

**Tetrahedron Letters Vol. 49, No. 48, 2008**

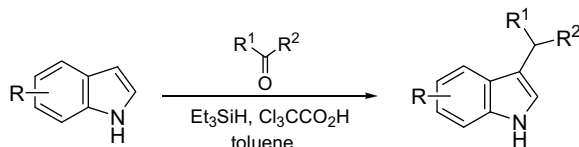
**Contents**

**COMMUNICATIONS**

**An expedient synthesis of 3-substituted indoles via reductive alkylation with ketones**

pp 6749–6751

John R. Rizzo, Charles A. Alt, Tony Y. Zhang \*

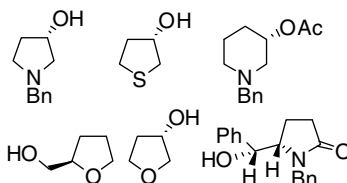


3-Alkylindoles were prepared in one step from indoles and ketones via a convenient reductive alkylation procedure using triethylsilane and trichloroacetic acid.

**Synthesis of a variety of optically active hydroxylated heterocyclic compounds using epoxide hydrolase technology**

pp 6752–6755

Daniel P. Pienaar, Robin K. Mitra, Thomas I. van Deventer, Adriana L. Botes \*

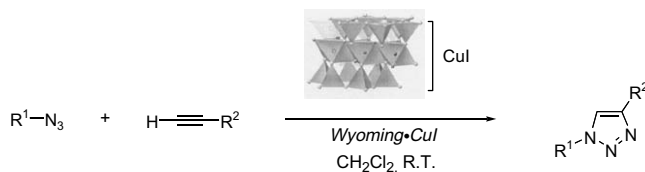


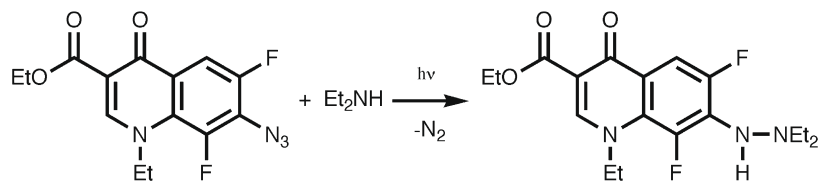
Novel epoxide hydrolases were utilised to hydrolyse a variety of functionalised epoxides. The biotransformation products were subsequently converted into a variety of optically active heterocyclic compounds.

**Copper(I)-doped Wyoming's montmorillonite for the synthesis of disubstituted 1,2,3-triazoles**

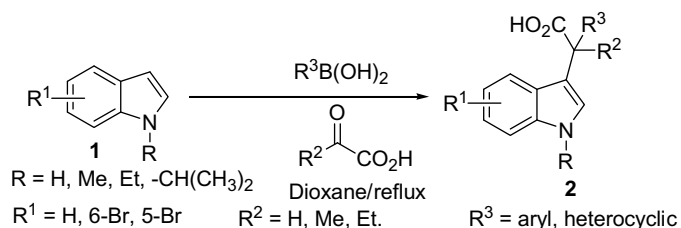
pp 6756–6758

Ibtissem Jlalía, Hichem Elamari, Faouzi Meganem, Jean Herscovici, Christian Girard \*

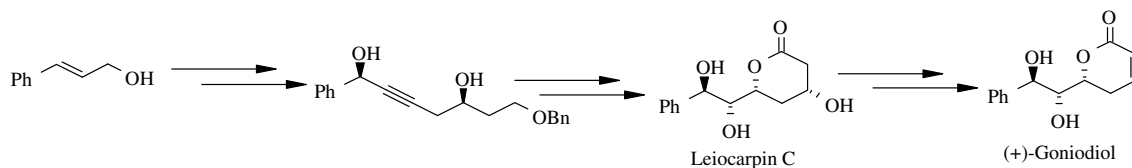


**Photochemistry of 7-azide-1-ethyl-3-carboxylate-6,8-difluoroquinolone: a novel reagent for photoaffinity labeling** pp 6759–6761Elisa Leyva <sup>\*</sup>, Denisse de Loera, Socorro Leyva**Novel Petasis boronic acid reactions with indoles: synthesis of indol-3-yl-aryl-acetic acids**

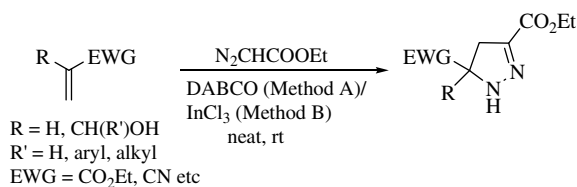
pp 6762–6764

Dinabandhu Naskar <sup>\*</sup>, Subhasish Neogi, Amrita Roy, Ashis Baran Mandal**The first stereoselective and the total synthesis of Leiocarpin C and total synthesis of (+)-Goniodiol**

pp 6765–6767

J. S. Yadav <sup>\*</sup>, K. Premalatha, S. J. Harshavardhan, B. V. Subba Reddy**Lewis acid- and/or Lewis base-catalyzed [3+2] cycloaddition reaction: synthesis of pyrazoles and pyrazolines**

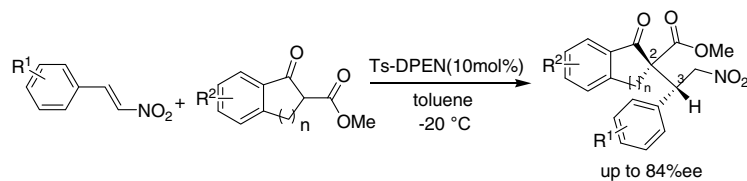
pp 6768–6772

Palakodety Radha Krishna <sup>\*</sup>, Empati Raja Sekhar, Florence Mongin

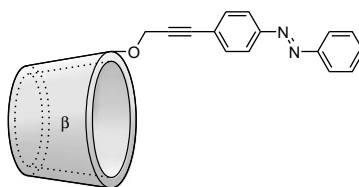
Lewis acid- and/or Lewis base-catalyzed cycloaddition of various olefins with ethyl diazoacetate is reported.

**Noyori's Ts-DPEN ligand: an efficient bifunctional primary amine-based organocatalyst in enantio- and diastereoselective Michael addition of 1,3-dicarbonyl indane compounds to nitroolefins**

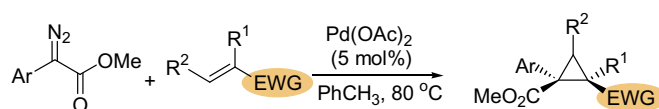
pp 6773–6777

Ya-Dong Ju, Li-Wen Xu <sup>\*</sup>, Li Li, Guo-Qiao Lai, Hua-Yu Qiu, Jian-Xiong Jiang, Yixin Lu
**Synthesis of a  $\beta$ -cyclodextrin derivative bearing an azobenzene group on the secondary face**

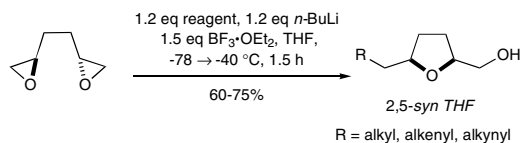
pp 6778–6780

Juan M. Casas-Solvas, Antonio Vargas-Berenguel <sup>\*</sup>
**Palladium-catalyzed cyclopropanation of electron-deficient olefins with aryldiazocarbonyl compounds**

pp 6781–6783

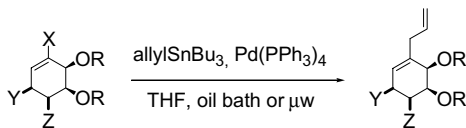
Shufeng Chen, Jian Ma, Jianbo Wang <sup>\*</sup>
**Efficient access to 2,5-substituted tetrahydrofurans via a one-pot cyclization of di- and triepoxides**

pp 6784–6786

Gordon J. Florence <sup>\*</sup>, Romain Cadou

**Stille reaction over *cis*-halocyclohexadienediol derivatives**

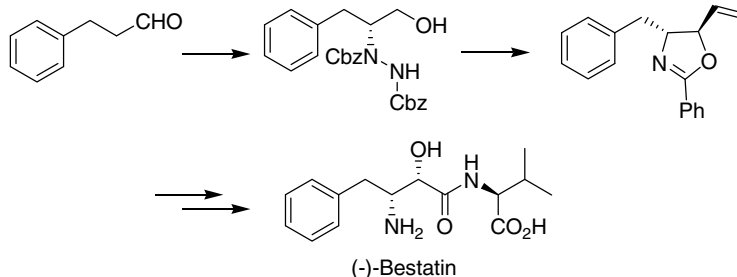
pp 6787–6790

Viviana Heguaburu <sup>\*</sup>, Marcus Mandolesi Sá, Valeria Schapiro, Enrique Pandolfi

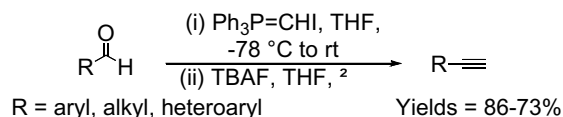
Stille reaction was performed with several enantiomerically pure *cis*-diol derivatives under conventional heating and microwave irradiation forming the corresponding allyl *cis*-dihydrodiol derivatives.

**A short enantioselective synthesis of (-)-bestatin via L-proline-catalyzed  $\alpha$ -amination of an aldehyde**

pp 6791–6793

Shyla George, Gurunath S. Suryavanshi, Arumugam Sudalai <sup>\*</sup>**Terminal alkynes from aldehydes via dehydrohalogenation of (*Z*)-1-iodo-1-alkenes with TBAF**

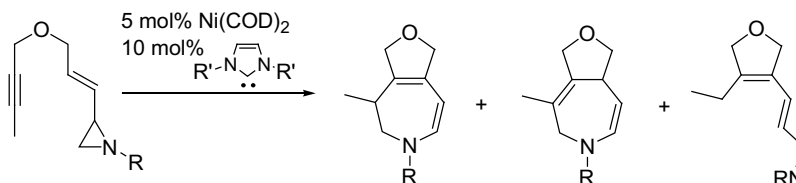
pp 6794–6796

Mira Beshai, Bhartesh Dhudshia, Ryan Mills, Avinash N. Thadani <sup>\*</sup>

Terminal alkynes were synthesized in high yields from the corresponding (*Z*)-1-iodo-1-alkenes via dehydrohalogenation with tetrabutylammonium fluoride (TBAF). A one-pot synthesis of terminal alkynes from aldehydes was also developed.

**Nickel-catalyzed reactions of vinyl aziridines and aziridinylen-ynes**

pp 6797–6799

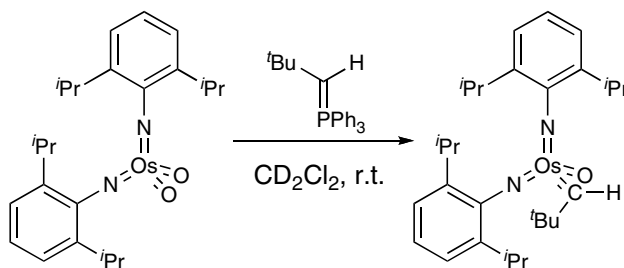
Gang Zuo, Kainan Zhang, Janis Louie <sup>\*</sup>

Ni/NHC was found to catalyze the rearrangement of vinyl aziridines and aziridinylen-ynes under mild conditions.

**Synthesis and reactivity of an unprecedented osmium(VIII) alkylidene**

pp 6800–6803

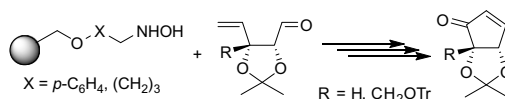
Véronique Martin, Simon Blakey \*



**Traceless solid-phase synthesis of hydroxylated cyclopentenones**

pp 6804–6806

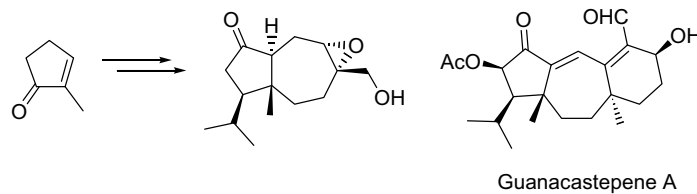
Christos I. Stathakis, John K. Gallos \*



**A synthetic approach to the functionalized hydroazulene core of guanacastepenes and heptemerenes**

pp 6807–6809

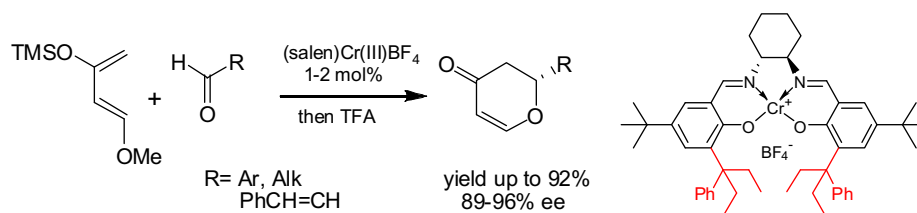
Karol Michalak, Michał Michalak, Jerzy Wicha \*



**Improvement of the reactivity and selectivity of the oxo-Diels–Alder reaction by steric modification of the salen–chromium catalyst**

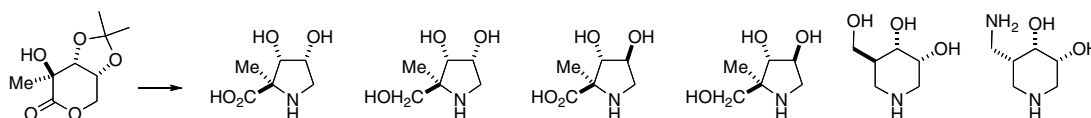
pp 6810–6811

Wojciech Chaładaj, Piotr Kwiatkowski, Janusz Jurczak \*

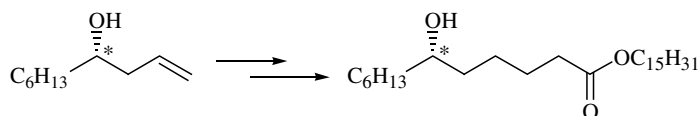


**Hydroxylated C-branched pyrrolidines, C-branched prolines and C-branched piperidines from a 2-C-methyl sugar lactone; efficient azide displacement of a tertiary triflate with inversion of configuration** pp 6812–6815

Filipa P. da Cruz, Graeme Horne, George W. J. Fleet \*


**Tandem cross-metathesis/hydrogenation: application to an enantioselective synthesis of pentadecyl 6-hydroxydodecanoate** pp 6816–6818

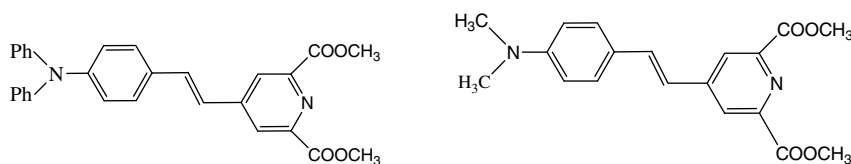
Emmanuel Bourcet, Marie-Alice Virolleaud, Fabienne Fache, Olivier Piva \*



The title compound has been obtained in two steps through a cross-metathesis/hydrogenation process performed between a chiral homoallylic alcohol and an unsaturated ester.

**Dipicolinate as acceptor in D-π-A chromophores: synthesis, characterization and fluorescence following single- and two-photon excitation** pp 6819–6822

Haibo Xiao \*, Xiaoming Tao, Yaochuan Wang, Shixiong Qian, Guanghao Shi, Hui Li

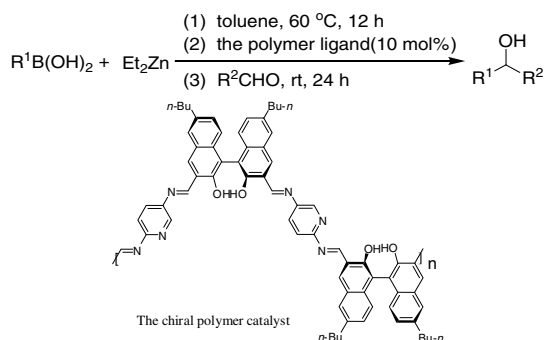


Compound 6

Compound 7

Compound 6:  $\delta = 35$  GM (Z-scan, 800nm, 140fs)  $\phi = 0.85$ Compound 7:  $\delta = 23$  GM (Z-scan, 800nm, 140fs)  $\phi = 0.63$ 
**Enantioselective arylation of aldehydes catalyzed by a soluble optically active polybinaphthols ligand** pp 6823–6826

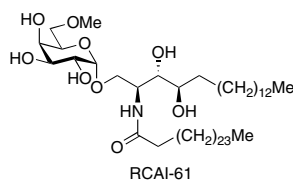
Xiaobo Huang, Linglin Wu, Jinqian Xu, Lili Zong, Hongwen Hu, Yixiang Cheng \*



**RCAI-61, the 6'-O-methylated analog of KRN7000: its synthesis and potent bioactivity for mouse lymphocytes to produce interferon- $\gamma$  in vivo**

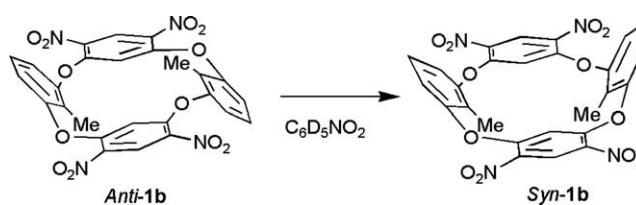
pp 6827–6830

Takuya Tashiro, Ryusuke Nakagawa, Sayo Inoue, Masao Shiozaki, Hiroshi Watarai, Masaru Taniguchi, Kenji Mori \*

RCAI-61 and related analogs of KRN7000 induce a large amount of IFN- $\gamma$  production.**Anti to syn isomerization of oxacalix[4]arene bearing two methyl groups at the intra-annular distal positions**

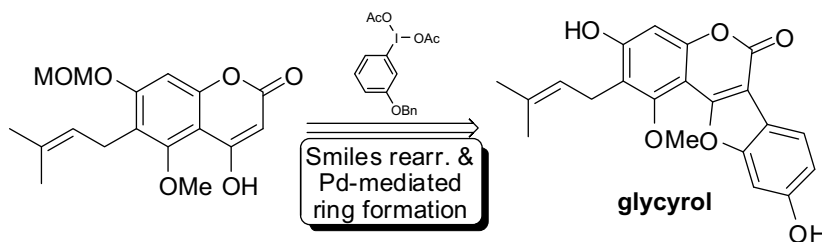
pp 6831–6834

Hisatoshi Konishi \*, Takayuki Mita, Yusuke Yasukawa, Osamu Morikawa, Kazuhiro Kobayashi

The *anti* to *syn* conversion very slowly proceeds at 473 K in nitrobenzene- $d_5$  with a half-life of 7.2 h ( $\Delta G^\ddagger$  139 kJ mol $^{-1}$ ).**The first total synthesis of glycyrol**

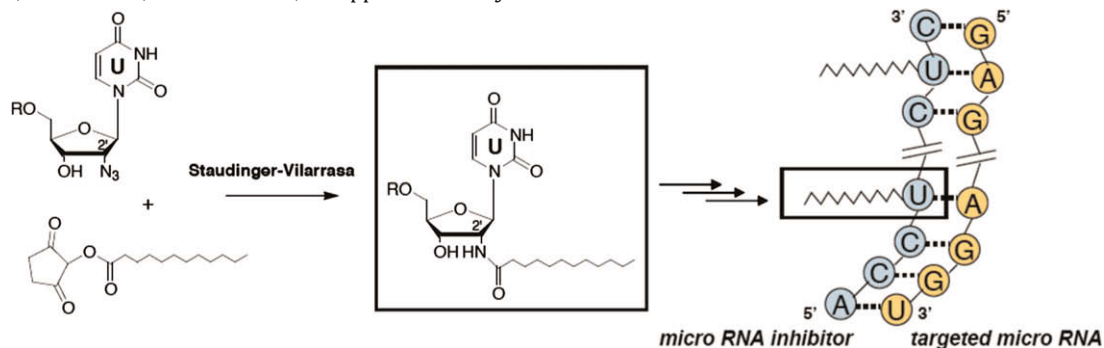
pp 6835–6837

Ying Lan Jin, Sanghee Kim, Yeong Shik Kim, Soon-Ai Kim, Hak Sung Kim \*

Glycyrol, isolated from *Glycyrrhizae Radix*, has a unique skeleton of a benzofuran coumarin. The key steps in the synthesis of glycyrol are Smiles rearrangement and Pd-mediated ring formation and selective introduction of prenyl and *O*-methyl groups.**2'-Lipid-modified oligonucleotides via a 'Staudinger-Vilarrasa' reaction**

pp 6838–6840

Hubert Chapuis, Laurent Bui, Isabelle Bestel, Philippe Barthélémy \*

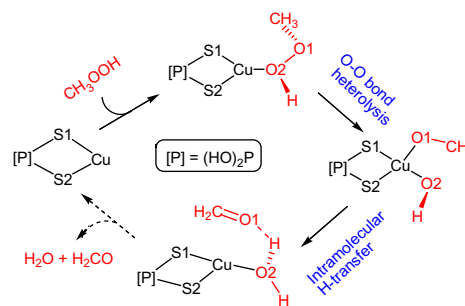


**Decomposition of alkyl hydroperoxide by a copper(I) complex: insights from density functional theory**

pp 6841–6845

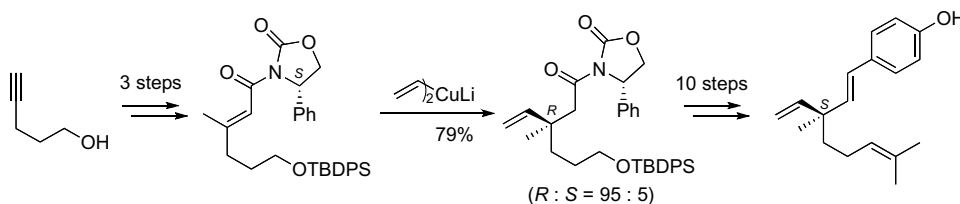
Yi Luo, Satoshi Maeda, Koichi Ohno \*

Computations suggest that (OH)<sub>2</sub>PS<sub>2</sub>Cu(I)-mediated decomposition of CH<sub>3</sub>OOH leads to formaldehyde and water molecules via O–O bond heterolysis and subsequent intramolecular hydrogen transfer, with retention of the copper(I) complex.

**Efficient construction of a chiral all-carbon quaternary center by asymmetric 1,4-addition and its application to total synthesis of (+)-bakuchiol**

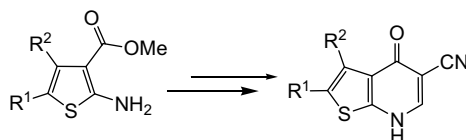
pp 6846–6849

Tomoyuki Esumi \*, Hiroyuki Shimizu, Akinori Kashiya, Chizu Sasaki, Masao Toyota, Yoshiyasu Fukuyama \*

**A facile, scalable preparation of 4-oxo-4,7-dihydrothieno[2,3-*b*]pyridine-5-carbonitriles**

pp 6850–6852

L. Nathan Tumey \*, Niala Bhagirath, Biqi Wu, Diane H. Boschelli

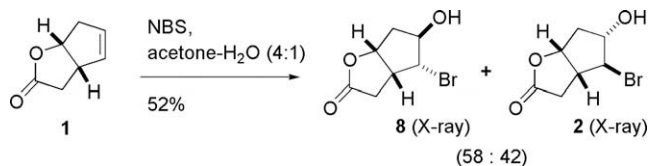


We report a three step route to give 4-oxo-4,7-dihydrothieno[2,3-*b*]pyridine-5-carbonitriles from 2-aminothiophene-3-carboxylate esters. The reactions proceed in good yield and generally require no chromatographic purification.

**Bromohydrin reactions of Grieco's bicyclic lactone**

pp 6853–6855

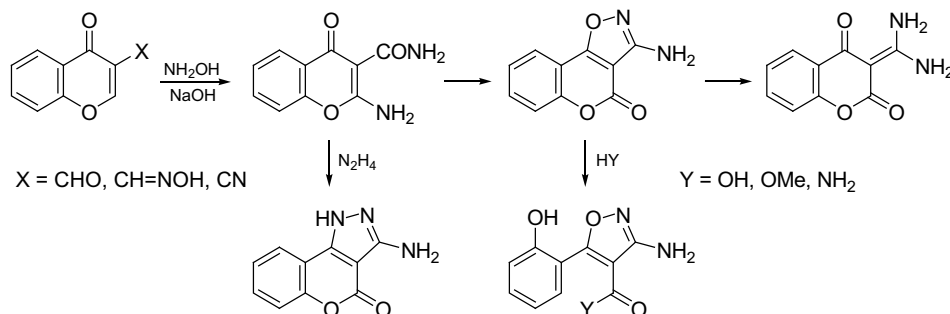
Rodolfo Tello-Aburto, Maria Yolanda Rios, Dale C. Swenson, Horacio F. Olivo \*





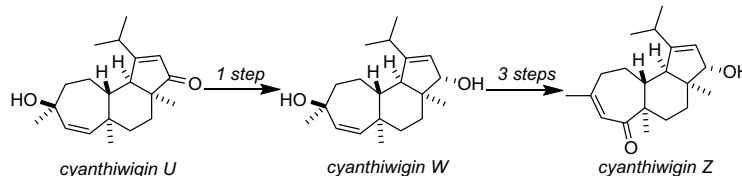
### A reinvestigation of the reactions of 3-substituted chromones with hydroxylamine. Unexpected synthesis of 3-amino-4*H*-chromeno[3,4-*d*]isoxazol-4-one and 3-(diaminomethylene)chroman-2,4-dione

pp 6856–6859

Vyacheslav Ya. Sosnovskikh<sup>\*</sup>, Vladimir S. Moshkin, Mikhail I. Kodess

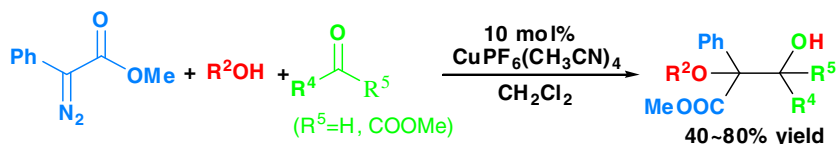
### Conversion of cyanthiwigin U to related cyanthiwigins: total syntheses of cyanthiwigin W and cyanthiwigin Z

pp 6860–6861

Matthew W. B. Pfeiffer, Andrew J. Phillips<sup>\*</sup>

### Copper(I) hexafluorophosphate: a dual functional catalyst for three-component reactions of methyl phenyldiazoacetate with alcohols and aldehydes or $\alpha$ -ketoesters

pp 6862–6865

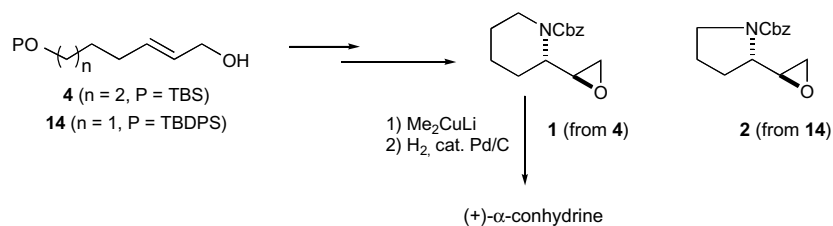
Yongli Yue, Xin Guo, Zhiyong Chen, Liping Yang, Wenhao Hu<sup>\*</sup>

Oxonium ylides in situ generated from methyl phenyldiazoacetate and alcohols in the presence of  $\text{CuPF}_6(\text{CH}_3\text{CN})_4$  underwent an aldol-type reaction with aldehydes or  $\alpha$ -ketoesters in a convergent, three-component fashion to give  $\alpha$ -alkoxy- $\beta$ -hydroxy acid derivatives in good yields.



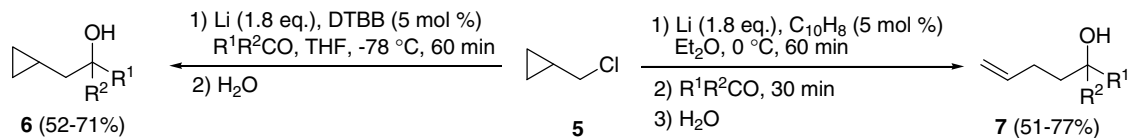
### A highly stereocontrolled route to 2-(2'-oxiranyl)piperidines and pyrrolidines: enantioselective synthesis of (+)- $\alpha$ -conhydrine

pp 6866–6869

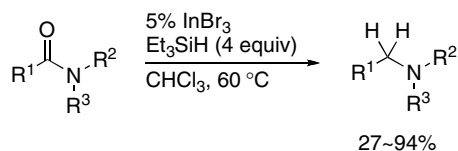
Dídac Rodríguez, Anna Picó, Albert Moyano<sup>\*</sup>

**Easy selective generation of (lithiomethyl)cyclopropane or homoallyllithium by a chlorine–lithium exchange**

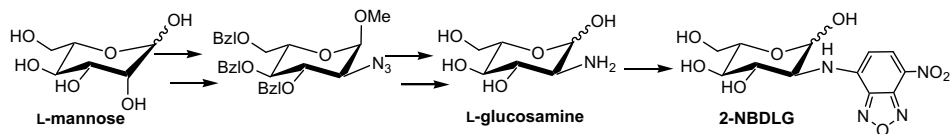
pp 6870–6872

Isidro M. Pastor <sup>\*</sup>, Itziar Peñafiel, Miguel Yus <sup>\*</sup>**One-step conversion to tertiary amines: InBr<sub>3</sub>/Et<sub>3</sub>SiH-mediated reductive deoxygenation of tertiary amides**

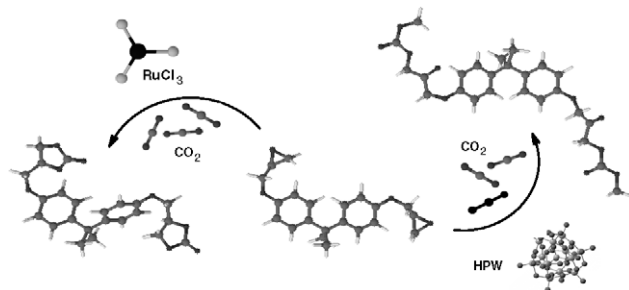
pp 6873–6875

Norio Sakai <sup>\*</sup>, Kohji Fujii, Takeo Konakahara**Synthesis of 2-NBDLG, a fluorescent derivative of L-glucosamine; the antipode of D-glucose tracer 2-NBDG**

pp 6876–6878

Toshihiro Yamamoto <sup>\*</sup>, Yuji Nishiuchi, Tadashi Teshima, Hideaki Matsuoka, Katsuya Yamada <sup>\*</sup>**Selectivity of the cyclic carbonate formation by fixation of carbon dioxide into epoxides catalyzed by Lewis bases**

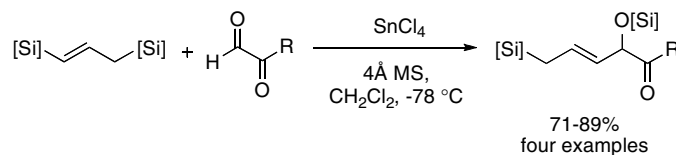
pp 6879–6881

Caio Ribeiro Gomes, Daniele Marcondes Ferreira, Carlos J. Leopoldo Constantino, Eduardo R. Pérez González <sup>\*</sup>

**Lewis acid-promoted carbonyl addition of 1,3-bis(silyl)propenes**

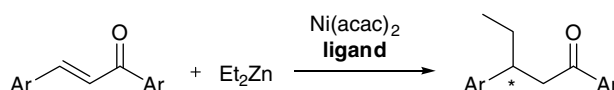
pp 6882–6884

Pavel Tuzina, Peter Somfai \*

**Enantioselective nickel-catalyzed conjugate addition of dialkylzinc to chalcones using chiral  $\alpha$ -amino amides**

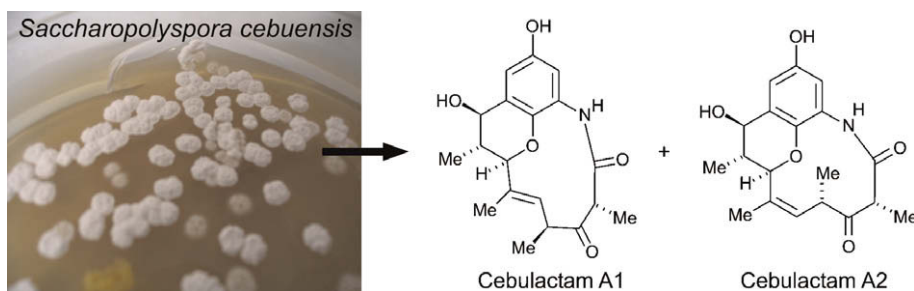
pp 6885–6888

Jorge Escorihuela, M. Isabel Burguete \*, Santiago V. Luis \*

**Cebulactams A1 and A2, new macrolactams isolated from *Saccharopolyspora cebuensis*, the first obligate marine strain of the genus *Saccharopolyspora***

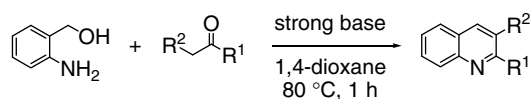
pp 6889–6892

Sheila Marie Pimentel-Elardo, Tobias A. M. Gulder, Ute Hentschel \*, Gerhard Bringmann \*

**Base-mediated synthesis of quinolines: an unexpected cyclization reaction between 2-aminobenzylalcohol and ketones**

pp 6893–6895

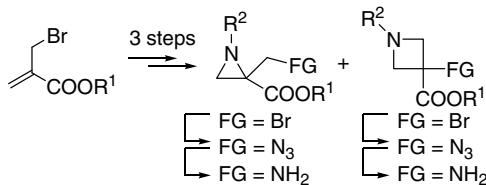
Hans Vander Mierde \*, Pascal Van Der Voort, Francis Verpoort \*



### Synthesis of alkyl 2-(bromomethyl)aziridine-2-carboxylates and alkyl 3-bromoazetidide-3-carboxylates as amino acid building blocks

pp 6896–6900

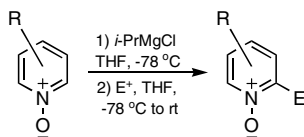
Sven Mangelinckx, Asta Žukauskaitė, Vida Buinauskaitė, Algirdas Šačkus, Norbert De Kimpe \*



### Selective synthesis of 2-substituted pyridine *N*-oxides via directed *ortho*-metallation using Grignard reagents

pp 6901–6903

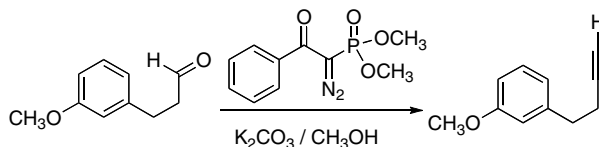
Hans Andersson, Magnus Gustafsson, Roger Olsson \*, Fredrik Almqvist \*



### A convenient reagent for aldehyde to alkyne homologation

pp 6904–6906

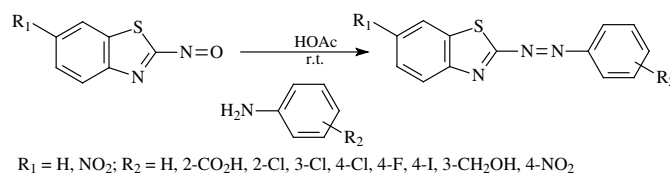
Douglass F. Taber \*, Sha Bai, Peng-fei Guo



### 2-Nitrosobenzothiazoles: useful synthons for new azobenzothiazole dyes

pp 6907–6909

Hélio Faustino, Reda M. El-Shishtawy, Lucinda V. Reis, Paulo F. Santos, Paulo Almeida \*

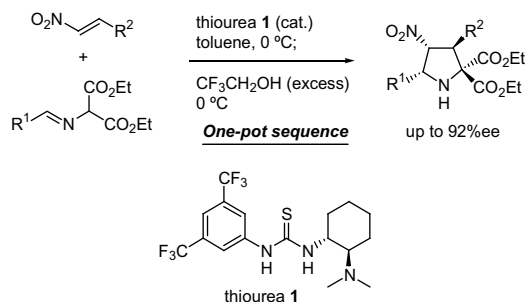


Novel azobenzothiazole dyes have been synthesized by condensation of 2-nitrosobenzothiazole and 6-nitro-2-nitrosobenzothiazole with aniline, anthranilic acid, 3-hydroxymethylaniline, 2-, 3- and 4-chloroaniline, 4-fluoroaniline, 4-iodoaniline or 4-nitroaniline. The new synthetic approach described is advantageous over the classic diazotization process commonly used for the preparation of related disperse dyes, since the presence of an electron-donating group at the *para*-position, or equivalent, of the coupling component is no more a pre-requisite for the success of the condensation reaction.

**Thiourea-catalyzed asymmetric formal [3+2] cycloaddition of azomethine ylides with nitroolefins**

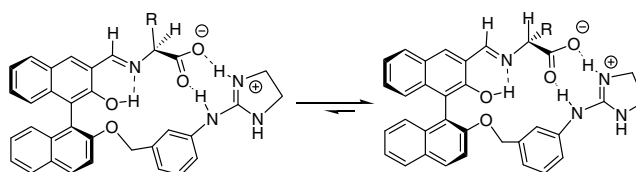
pp 6910–6913

Jianwu Xie, Kohzo Yoshida, Kiyosei Takasu, Yoshiji Takemoto \*

**Chirality conversion and enantioselective extraction of amino acids by imidazolium-based binol-aldehyde**

pp 6914–6916

Lijun Tang, Hyerim Ga, Jiyoung Kim, Sujung Choi, Raju Nandhakumar, Kwan Mook Kim \*



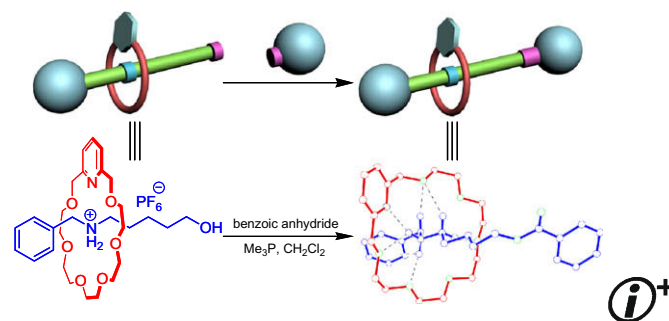
A novel imidazolium-based binol receptor **4** has been synthesized and used as a chirality conversion reagent for general amino acids with higher *D*-form selectivity compared to other guanidinium-based receptors. Favorable solubility in chloroform enabled **4** as an effective chiral extractant for the resolution of racemic amino acids.

**Binding of secondary dialkylammonium salts by pyrido-21-crown-7**

pp 6917–6920

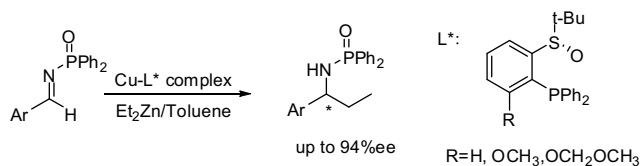
Chuanju Zhang, Kelong Zhu, Shijun Li, Jinqiang Zhang, Feng Wang, Ming Liu, Ning Li, Feihe Huang \*

Pyrido-21-crown-7 (**P21C7**) has been synthesized and shown to form [2]pseudorotaxanes spontaneously with secondary dialkylammonium ions. These complexes are stronger than their benzo-21-crown-7 counterparts and much stronger than their dibenzo-24-crown-8 counterparts. Based on this new **P21C7**/secondary dialkylammonium salt recognition motif, a [2]rotaxane terminated by phenyl groups as stoppers has been successfully constructed using the threading-followed-by-stoppering technique.

**Catalytic asymmetric diethylzinc addition to diphenylphosphonyl imines using chiral *tert*-butanesulfinylphosphine ligands**

pp 6921–6923

Junmin Chen, Dong Li, Haifeng Ma, Linfeng Cun, Jin Zhu, Jingen Deng, Jian Liao \*

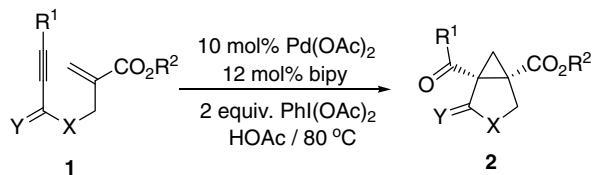


A class of novel chiral *tert*-butanesulfinylphosphine ligands were designed and synthesized by a concise two-step route with high yields. High activities and enantioselectivities (up to 94% ee) were achieved when using them in catalytic asymmetric diethylzinc addition to diphenylphosphonyl imines.

**i+**

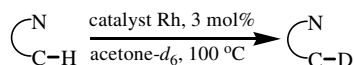
**Cyclization–oxidation of 1,6-enyne derivated from Baylis–Hillman adducts via Pd(II)/Pd(IV)-catalyzed reactions: stereoselective synthesis of multi-substituted bicyclo[3.1.0] hexanes and insight into reaction pathways** pp 6924–6928

Hui Liu, Jianjun Yu, Limin Wang, Xiaofeng Tong \*



**Chelation-assisted rhodium hydride-catalyzed regioselective H/D exchange in arenes** pp 6929–6932

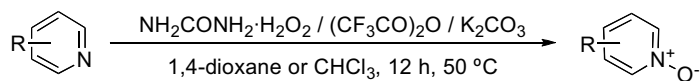
Shanshan Chen, Guoyong Song, Xingwei Li \*




A series of air stable ionic rhodium(III) phosphine hydride complexes are synthesized via cyclometalation of functionalized arenes and prove to be active catalysts for regioselective H/D exchange in various arenes via chelation-assisted C–H activation in acetone-*d*<sub>6</sub>.

**A safe, convenient and efficient method for the preparation of heterocyclic N-oxides using urea-hydrogen peroxide** pp 6933–6935

Dawen Rong, Victoria A. Phillips, Ramón Sánchez Rubio, M<sup>a</sup> Ángeles Castro, Richard T. Wheelhouse \*



\*Corresponding author

 Supplementary data available via ScienceDirect

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