined Use of Titanium Tetraiodide and Its Chloro or Bromo Counterpart**

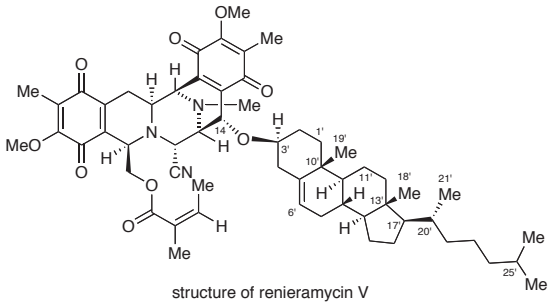
Shingo Hata, Daisuke Fukuda, Iwao Hachiya, and Makoto Shimizu*



Azetidin-3-one Ring-Opening Reaction Titanium Tetraiodide Reductive Aldol Reaction *syn*-Aldol

309 **Chemistry of Renieramycins. Part 10: Structure of Renieramycin V, a Novel Renieramycin Marine Natural Product Having a Sterol Ether at C-14 Position**

Naoki Saito,* Miho Yoshino, Kornvika Charupant, and Khanit Suwanborirux

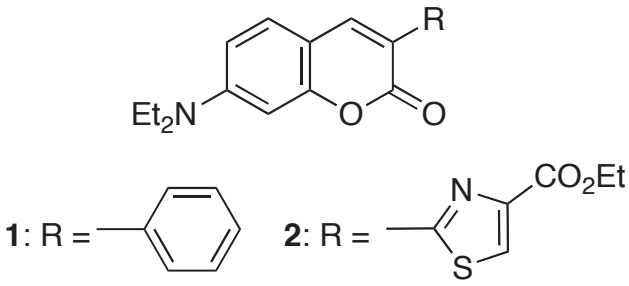


structure of renieramycin V

Isoquinoline Alkaloid Marine Natural Product Structure Elucidation Cytotoxicity Renieramycin

315 **Solid-State Fluorescence Properties and Crystal Structures of 7-(Diethylamino)coumarin Derivatives**

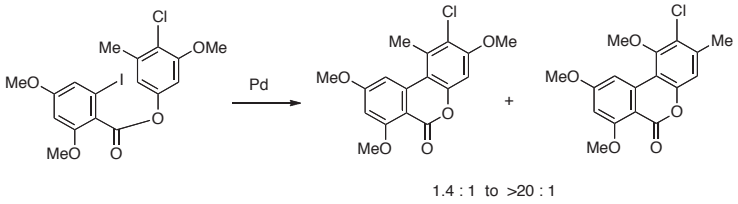
Kanji Kubo,* Taisuke Matsumoto, Keiko Ideta, Haruko Takechi, and Hajime Takahashi



Coumarin Fluorescence Thiazole S···π Interaction Crystal Structure

323 **Highly Regioselective Intramolecular Biaryl Coupling Reaction of a Phenyl Benzoate Derivative for the Synthesis of Graphislactone G**

Hitoshi Abe,* Takuya Matsukihira, Tomoko Fukumoto, Yoshikazu Horino, Yasuo Takeuchi,* and Takashi Harayama

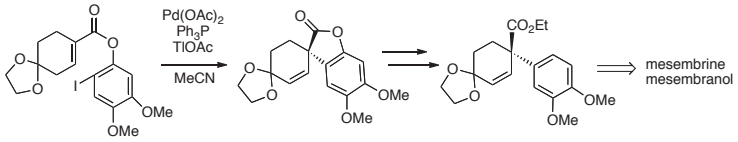


1.4 : 1 to >20 : 1

6*H*-Dibenzo[*b,d*]pyran-6-one Palladium Intramolecular Coupling Reaction Phenyl Benzoate Demethylation

327 **Formal Synthesis of Sceletium Alkaloids, (±)-Mesembrine and (±)-Mesembranol**

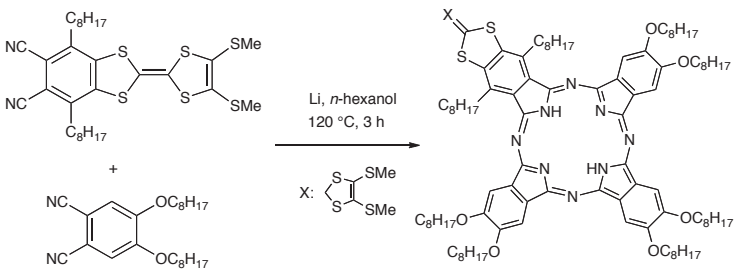
Toshio Honda,* Hironobu Arai, Naoshi Yamamoto, and Kazunori Takahashi



Mizoroki-Heck Reaction Mesembrine Sceletium Alkaloid Mesembranol Serotonin Reuptake Inhibitor

333 **Preparation and Optical and Electrochemical Properties of Unsymmetrical Phthalocyanines with One or Two TTF Units**

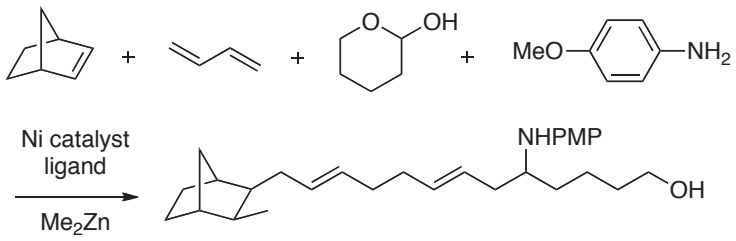
Takeshi Kimura,* Nobuhiro Takahashi, Tomoyuki Tajima, and Yutaka Takaguchi



Phthalocyanine TTF UV-vis Spectrum Trifluoroacetic Acid Iodine

339 **Ni-Catalyzed Multi-Component Coupling Reaction of Norbornene, Dimethylzinc, Butadiene, and Aldimine**

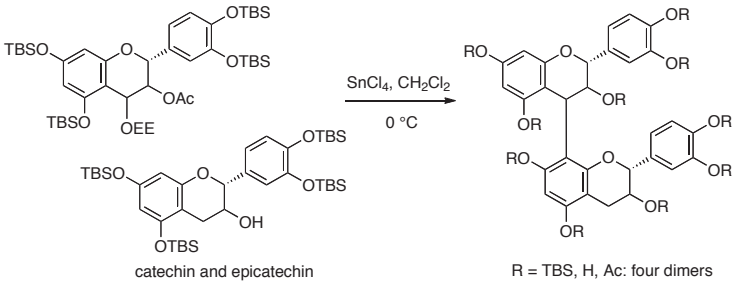
Toshiyuki Nakamura, Takamichi Mori, Mariko Togawa, and Masanari Kimura*



Nickel Butadiene Norbornene Imine Dimethylzinc

349 **Condensation of Catechin and Epicatechin Incorporating a TBS-Protecting Group**

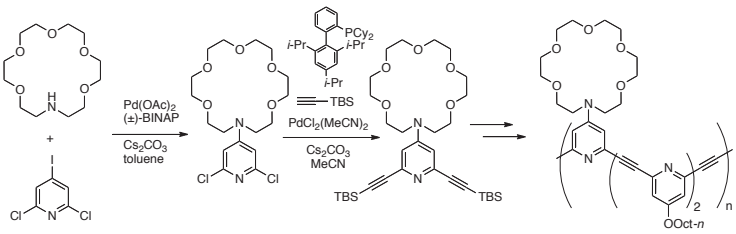
Noriyuki Nakajima,* Keiko Horikawa, Norimasa Takekawa, Masahiro Hamada, and Takao Kishimoto



Condensed Tannin Proanthocyanidin Catechin Dimer *tert*-Butyldimethylsilyl (TBS)-Protecting Group Large-Scale Synthesis

355 **Palladium-Catalyzed Selective and Sequential Functionalization of 2,4,6-Trihalopyridine Rings: Synthesis of Ethynylpyridine Polymers Directly Joined with Aza-Crown Ethers**

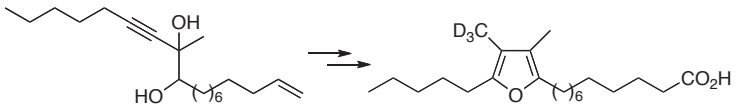
Shunsuke Takashima, Tsuyoshi Yamamoto, Hajime Abe,* and Masahiko Inouye*



Azacrown Ether Palladium-Catalyzed Amination Sonogashira Reaction Ethynylpyridine Trihalopyridine

361 **Optimized Syntheses of the Furan Fatty Acids F_5 and F_6 Featuring Convertion of a β-Iodofuran into a β-Methylfuran in a Single Operation**

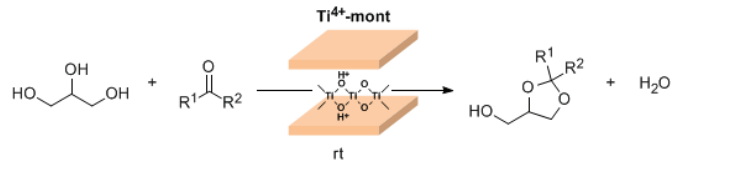
David W. Knight* and Andrew W. T. Smith



Furan Fatty Acid Synthesis 5-*endo*-Dig Iodine-Methyl Exchange

371 **Highly Efficient Condensation of Glycerol to Cyclic Acetals Catalyzed by Titanium-Exchanged Montmorillonite**

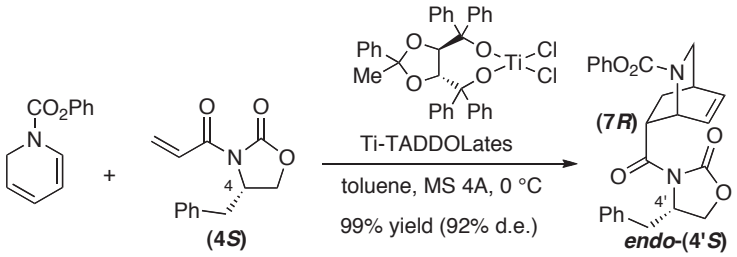
Takato Mitsudome, Tsuyoshi Matsuno, Shoichiro Sueoka, Tomoo Mizugaki, Koichiro Jitsukawa, and Kiyotomi Kaneda*



Titanium Montmorillonite Heterogeneous Catalyst Cyclic Acetal Glycerol

377 **Asymmetric Synthesis of Isoquinuclidine by Diels-Alder Reaction of 1,2-Dihydropyridine and Chiral Dienophile Utilizing a Chiral Lewis Acid**

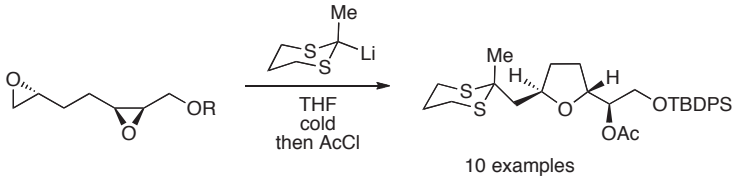
Masafumi Hirama, Chonticha Suttibut, N. D. M. Romauli Hutabarat, Chigusa Seki, Noritaka Sakuta, Takefumi Tsuchiya, Yoshihito Kohari, Hiroto Nakano, Koji Uwai, Nobuhiro Takano, Mitsukuni Yasui, Yuko Okuyama, Kenichi Osone, Mitsuhiro Takeshita, and Haruo Matsuyama*



1,2-Dihydropyridine Chiral Isoquinuclidine Diels-Alder Reaction Chiral Lewis Acid Catalyst Match-Mismatch Effect

385 **Enantioenriched Formation of Synthons of 1,5-Hexadiene Bis-epoxides for Construction of Nonracemic *cis*- and *trans*-2,5-Disubstituted Tetrahydrofurans**

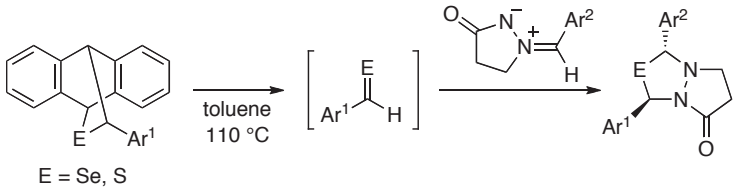
David R. Williams* and Ramkrishna De



Bis-epoxide Asymmetric Epoxidation Katsuki Epoxidation Substituted Tetrahydrofuran Stereoselective Synthesis

393 **[3+2] Cycloaddition of Seleno- and Thioaldehydes with Cyclic Azomethine Imines**

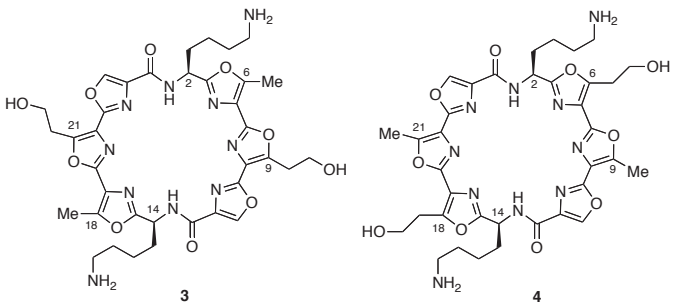
Hajime Maeda, Yusuke Takamizawa, and Masahito Segi*



Cycloaddition Cycloreversion Selenoaldehyde Azomethine Imine 1,3-Dipole

401 **Design and Synthesis of G-Quadruplex Ligands Bearing Macrocyclic Hexaoxazoles with Four-Way Side Chains**

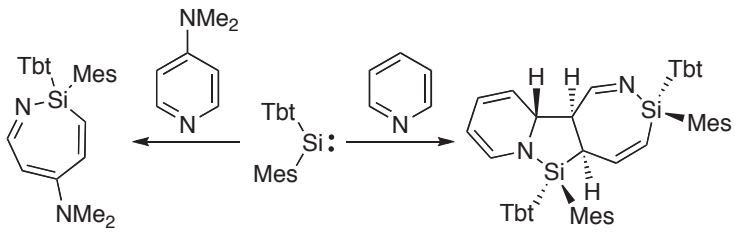
Keisuke Iida, Satoki Majima, Terumi Ohtake, Masayuki Tera, Kazuo Shin-ya, and Kazuo Nagasawa*



G-Quadruplex Telomestatin Macrocyclic Polyoxazole Four-Way Ligand Nucleic Acid

413 **Reactions of an Overcrowded Silylene with Pyridines: Formation of a Novel 2*H*-1,2-Azasilepine and Its Further Cycloaddition**

Yoshiyuki Mizuhata, Takahiro Sato, and Norihiro Tokitoh*

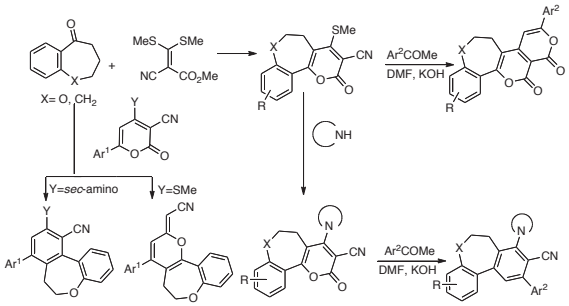


Silylene 2*H*-1,2-Azasilepin Cycloaddition Ring Expansion Pyiridine

■ **PAPERS**

555 **Oxaheterocycles: Di- and Trioxabenzo[3,4]cyclohepta-[1,2-*a*]naphthalene-6,7-diones and Dibenzo[*a*,*c*]-cycloheptene-3-carbonitriles**

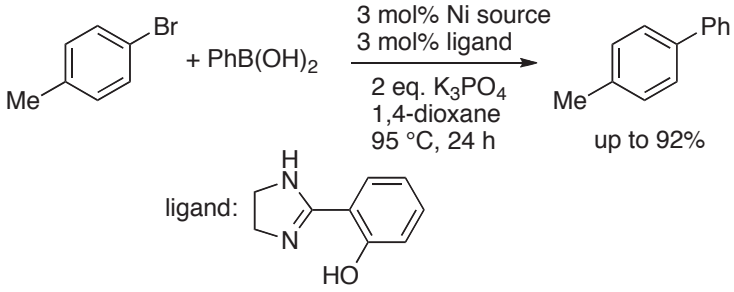
Hardesh K. Maurya, Ramendra Pratap, Vishnu K. Tandon,* Pushyamitra Mishra, Brijesh Kumar, and Vishnu Ji Ram*



Ring Transformation Reaction Ketene Dithioacetal Pyrano[3,4-*c*]benzopyran-6,7-dione Tetrahydrobenzo[*b*]oxepine

569 **Ni- and Cu-Catalyzed Coupling Reactions Using 2-(4,5-Dihydro-1*H*-imidazo-2-yl)phenol as a Versatile Phosphine-Free Ligand**

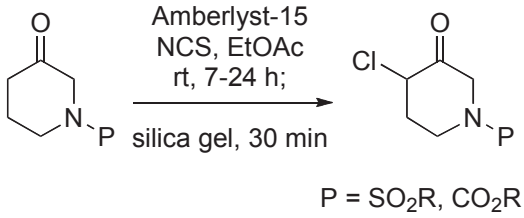
Satoshi Haneda, Kazuhiko Sudo, and Masahiko Hayashi*



Coupling Reaction Ligand Phosphine-Free Indole Boronic Acid

577 **Regioselective α-Monochlorination of *N*-Protected-3-piperidones**

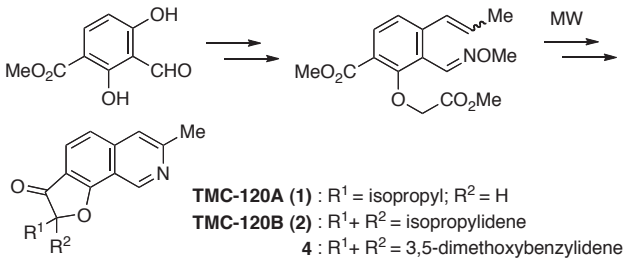
Pradeep S. Chauhan, Max M. Majireck, and Steven M. Weinreb*



Chlorination 3-Piperidone Regioselectivity *N*-Chlorosuccinimide

587 **Improved Synthesis of the New Furo[3,2-*h*]isoquinoline Alkaloids TMC-120B and TMC-120A, and Their Inhibitory Activities against IFN-γ and IL-4 Production**

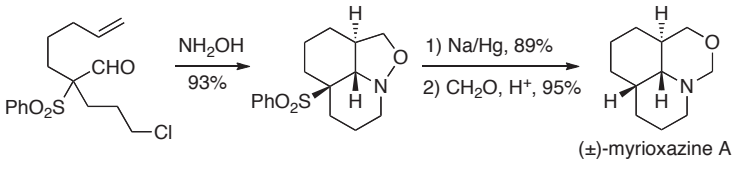
Tominari Choshi,* Teppei Kumemura, Haruto Fujioka, Yuhzo Hieda, and Satoshi Hibino*



Furo[3,2-*h*]isoquinoline TMC-120B Electrocyclization 1-Azahexatriene System Microwave

597 **Synthesis of Fused Tricyclic Heterocycles by Condensation, Cyclization, Dipolar Cycloaddition Cascade of α-Benzenesulfonyl and α-Phenylthio Substituted Aldehydes**

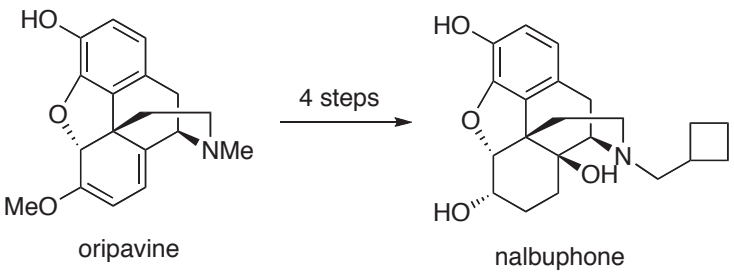
Iain Coldham,* Adam J. M. Burrell, Luke Watson, Niall Oram, and Nathaniel G. Martin



Intramolecular Cycloaddition Tandem Reaction Stereoselective Reaction Myrioxazine A

615 **Synthesis of Nalbuphine from Oripavine *via* *N*-Demethylation of *N*-Cyclobutylmethyl Oripavine**

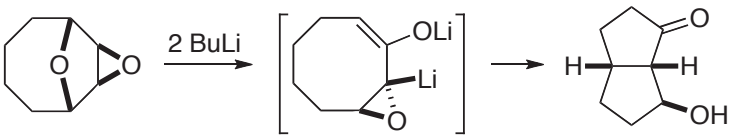
Ales Machara, D. Phillip Cox, and Tomas Hudlicky*



Morphine Alkaloid Oripavine Salt *N*-Demethylation Nalbuphine Synthesis Nalbuphone Synthesis

625 **Unusual Base-Induced Rearrangement of *exo*-9-Oxabicyclo[4.2.1]non-7-ene Oxide to *exo*-8-Hydroxybicyclo[3.3.0]octan-2-one**

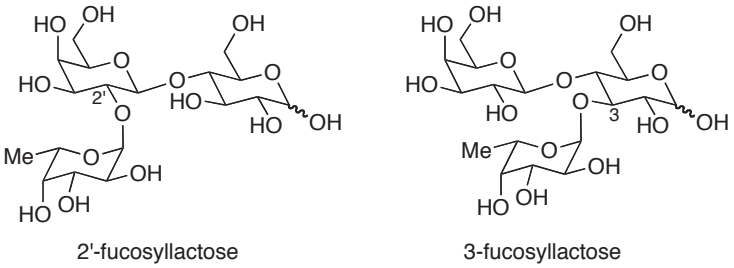
David M. Hodgson,* Matthew A. H. Stent, Robert S. Paton, and Francis X. Wilson



Epoxide Lithium Rearrangement Carbenoid C-H Insertion

637 **Synthesis of Human Milk Oligosaccharides: 2'- and 3'-Fucosyllactose**

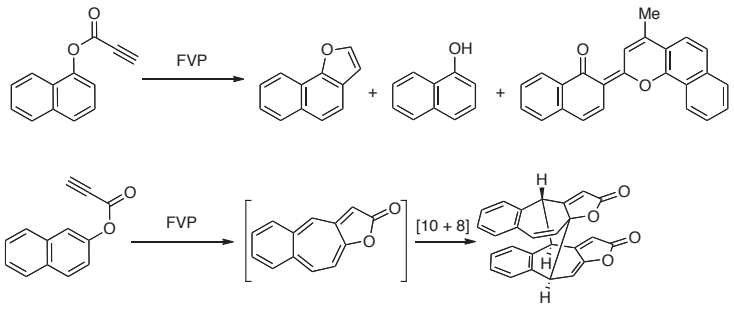
Claney L. Pereira and Frank E. McDonald*



Oligosaccharide *O*-Allylglycoside *O*-Glycosylation Regioselectivity Stereoselectivity

657 **Flash Vacuum Pyrolysis of Naphthalen-1-yl and -2-yl Prop-2-ynoate**

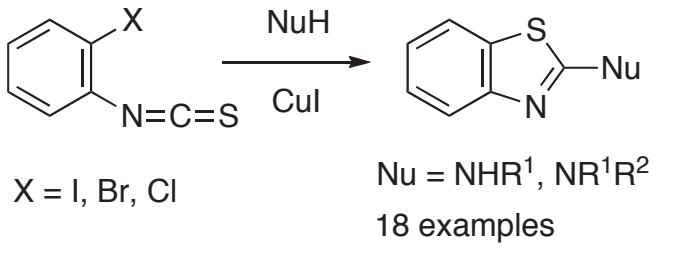
Vit Lellek and Hans-Jürgen Hansen*



Pyrolysis Naphthalenyl Prop-2-ynoate Benzocyclohepta[1,2-*b*]furan-2(2*H*)-one Cyclohepta[*b*]furan-2(2*H*)-one [10+8] Cycloaddition

669 **Rapid One-Pot Versatile Preparation of 2-Aminobenzothiazoles by Highly Efficient Copper(I)-Catalyzed Inorganic Base-Free Intramolecular Cyclization**

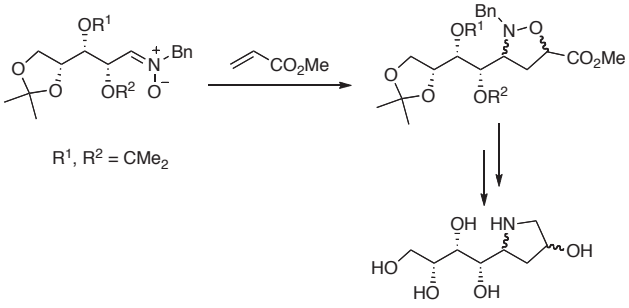
Haruki Sashida* and Mamoru Kaname



Benzothiazole Isothiocyanate Copper-Catalyzed Cyclization

683 **1,3-Dipolar Cycloaddition of D-Xylose Derived Nitrone with Methyl Acrylate. Synthesis of Chiral Pyrrolidinones and Pyrrolidines**

Gabriel Podolan, Lubor Fišera,* Jozef Kožíšek, and Marek Fronc



R^1, R^2 = CMe_2

Nitrone Cycloaddition Isoxazolidine Chiral Pyrrolidine

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