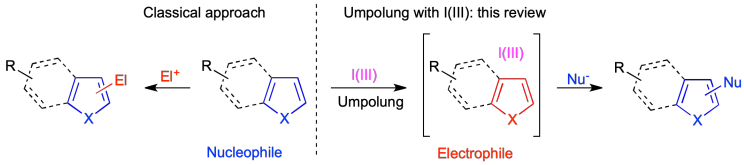
■ REVIEWS

555 **Umpolung of Electron-Rich Heteroarenes with Hypervalent Iodine Reagents**

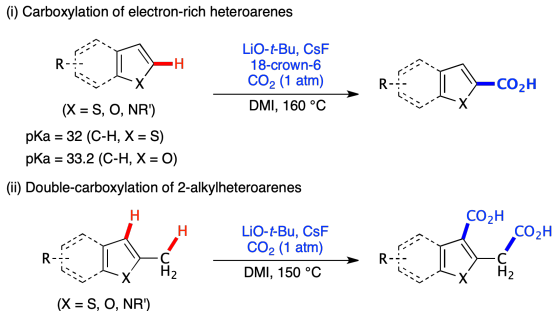
Pamela Pal, Jerome Waser,* and Raj Kumar Nandi*



Hypervalent Iodine Heterocycle Umpolung Oxidative Coupling Single Electron Transfer

592 **Combined Brønsted-Base-Mediated Direct C-H Carboxylation of Heteroarenes with CO_2**

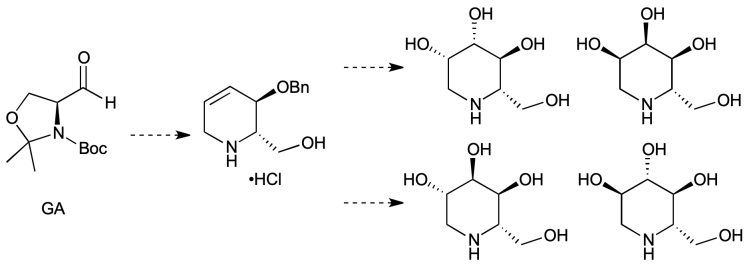
Masanori Shigeno,* Keita Sasaki, Kazuya Hanasaka, Itsuki Tohara, Kanako Nozawa-Kumada, and Yoshinori Kondo*



Brønsted Base Carbon Dioxide Carboxylation C-H Functionalization

609 **Conformational Control in Stereoselective Chemical Reactions: From Amino Acids to Iminosugars**

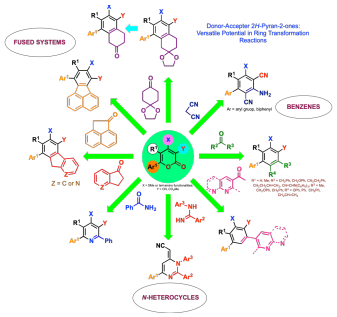
Ari Koskinen*



Amino Acid Stereoselective Synthesis Asymmetric Synthesis Imino Sugar Natural Product

624 **Recent Development on the Ring Transformation Reactions: Synthesis of Functionalized Benzenes, *N*-Heterocycles and Fused Ring Systems**

Priyanka B. Kole and Fateh V. Singh*

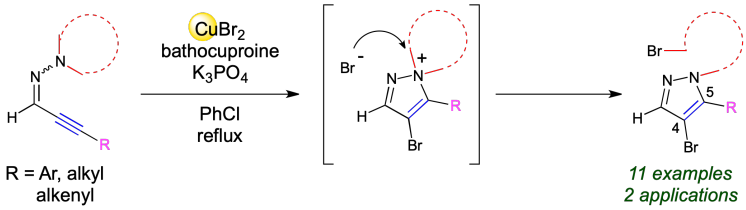


Pyranone Electrophile Nucleophile Carbanion Ring Transformation

■ COMMUNICATIONS

661 **Dihalogenative Cyclization for the Synthesis of 4-Bromo-1-bromoalkyl-5-aryl/alkyl/alkenyl-pyrazoles**

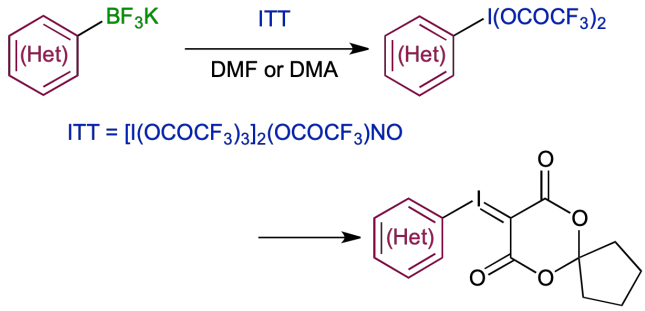
Motohiro Yasui, Maki Hasegawa, Keiji Konishi, Norihiko Takeda, and Masafumi Ueda*



Pyrazole Single Electron Transfer Halocyclization Transition Metal Domino Reaction

670 **Generation of Monoaryl-λ^3-iodanes from Arylboron Compounds through *ipso*-Substitution**

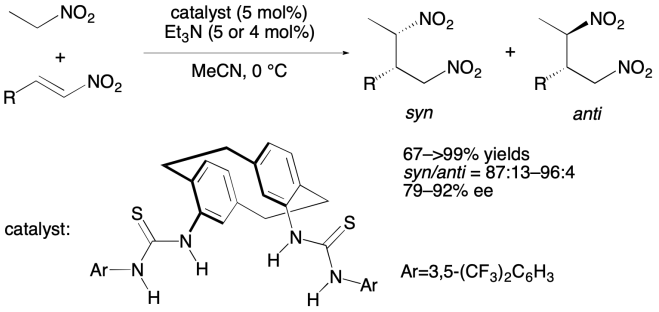
Ayako Nakano, Yukino Okabe, Keitaro Matsuoka, Narumi Komami, Keito Watanabe, Masahiro Kojima, Tatsuhiko Yoshino, and Shigeki Matsunaga*



Hypervalent Iodine Iodonium Ylide Monoaryl-λ^3-iodane Iodine Tris(trifluoroacetate)

678 **Planar Chiral [2.2]Paracyclophane-Based Bis(thiourea)-Catalyzed Highly Diastereo- and Enantioselective Michael Addition Reaction of Nitroethane to Nitrostyrenes**

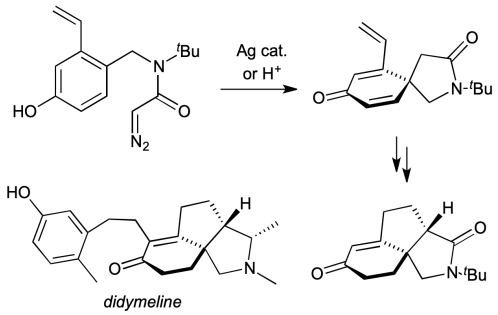
Shinji Kitagaki,* Eriko Shimo, Sawa Takeda, Rintaro Fukai, Naohiro Kojima, Shun Yoshioka, Naoko Takenaga, and Keisuke Yoshida



[2.2]Paracyclophane Bis(thiourea) Planar Chirality Michael Addition Hydrogen-Bonding Donor Catalyst

687 **Synthetic Studies on Didymeline Using Spirocyclization of Phenols with Diazo Functionality**

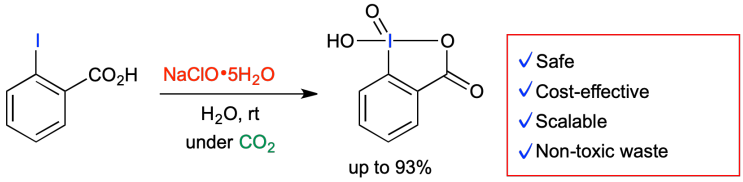
Mitsuru Ikeda, Hiroki Nakayama, Ayaka Kanda, Shingo Harada,* and Tetsuhiro Nemoto*



Spirocyclization Phenol Didymeline

694 **Facile Preparation of 1-Hydroxy-1,2-benziodoxol-3(1*H*)-one 1-Oxide (IBX) and Dess–Martin Reagent Using Sodium Hypochlorite under Carbon Dioxide**

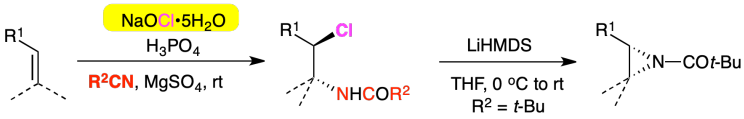
Kazunori Miyamoto,* Tomohide Okada, Takashi Toyama, Shinji Imamura, and Masanobu Uchiyama*



Hypervalent Iodine IBX NaClO Safety Carbon Dioxide

699 **Chloroamidation of Alkenes Using Sodium Hypochlorite Pentahydrate and Its Application to Synthesis of Aziridines**

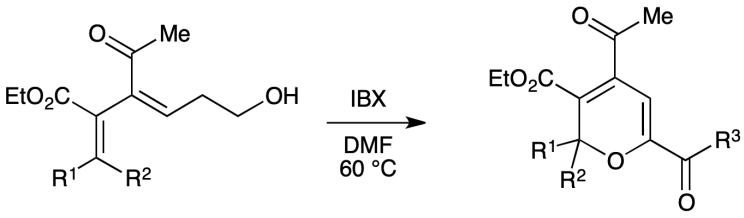
Masayuki Kirihara,* Kouta Adachi, Yugo Sakamoto, Kazuki Tujimoto, Sho Yamahara, Ryoji Matsushima, Yukou Namba, Kosuke Sato, Takashi Kamada, Yoshikazu Kimura, and Shinobu Takizawa*



Sodium Hypochlorite Pentahydrate Chloroamidation Haloamidation Nitrile Aziridine

707 **IBX Oxidations for the Synthesis of Substituted 2*H*-Pyrans**

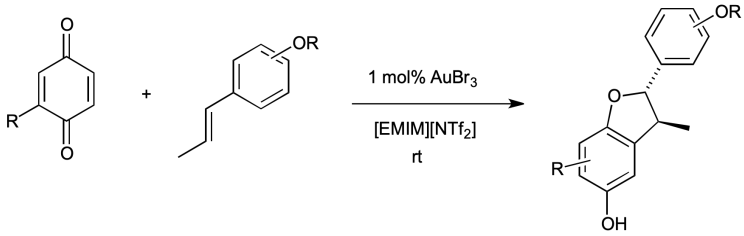
David R. Williams,* Seth A. Bawel, Nazanin Haddadpour, and Sarah Maier



C=C Isomerization Cycloisomerization 2*H*-Pyran IBX Oxidation Oxa-electrocyclization

714 **Gold-Catalyzed Formal [3+2] Cycloaddition of *p*-Quinones and 1-Phenylpropenes in Ionic Liquid: Environmentally Friendly and Stereoselective Synthesis of 2,3-Dihydrobenzofuran Neolignans**

Nobuyoshi Morita,* Kanae Ikeda, Hitomi Chiaki, Ryuto Araki, Kosaku Tanaka III, Yoshimitsu Hashimoto, and Osamu Tamura*

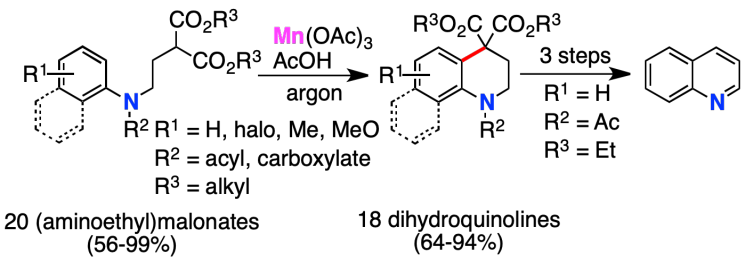


Gold(III) Catalyst Formal [3+2] Cycloaddition *p*-Quinone 1-Phenylpropene Ionic Liquid

■ PAPERS

723 **Mn(III)-Based Oxidative Cyclization of 2-((2-Arylamino)ethyl)malonates: Synthesis of Quinolines via Dihydroquinolinedicarboxylates**

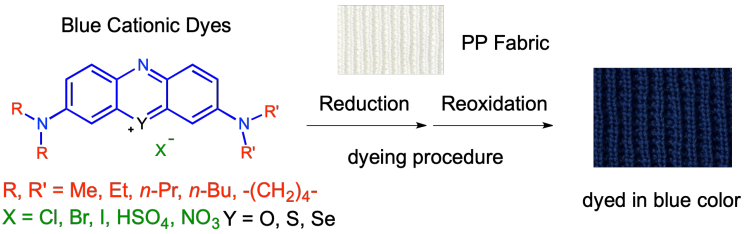
Takayuki Nagashimada, Masahiro Morikawa, Kengo Ohki, and Hiroshi Nishino*



Dihydroquinolinedicarboxylate 2-(2-(Arylamino)ethyl)malonate Mn(III)-Based Oxidative Cyclization 6-*endo* Mode Cyclization Quinoline

754 **Synthesis and Blue Dyeing Ability for Polypropylene Fabrics of Various 3,7-Bis(dialkylamino)phenoxazin-5-ium Salts and the Sulfur and Selenium Analogs**

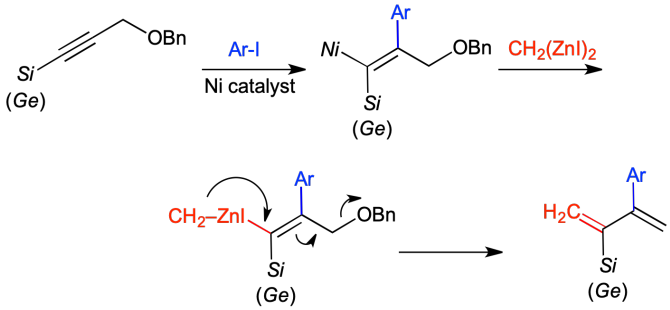
Takumi Yoshida* and Masahito Segi*



Phenoxazinium Salt Polypropylene Dyeing Cationic Dye

769 **Preparation of 2-Aryl-3-silyl- and 2-Aryl-3-germyl-1,3-butadienes via Arylnickelation and Zinciomethylation**

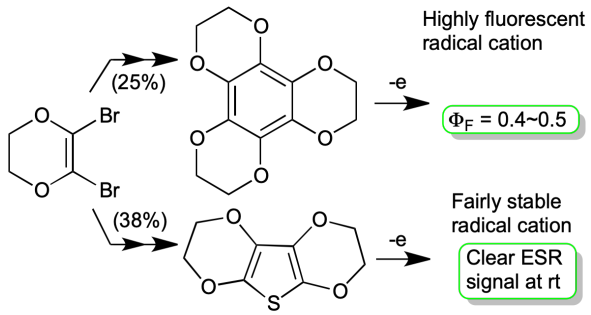
Nana Yoshino, Betemariam Sharewa, Zenichi Ikeda, and Seijiro Matsubara*



Zinc Silyl Germyl Tris(2-furyl)phosphine

778 **Synthesis, Structure, and π-Donor Properties of Tris-(ethylenedioxy)benzene and Bis(ethylenedioxy)thiophene**

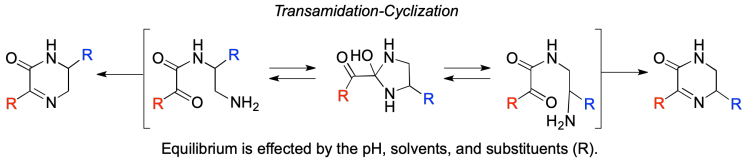
Ryoji Watanabe, Tohru Nishinaga,* Yoshiyuki Kuwatani, and Masahiko Iyoda*



π-Donor Tris(ethylenedioxy)benzene Tis(ethylenedioxy)thiophene Radical Cation Strong Fluorescent Emission

790 **Intramolecular Transamidation-Cyclization of *N*-(α-Oxoacetyl)diamine: Influence of Solvent, Acidity and Substituents**

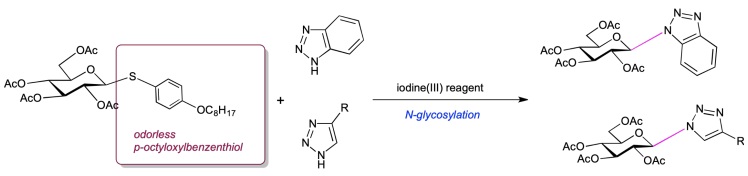
Takashi Kouko, Hiroaki Miyazawa, Hideki Hikita, Hiromi Totsuka, Kazuhiro Higuchi,* and Tomomi Kawasaki*



Transamidation Cyclization Hamacanthin Pyrazinone

809 ***N*-Glycosylation of *Thio*-glycoside Derived from Odorless Thiols Using Hypervalent Iodine(III) Reagent**

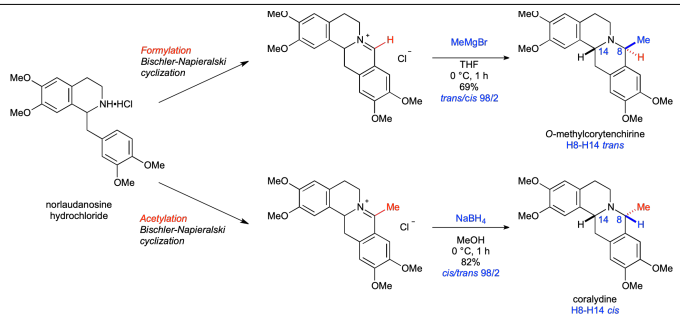
Koji Morimoto, Kana Yanase, Tohru Kamitanaka, and Tetsuya Kajimoto*



N-Glycosylation Hypervalent Iodine(III) Reagent Thioglycoside Odorless Thiol

817 **Stereoselective Synthesis of Diastereomeric Berberine Alkaloids, *O*-Methylcorytenchirine and Coralydine**

Misaki Kirii, Junpei Matsuoka, Akari Miyawaki, Kiyoshi Tomioka, and Yasutomo Yamamoto*

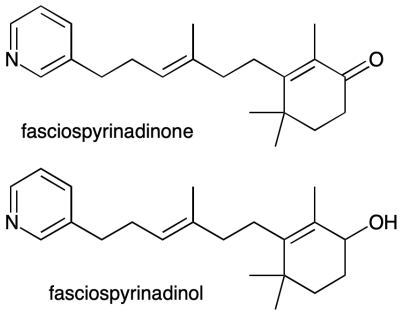


Isoquinoline Berberine *O*-Methylcorytenchirine Coralydine Total Tynthesis

827 **Fasciospyrinadinone and Fasciospyrinadinol, Novel 3-Alkylpyridine Sesquiterpenoids from an Indonesian Marine Sponge, as Selective Growth Inhibitors of the Cancer Cells under Nutrient Starvation**

Hirokazu Matsumoto, Tomoya Hisa, Kazunari Toda, Ryosuke Ishida, Andi Setiawan, Masayoshi Arai, and Naoyuki Kotoku*

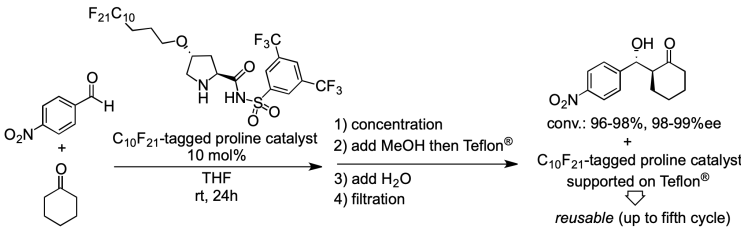
marine sponge
Petrosaspongia sp.



Marine Natural Product Pyridine Sesquiterpenoid Structure Elucidation Total Synthesis Anticancer Compound

839 **A Fluorous Proline Catalyst Immobilized on Teflon® for Highly Stereoselective Asymmetric Aldol Reactions**

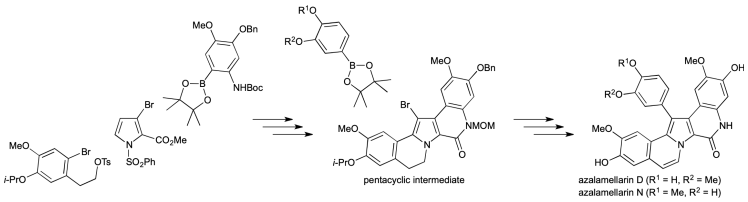
Kazuki Ishihara, Riho Obayashi, Mizuki Ohira, Yuki Kobayashi, Kotaro Ishihara, Yamato Kato, Narisa Takeuchi, Risa Mizuno, Takayuki Shioiri, and Masato Matsugi*



Fluorous Catalyst Proline Aldol Reaction Teflon® Recycle

862 **Divergent Total Synthesis of Azalamellarins D and N**

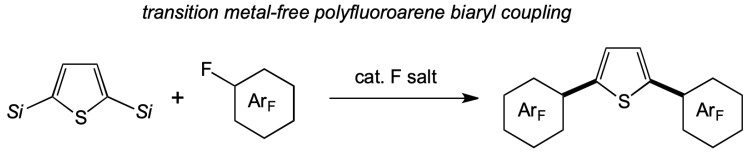
Tsutomu Fukuda,* Seiya Okutani, Mayu Sumi, Kazuhito Miyagi, Gen Onodera, and Masanari Kimura



Azalamellarin D Azalamellarin N Total Synthesis Pentacyclic Intermediate

878 **Polyfluoroarene-Capped Thiophene Derivatives via Fluoride-Catalyzed Nucleophilic Aromatic Substitution**

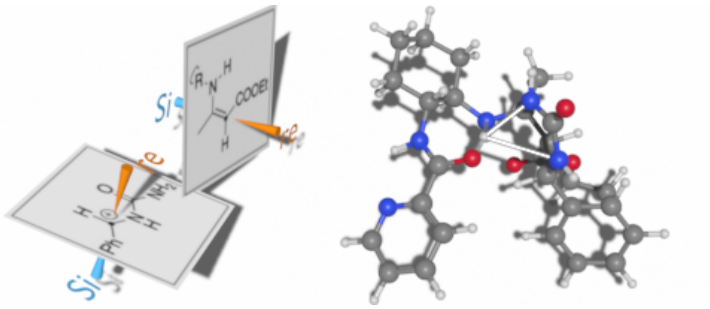
Kotaro Kikushima, Kana Matsuki, Yuna Yoneda, Takayuki Menjo, Kosuke Kaneko, Tomonori Hanasaki, and Toshifumi Dohi*



Thiophene Polyfluoroarene Transition Metal-Free Nucleophilic Aromatic Substitution Organocatalyst

893 **Stereoselectivity of the Biginelli Reaction Catalyzed by Chiral Primary Amine: A Computational Study**

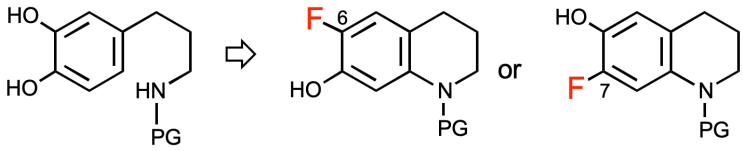
Takayoshi Yoshimura, Maneeporn Puripat, Vudhichai Parasuk, and Miho Hatanaka*



Density Functional Theory

902 **Regio-Complementary Preparation of 6- and 7-Fluoro-1,2,3,4-tetrahydroquinolines via the Cyclization of Catecholamines Followed by Deoxyfluorination**

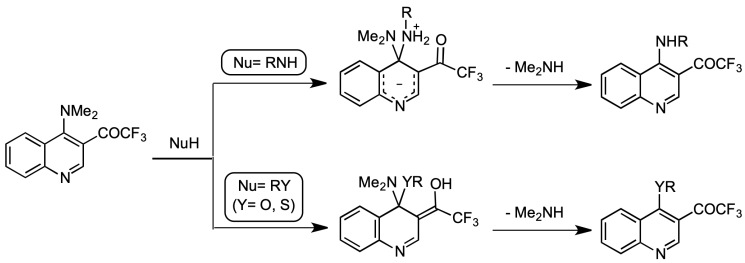
Kazuyuki Saito, Wang Zhou, Shohei Sato, Keita Takubo, Kazunori Furutsu, Ahmed A. B. Mohamed, Euis Maras Purwati, Takashi Ikawa, and Shuji Akai*



Catecholamine Cyclization Deoxyfluorination Regioselective Reaction Tetrahydroquinoline

918 **Computational Study for the Aromatic Nucleophilic Substitution of 4-Dimethylamino-3-trifluoroacetyl-quinoline with Various Nucleophiles**

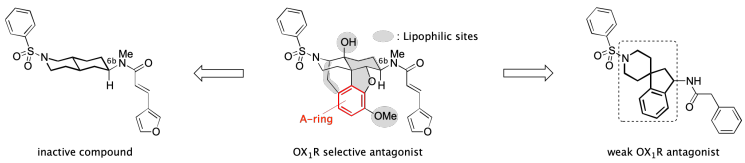
Norio Ota, Souma Nakagawa, Yasuhiro Kamitori, and Etsuji Okada*



DFT Calculation C-PCM Model Aromatic Nucleophilic Substitution 3-Trifluoroacetylated 4-Quinolylamine Meisenheimer Complex

929 **Design and Synthesis of Novel Orexin Antagonists via Structural Simplification of the Morphinan Skeleton**

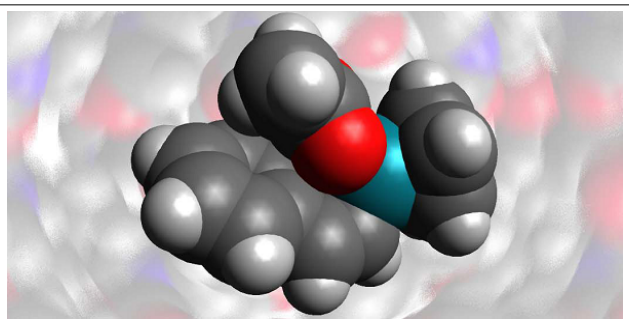
Sayaka Ohrui,* Yoko Irukayama-Tomobe, Yukiko Ishikawa, Masashi Yanagisawa, and Hiroshi Nagase



Orexin Orexin 1 Receptor Antagonist Medicinal Chemistry Structure-Activity Relationship (SAR) Morphinan Skeleton

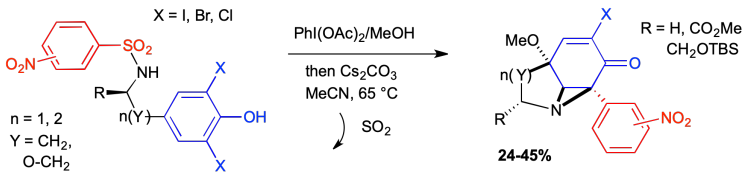
952 **A Theoretical Study of Product Selectivity in Rhodium-Catalyzed Oxidative Coupling Reaction Caused by the Solvation Effect**

Masahiro Higashi,* Naoto Shibata, Suguru Takeno, Tetsuya Satoh, Masahiro Miura, and Hirofumi Sato*

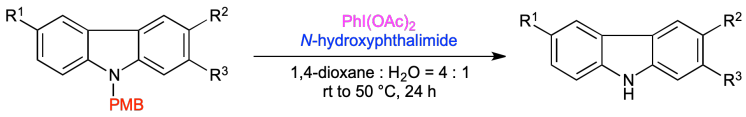


Solvent Effect Rhodium Catalysis Oxidative Coupling 1-Phenylpyrazole

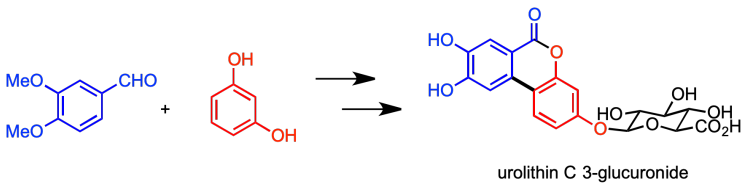
■ SHORT PAPERS



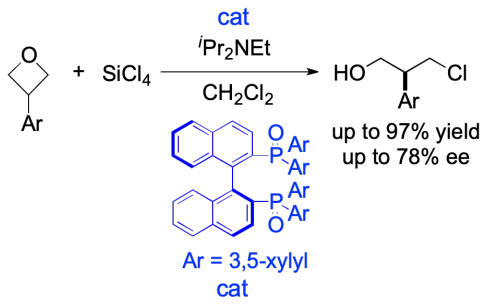
Hypervalent Iodine Phenol Aziridine Michael–Smiles Ring-Closure Cascade Heterocycle



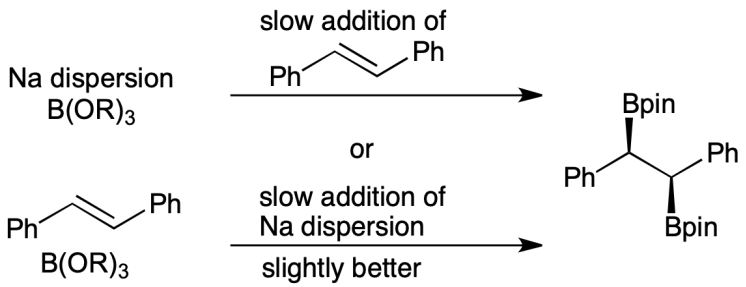
Carbazole Deprotection Hypervalent Iodine *N*-Hydroxyphthalimide



Ellagitannin Palladium Regioselectivity Glycosylation



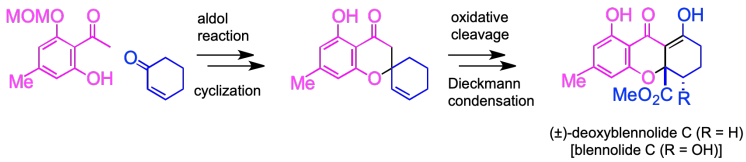
Oxetane Phosphine Oxide Asymmetric Catalysis Ring Opening Hypervalent Silicon



Sodium Dispersion Reduction Borylation

1064 **Total Synthesis of (±)-4-Deoxyblennolide C via Spirochromanone**

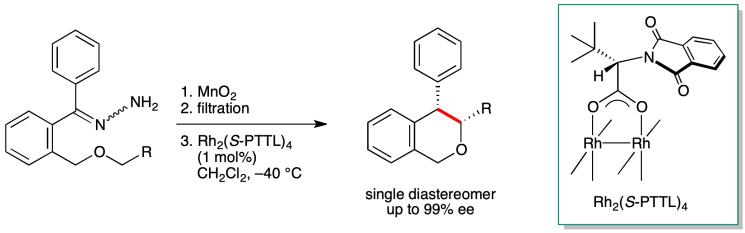
Takuya Kumamoto,* Sho Hasegawa, Kanna Adachi, and Kazuaki Katakawa



Xanthone Spirochromanone Oxidative Cleavage Dieckmann Condensation Blennolide

1078 **Diastereo- and Enantioselective Intramolecular 1,6-C–H Insertion Reaction of Diaryldiazomethanes Catalyzed by Chiral Dirhodium(II) Carboxylates**

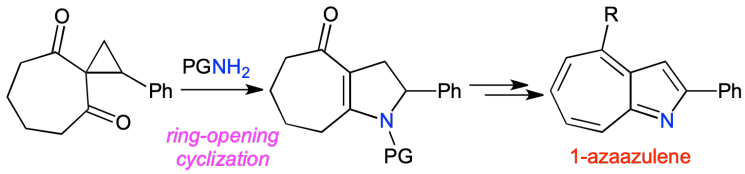
Motoki Ito, Yuji Kondo, Ryosuke Namie, Yoshihiro Natori, Koji Takeda, Hisanori Nambu, Masahiro Anada,* Yasunori Yamamoto, and Shunichi Hashimoto*



Asymmetric Catalysis Dirhodium(II) Complex Diaryldiazomethane C–H Insertion Enantioselection

1099 **Synthesis of 1-Azaazulenes Using Ring-Opening Cyclization of Spirocyclopropane with Amine**

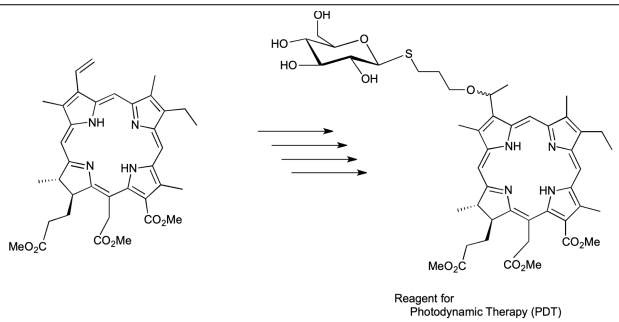
Hisanori Nambu,* Yuta Onuki, Koga Yamazaki, and Takayuki Yakura



1-Azaazulene Spirocyclopropane Ring-Opening Cyclization 2,4-Dimethoxybenzylamine Tropone

1108 **Large-Scale Synthesis of Thio-glucose-Conjugated Chlorin e6 for Photodynamic Therapy**

Akihiro Nomoto,* Hiroaki Yamaguchi, Masato Masuda, Keisuke Hyakumura, Shintaro Kodama, Tomohiro Osaki, Yoshiharu Okamoto, Mamoru Tanaka, Hiromi Kataoka, Atsushi Narumi, Tomokazu Yoshimura, Shigenobu Yano, and Akiya Ogawa



Chlorin e6 Photodynamic Therapy Glucose Large-Scale Synthesis Photosensitizer

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