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Tetrahedron Letters

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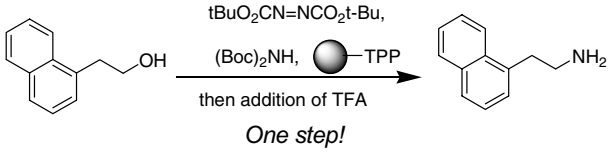
Contents

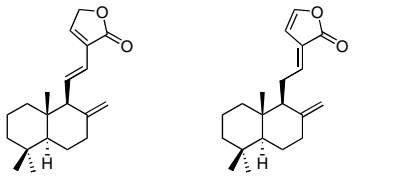
COMMUNICATIONS

Efficient conversion of primary and secondary alcohols to primary amines **pp 7745–7746**
Weilin Sun and Jeffrey C. Pelletier*

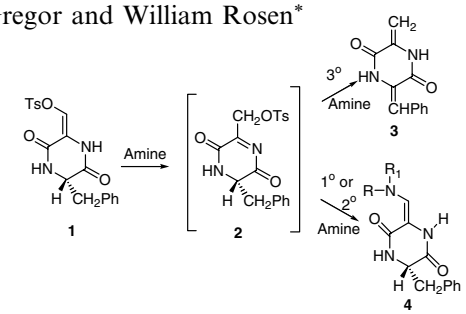


A single step method for the conversion of primary and secondary alcohols to amines is described. The method requires reagents that are easily removed by typical workup procedures.

Expedient synthesis of villosin and its isomer (*E*)-labda-8(17),12,14-trien-15(16)-olide **pp 7747–7750**
John Boukouvalas,* Jian-Xin Wang and Olivier Marion

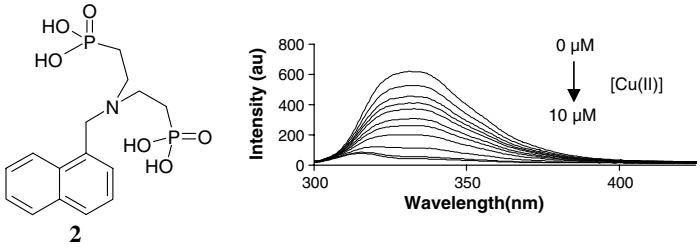


Nucleophilic reactivity of amines with an α-formylglycyl enol-tosylate fragment **pp 7751–7755**
Sitaram Bhavaraju, Michael A. McGregor and William Rosen*



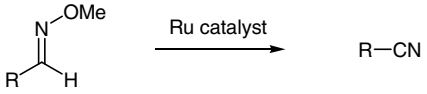
The competitive reaction of an amine in aprotic polar solvent with **1** selectively yields **3** or **4** via intermediate [**2**] dependent on the protic or aprotic nature of the electron donor.

A novel fluorescent chemosensor for Cu(II) in aqueous solution based on a β-aminobisphosphonate receptor **pp 7756–7760**
Sukanta Kamila, John F. Callan,* Ray C. Mulrooney and Moira Middleton



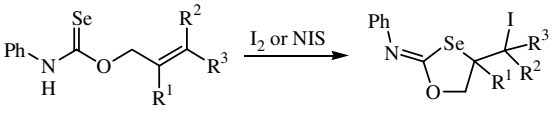
Chemosensor **2** was developed as a probe for μM levels of Cu(II) ions in aqueous solution and is operable over a broad pH range.

Ruthenium-catalysed conversion of oxime ethers into nitriles **pp 7761–7763**
Naveen Anand, Nathan A. Owston, Alexandra J. Parker, Paul A. Slatford and Jonathan M. J. Williams*

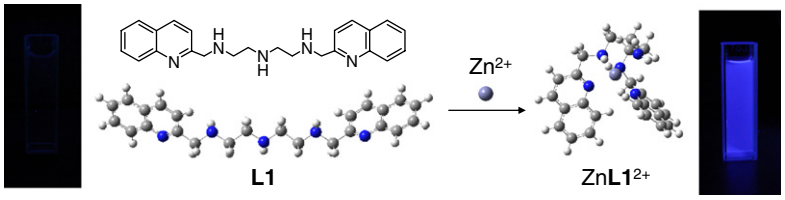


A ruthenium-catalysed process for the conversion of oxime ethers into nitriles has been developed and applied to a range of substrates including aryl and alkyl oxime ethers.

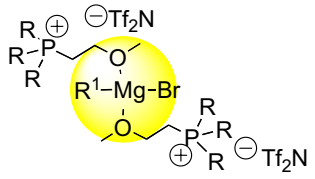
First regioselective iodocyclization of *O*-allylselenocarbamates **pp 7764–7768**
Dinesh R. Garud, Masaki Makimura, Hiromune Ando, Hideharu Ishihara and Mamoru Koketsu*



A quinoline–polyamine conjugate as a fluorescent chemosensor for quantitative detection of Zn(II) in water **pp 7769–7773**
Yasuhiro Shiraishi,* Chizuru Ichimura and Takayuki Hirai

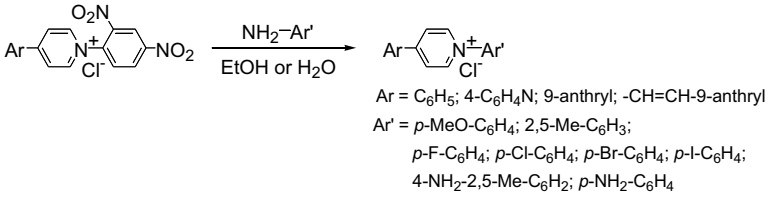


Design of ionic liquids as a medium for the Grignard reaction pp 7774–7777
Toshiyuki Itoh,* Keisuke Kude, Shuichi Hayase and Motoi Kawatsura



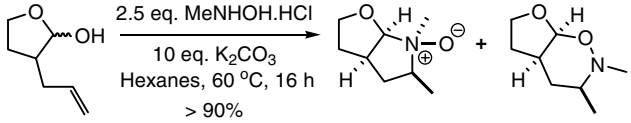
Introduction of an alkyl ether moiety on the side arm of a phosphonium salt ionic liquid was quite effective in improving the capability of phosphonium salt ionic liquids as solvents for the Grignard reaction.

N-Arylated pyridinium salts having reactive groups pp 7778–7781
Isao Yamaguchi,* Hideo Higashi, Sachiko Shigesue, Saki Shingai and Moriyuki Sato



The pyridinium salts having reactive amine and/or pyridyl groups were synthesized by the reaction of Zincke salts with amines.

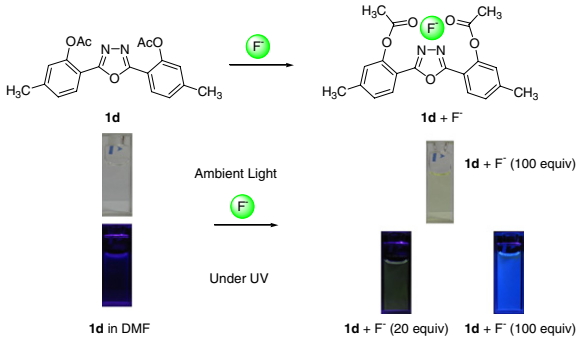
On the use of anomeric hydroxylamines in the reverse-Cope cyclisation pp 7782–7787
Nigel P. Bainbridge, Angela C. Currie, Nicholas J. Cooper, James C. Muir, David W. Knight* and Jonathan M. Walton



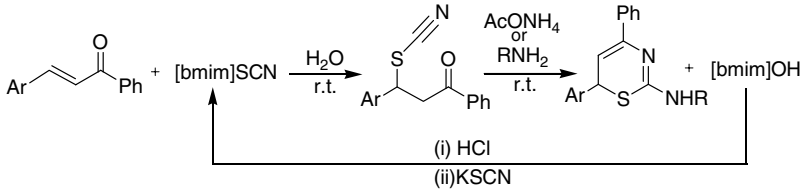
Reverse-Cope cyclisations of unsaturated hydroxylamines, when the latter are anomeric, are shown to be a viable approach to a variety of hexahydrofuro[2,3-*b*]pyrrole 6-oxides.

A new series of 2,5-bis(4-methylphenyl)-1,3,4-oxadiazole derivatives: their synthesis and fluorescence properties for anion sensors pp 7788–7792
Chan Kyu Kwak, Chi-Han Lee and Taek Seung Lee*

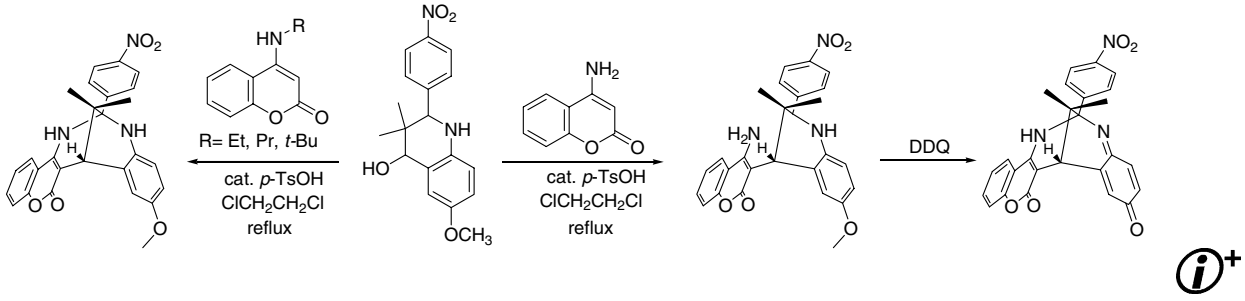
A new series of 2,5-bis(4-methylphenyl)-1,3,4-oxadiazole derivatives containing various substituted groups on the *ortho*-position to oxadiazole ring was synthesized and their fluorescent sensor properties were investigated. It was found that the new sensory compound, **1d**, can be used as a fluoride anion sensor in terms of naked-eye detection and fluorescent sensing with high selectivity. Dual emission colors were exhibited according to the fluoride anion concentration.



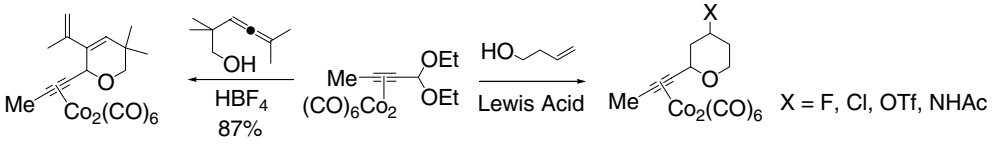
An efficient conjugate hydrothiocyanation of chalcones with a task-specific ionic liquid **pp 7793–7795**
Lal Dhar S. Yadav,* Rajesh Patel, Vijai K. Rai and Vishnu P. Srivastava



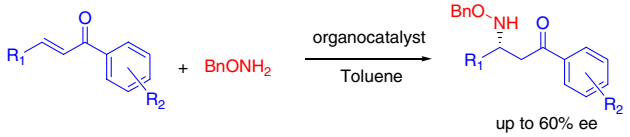
Synthesis and characterization of coumarin and dimedone-derived diazabicycles **pp 7796–7800**
Jiun-Ting Lai, Pei-Yu Kuo, Yung-Her Gau and Ding-Yah Yang*



Protected propargylic acetals. Nicholas–Prins cyclization leading to functionalized 2-alkynyltetrahydropyrans. Intramolecular trapping by allenes **pp 7801–7804**
Clarisse Olier, Stéphane Gastaldi, Gérard Gil and Michèle P. Bertrand*

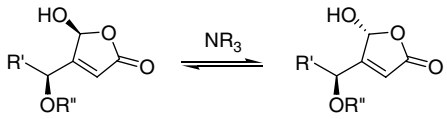


Organocatalytic asymmetric aza-Michael reaction: enantioselective addition of *O*-benzylhydroxylamine to chalcones **pp 7805–7808**
Daniel Pettersen, Francesca Piana, Luca Bernardi, Francesco Fini, Mariafrancesca Fochi, Valentina Sgarzani and Alfredo Ricci*

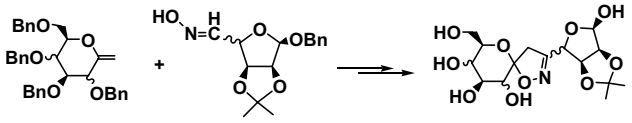


An organocatalytic enantioselective aza-Michael reaction is described. *O*-Benzylhydroxylamine adds to chalcones in the presence of a chiral thiourea catalyst, giving access to useful β-hydroxylamino ketones in good yields and moderate ee's.

Amine-catalyzed epimerization of γ-hydroxybutenolides **pp 7809–7812**
William H. Miles,* Daniela G. Duca, Brandon R. Selfridge, Chiquita A. Palha De Sousa, Kristin B. Hamman, Elliot O. Goodzeit and Jaryd T. Freedman

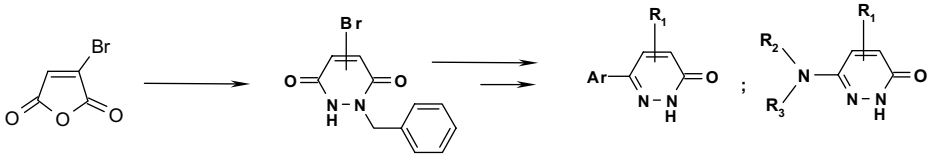


The synthesis and biological activity of novel spiro-isoxazoline *C*-disaccharides based on 1,3-dipolar cycloaddition of *exo*-glycals and sugar nitrile oxides **pp 7813–7816**
Ping-Zhu Zhang, Xiao-Liu Li,* Hua Chen, Ya-Nan Li and Rui Wang

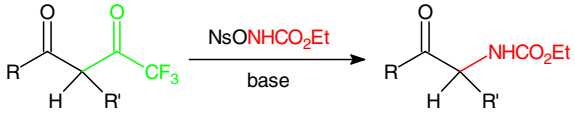


A series of novel spiro-isoxazoline *C*-disaccharides were synthesized by the 1,3-dipolar cycloaddition reactions of *exo*-glycals to sugar nitrile oxides, and their glycosidase inhibitory and antiviral activities were also evaluated.

Synthesis of regiospecifically polysubstituted pyridazinones **pp 7817–7820**
João X. de Araújo-Júnior, Martine Schmitt,* Cyril Antheaume and Jean-Jacques Bourguignon

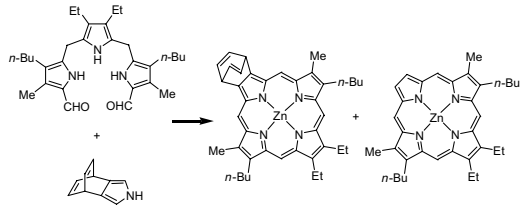


A novel deacylation during the amination of trifluoromethyl β-dicarbonyl compounds **pp 7821–7824**
Stefania Fioravanti,* Lucio Pellacani,* Federico Ramadori and Paolo A. Tardella*



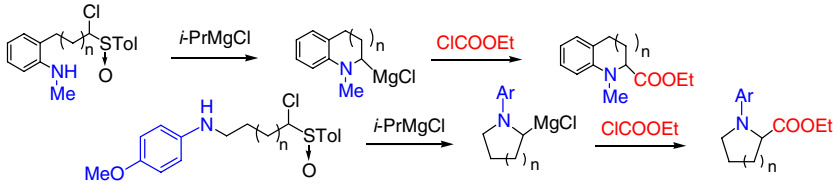
A rare loss of CF_3CO was observed in the amination reactions of trifluoromethyl β-dicarbonyl compounds with $NsONHCO_2Et$ as the aminating agent and CaO or NaH as the base. The reaction can facilitate a direct synthesis of N-substituted α-amino esters or α-amino ketones.

Retro-Diels–Alder reaction using bicyclo[2.2.2]octatriene-fused pyrrole during porphyrin synthesis **pp 7825–7828**
Hidemitsu Uno,* Yuri Sahara and Takahiro Takiue

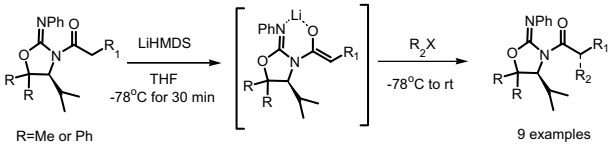


The retro-Diels–Alder reaction partially occurred in the preparation of bicyclo[2.2.2]octatriene-fused porphyrins.

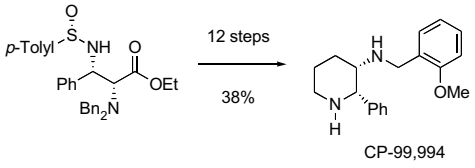
A new synthesis of cyclic α-amino acid derivatives by the intramolecular reaction of magnesium carbenoid with *N*-magnesio arylamine as the key reaction **pp 7829–7833**
Tohru Ohbayashi, Shintaro Mitsunaga and Tsuyoshi Satoh*



5,5-Dimethyl-2-phenylamino-2-oxazoline as an effective chiral auxiliary for asymmetric alkylations **pp 7834–7837**
Thanh Nguyen Le, Quynh Pham Bao Nguyen, Jae Nyoung Kim and Taek Hyeon Kim*

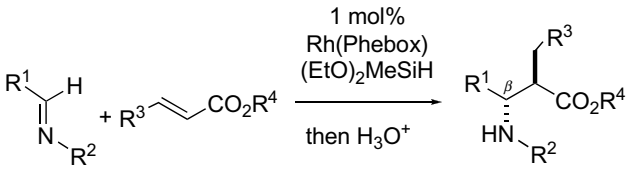


Sulfinimine-derived 2,3-diamino esters in the asymmetric synthesis of piperidine (2*S*,3*S*)-(+)-CP-99,994 **pp 7838–7840**
Franklin A. Davis,* Yanfeng Zhang and Danyang Li



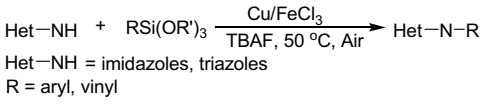
Sulfinimine-derived, differentially protected, 2,3-diamino esters are useful building blocks for the asymmetric synthesis of heterocycles and is illustrated by an efficient synthesis of amino piperidine alkaloid (+)-CP-99,994.

Diastereoselective reductive Mannich-type coupling of acrylates and aldimines with Rh(Phebox) catalyst **pp 7841–7844**
Hisao Nishiyama,* Junji Ishikawa and Takushi Shiomi

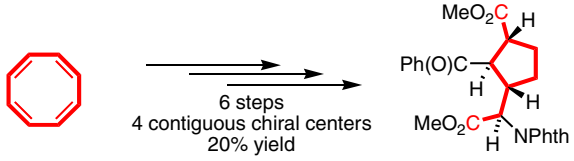


The coupling reaction with α,β-unsaturated esters and aldimines catalyzed by Rh(Phebox) complex was realized to give β-aminoesters in good to excellent yields with high diastereoselectivity up to 99%.

Solvent-free copper/iron co-catalyzed N-arylation reactions of nitrogen-containing heterocycles with trimethoxysilanes in air **pp 7845–7848**
Ren-Jie Song, Chen-Liang Deng, Ye-Xiang Xie and Jin-Heng Li*

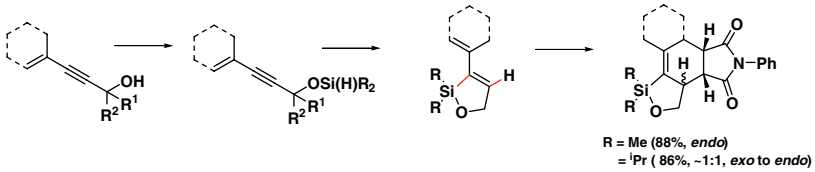


Generation of molecular complexity from cyclooctatetraene: synthesis of a protected 2-(3′-carboxy-2′-benzoylcyclopentyl)glycine **pp 7849–7852**
Subhabrata Chaudhury, Sergey Lindeman and William A. Donaldson*



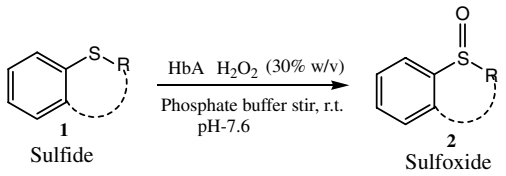
Synthesis of a protected 2-(3′-carboxycyclopentyl)glycine *rac*-**11**, possessing four contiguous chiral carbons, was accomplished in six steps (20% yield) from the hydrocarbon cyclooctatetraene.

Preparation of siloxacyclopentene containing 1,3-dienes and their Diels–Alder reactions **pp 7853–7856**
Ramakrishna R. Pidaparthi and Mark E. Welker*

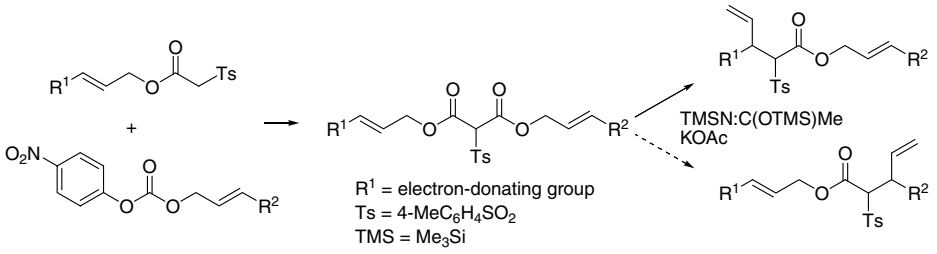


A number of enynyloxy dimethyl and diisopropyl silanes have been prepared and converted into siloxacyclopentene containing 1,3-dienes via intramolecular hydrosilylation of the alkyne functional group. Diels–Alder reactions of these dienes are reported.

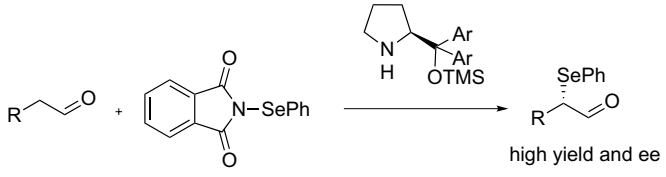
HbA/H_2O_2: an efficient biomimetic catalytic system for the oxidation of sulfides to sulfoxides **pp 7857–7860**
Atul Kumar* and Akanksha



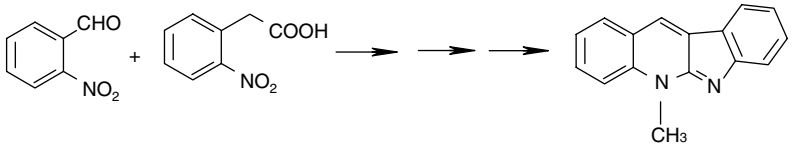
Highly regioselective decarboxylative Claisen rearrangement reactions of diallyl 2-sulfonylmalonates **pp 7861–7864**
Donald Craig,* Mark I. Lansdell and Simon E. Lewis



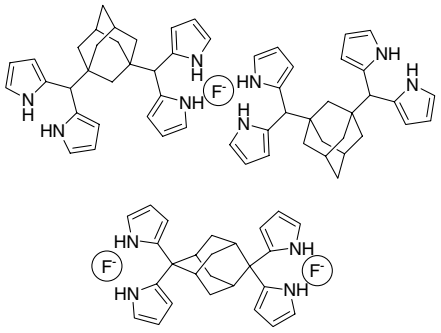
Organocatalytic highly enantioselective α-selenenylation of aldehydes **pp 7865–7869**
Henrik Sundén, Ramon Rios and Armando Córdova*



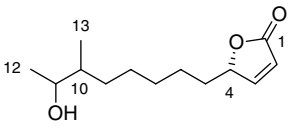
Double reductive cyclization: a facile synthesis of the indoloquinoline alkaloid cryptotackieine **pp 7870–7872**
P. T. Parvatkar, P. S. Parameswaran* and S. G. Tilve*



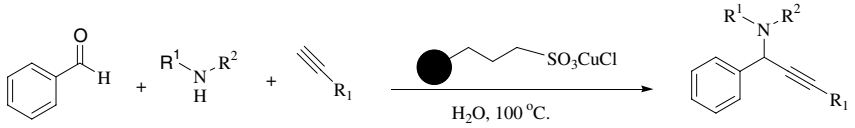
Adamantane–dipyrromethanes: novel anion receptors **pp 7873–7877**
Marija Renić, Nikola Basarić and Kata Mlinarić-Majerski*



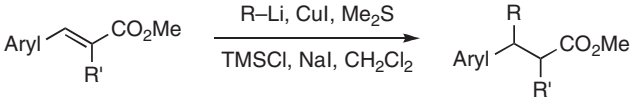
Synthesis of butenolides recently isolated from marine microorganisms **pp 7878–7881**
Staffan Karlsson, Fredrik Andersson, Palle Breistein and Erik Hedenström*



An efficient synthesis of propargylamines using a silica gel anchored copper chloride catalyst in an aqueous medium **pp 7882–7886**
B. Sreedhar,* P. Surendra Reddy, C. S. Vamsi Krishna and P. Vijaya Babu

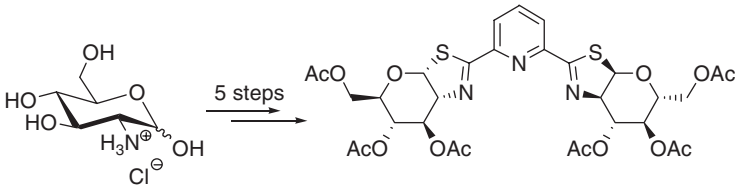


Conjugate addition of organocopper reagents in dichloromethane to α,β-unsaturated esters **pp 7887–7889**
Jingyue Yang and Gregory B. Dudley*



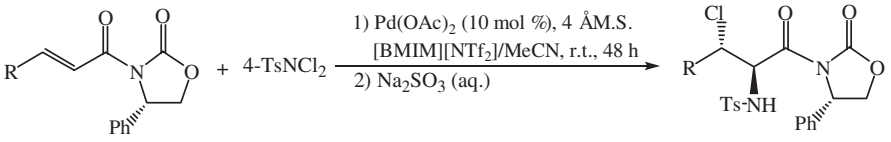
Organocopper reagents in conjunction with Lewis acid activators provide greater stability than traditional cuprate reagents while maintaining the reactivity needed for conjugate addition reactions in dichloromethane. Whereas cuprates engage in cross-coupling pathways, organocopper nucleophiles are more selective for conjugate addition. The utility of organocopper reagents in dichloromethane for the conjugate addition to α,β-unsaturated esters is expanded upon herein.

First synthesis of a carbohydrate-derived pyridyl bis(thiazoline) ligand **pp 7890–7893**
Mustafa Irmak, Tobias Lehnert and Mike M. K. Boysen*

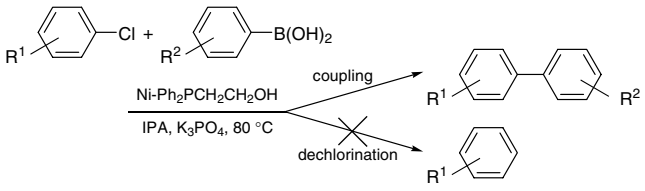


The first synthesis of a carbohydrate-based pyridyl bis(thiazoline) ligand starting from D-glucosamine and its application in asymmetric cyclopropanation reactions are reported.

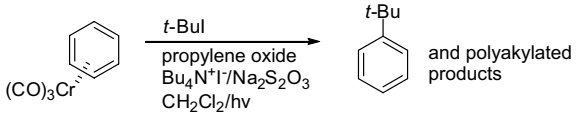
Chelation-controlled asymmetric aminohalogenation reaction **pp 7894–7898**
Yi-Ning Wang, Adiseshu Kattuboina, Teng Ai, Diya Banerjee and Guigen Li*



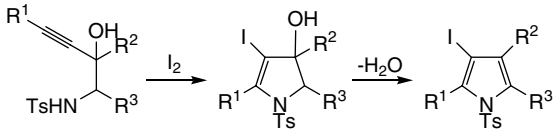
Ni-catalyzed cross-coupling reaction of aryl chlorides with arylboronic acids in IPA without using a reducing reagent **pp 7899–7902**
Li Zhou, Qingqing Miao, Ren He,* Xiujuan Feng and Ming Bao*



Radical aromatic substitution with benzene chromiumtricarbonyl **pp 7903–7905**
Jeffrey H. Byers,* Nathan R. Neale, J. Bradford Alexander and Stephen P. Gangemi



A general approach to polysubstituted pyrroles **pp 7906–7910**
David W. Knight,* Heinz C. Rost, Christopher M. Sharland and Jirada Singkhonrat



A series of alkynyl sulfonamides have been smoothly converted into the corresponding iodopyrroles, useful as precursors to highly substituted derivatives. The intermediate hydroxydihydropyrroles, surprisingly, proved to be stable, isolable compounds.

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ⓘ+ Supplementary data available via ScienceDirect

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