

## Tetrahedron Letters Vol. 54, Issue 8, 2013

## Contents

## COMMUNICATIONS

**Nano copper oxide mediated ligand-free C–S cross-coupling and concomitant oxidative aromatization of 4-aryl-3,4-dihydropyrimidin-2(1H)-thione with diaryliodonium salts**

pp 739–743

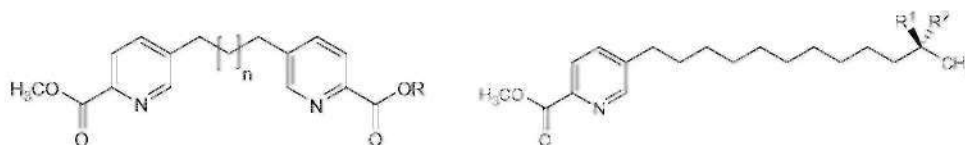
Bhagyashree Y. Bhong, Amol V. Shelke, Nandkishor N. Karade\*



**Penicolinates A–E from endophytic *Penicillium* sp. BCC16054**

pp 744–748

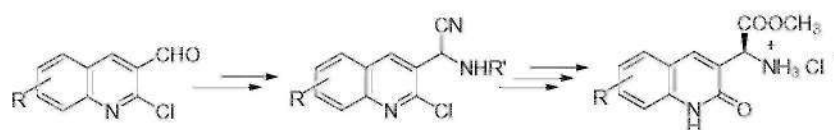
Chakapong Intaraudom, Nattawut Boonyuen, Rapheepat Suvannakad, Pranee Rachtawee, Pattama Pittayakhajonwut\*



**Efficient synthesis and X-ray structures of new  $\alpha$ -quinolin-3-yl- $\alpha$ -aminonitriles and derivatives**

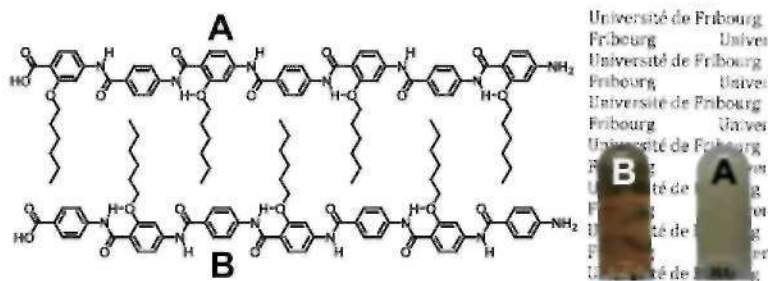
pp 749–752

Souheila Ladraa, Fabienne Berrée, Abdelmalek Bouraiou, Sofiane Bouacida, Thierry Roisnel, Bertrand Carboni, Ali Belfaitah\*



### Tuning the solubility of hepta(*p*-benzamide)s via the monomer sequence

pp 753–756

Helga Seyler, Andreas Kilbinger<sup>a</sup>

### Structurally diversified products from the reactions of 2-aminobenzamides with 1,3-cyclohexanediones catalyzed by iodine

pp 757–760

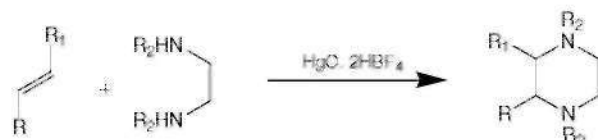
Lian Lu, Mei-Mei Zhang, Hong Jiang, Xiang-Shan Wang<sup>a</sup>

Controlling the reaction temperature at 50 °C, 80 °C, and 110 °C, respectively, the iodine-catalyzed reaction of 2-aminobenzamides with 1,3-cyclohexanediones gave structurally diversified products. In the latter, it gave bis-quinazolin-4(3*H*)-ones unexpectedly, with 1,3-cyclohexanediones ring-opening.



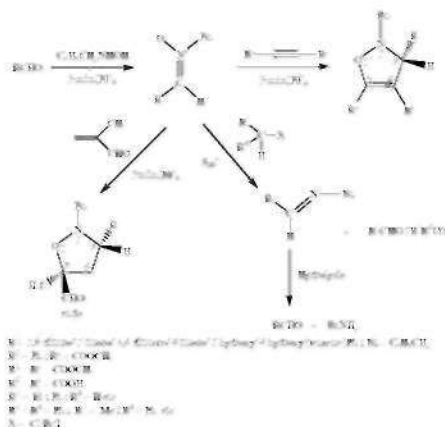
### A simple one-pot method for the mercuric oxide mediated synthesis of piperazines via oxidative diamination of olefins

pp 761–764

Harpreet Kour, Satya Paul<sup>a</sup>, Parvinder Pal Singh, Monika Gupta, Rajive Gupta

### An efficient ecofriendly protocol for the synthesis of novel fluoro isoxazoline and isoxazolidines using *N*-benzyl fluoro nitron via cycloaddition reactions

pp 765–770

Bhaskar Chakraborty<sup>a</sup>, Govinda Prasad Luitel

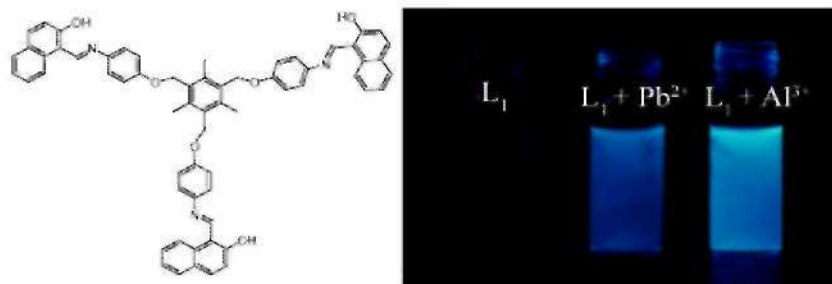
1-Butyl-3-methylimidazolium based ionic liquids are found to accelerate significantly the intermolecular 1,3-dipolar cycloaddition of *N*-benzyl fluoro nitrones derived in situ from aldehydes and benzylhydroxylamine, with electron deficient alkynes to afford enhanced rates and improved yields of isoxazolines while with enals exclusively *endo*-isoxazolidines are obtained with high selectivity. Synthetic potentiality of the novel isoxazolines and nitrones has also been tested successfully.



**Selective fluorescence sensor for Al<sup>3+</sup> and Pb<sup>2+</sup> in physiological condition by a benzene based tripodal receptor**

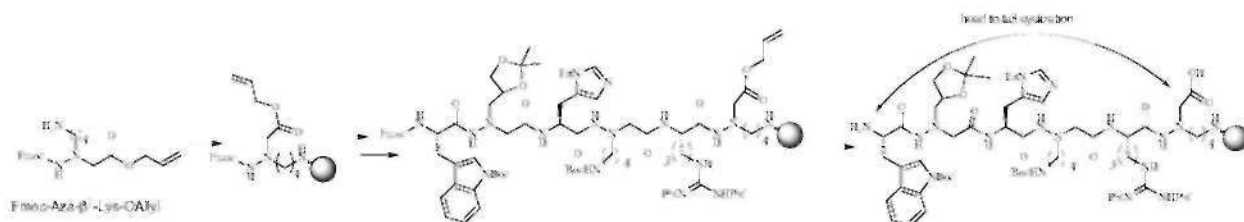
pp 771–774

Barun Kumar Datta, Chirantan Kar, Arghya Basu, Gopal Das\*

**Fmoc-aza-β<sup>3</sup>-Lys-OAllyl and Fmoc-aza-β<sup>3</sup>-Asp-OAllyl for on-resin head-to-tail cyclization of aza-β<sup>3</sup>-peptides**

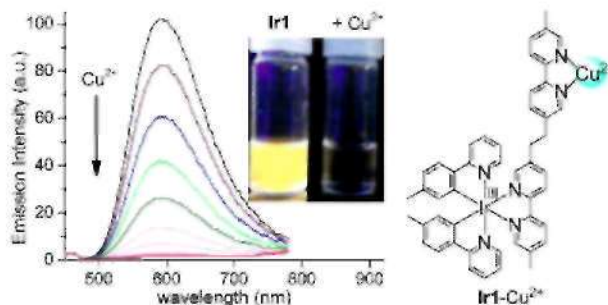
pp 775–778

Shoukri Abbour, Michèle Baudy-Floc'h\*

**Luminescent biscyclometalated iridium(III) complex for selective and switchable Cu<sup>2+</sup> ion binding in aqueous media**

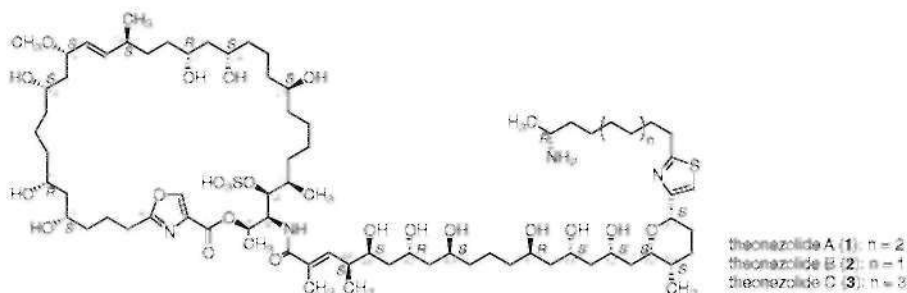
pp 779–782

Fengniu Lu, Masaki Yamamura, Tatsuya Nabeshima\*

**Stereochemistry of theonezolides A–C**

pp 783–787

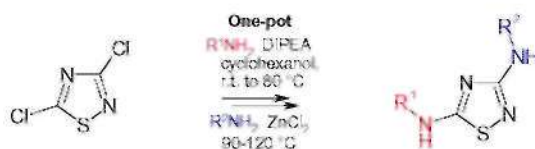
Kohei Nozawa, Masashi Tsuda, Naonobu Tanaka, Takaaki Kubota, Eri Fukushi, Jun Kawabata, Jun'ichi Kobayashi\*



**One-pot synthesis of bis(amino)-1,2,4-thiadiazoles via direct  $S_NAr$** 

pp 788–791

Howard A. Beeley, Sébastien Degorce, Craig S. Harris\*, Jonathan Lecoq, Rémy Morgentin, David Perkins

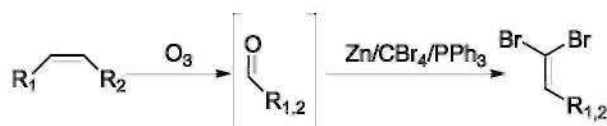


The synthesis of bis(amino)-1,2,4-thiadiazoles usually relies on a four-step sequence. Herein, we communicate to our knowledge the first one-pot synthesis of bis(amino)-1,2,4-thiadiazoles via a double  $S_NAr$  approach.

**Synthesis of dibromoolefins via a tandem ozonolysis–dibromoolefination reaction**

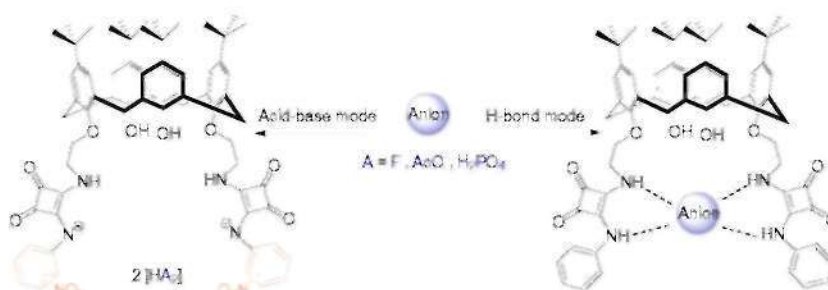
pp 792–795

Brenna Arlyce Brown\*, Jonathan G. C. Veinot

**Novel calix[4]arene-based receptors with bis-squaramide moieties for colorimetric sensing of anions via two different interaction modes**

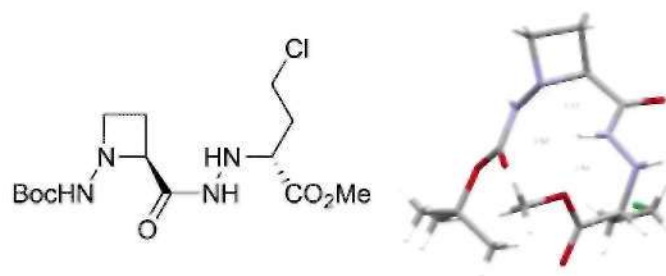
pp 796–801

Can Jin, Man Zhang, Chao Deng, Yangfan Guan, Jun Gong, Dunru Zhu, Yi Pan, Juli Jiang\*, Leyong Wang

**Reactivity of 1-aminoazetidine-2-carboxylic acid during peptide forming procedures: observation of an unusual variant of the hydrazino turn**

pp 802–805

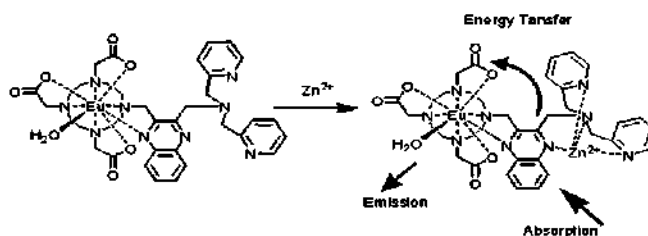
Amandine Altmayer-Henzién, Valérie Declerck, Régis Guillot, David J. Aitken\*



**A Europium-based luminescent chemosensor for Zn<sup>2+</sup> with quinoxaline as the antenna**

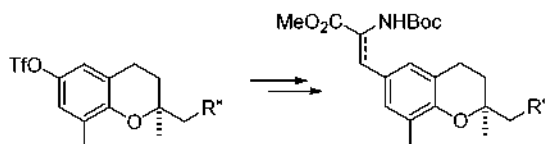
pp 806–810

Xinxiu Fang, Guiyan Zhao, Yanmeng Xiao, Jingwei Xu\*, Wei Yang\*

**Facile conversion of chromane-6-triflate to chromane-6-alanines under palladium conditions**

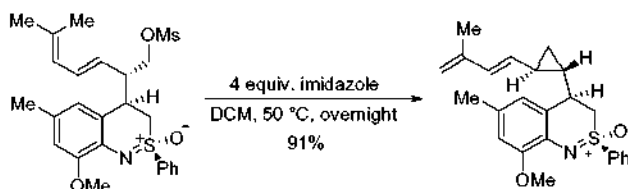
pp 811–813

Daniel K. Miller\*

**Benzothiazines in organic synthesis: formation of a cyclopropane via neighboring group participation**

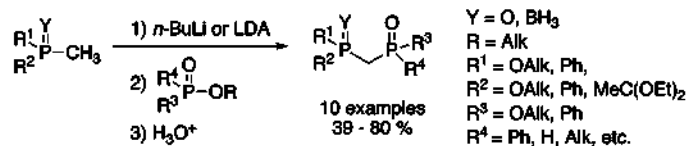
pp 814–816

Zhengxin Cai, Michael Harmata\*

**The phosphorus-Claisen condensation**

pp 817–820

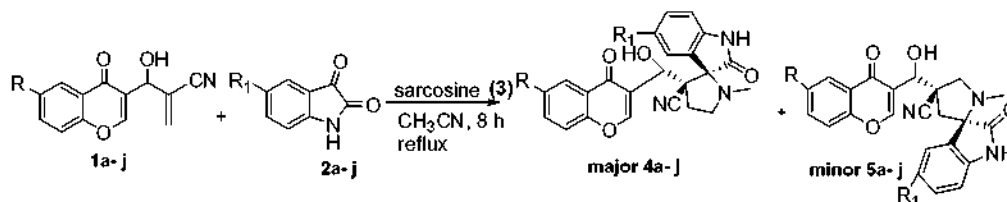
Laurent Gavara, Fabien Gelat, Jean-Luc Montchamp\*



### Synthesis of 3-spiropyrrolidine-3-spirooxindoles from Baylis–Hillman adducts of chromone with azomethine ylides

pp 821–827

Panneerselvam Yuvaraj, Boreddy S. R. Reddy\*



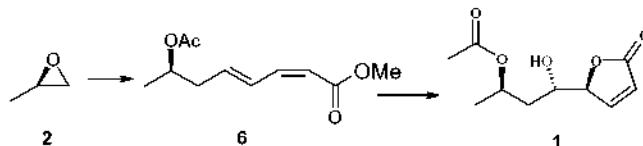
3-Spiropyrrolidine-oxindole unit is a privileged heterocyclic motif forming the core of a large family of alkaloid natural products with strong bioactivity profile and interesting structural properties. A novel regioselective synthesis of functionalized 3-spiropyrrolidine-3-spirooxindoles from 4-oxo-4H-chromone derivatives was accomplished by the [3+2] cycloaddition of azomethine ylides with Baylis–Hillman adducts.



### Concise and protecting group-free synthesis of botryolide-E

pp 828–829

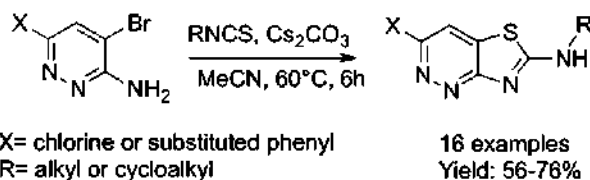
D. Chandra Rao, D. Kumar Reddy, V. Shekhar, Y. Venkateswarlu\*



### A short and straightforward approach towards 6-amino and 6-aminoalkyl thiazolo[4,5-c]pyridazines

pp 830–833

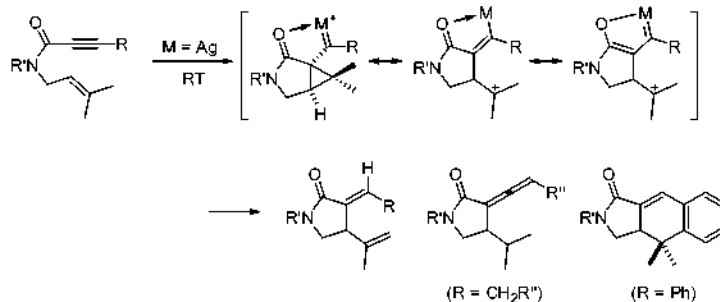
Alessandro Stella, Steven De Jonghe, Kenneth Segers, Piet Herdewijn\*



### Selectivity control by silver catalysts in the cycloisomerization of 1,6-enynes derived from propiolamides

pp 834–839

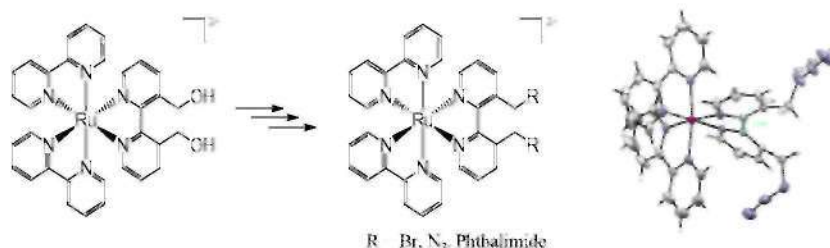
Jaeyoung Koo, Hyun-Sub Park, Seunghoon Shin\*



**Complexation to  $[\text{Ru}(\text{bpy})_2]^{2+}$ : the trick to functionalize 3,3'-disubstituted-2,2'-bipyridine**

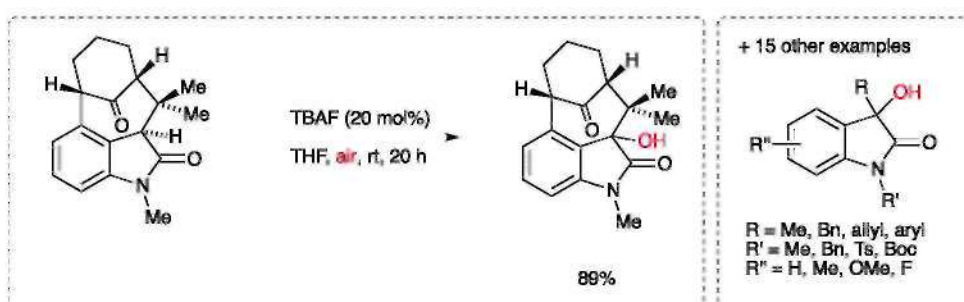
pp 840–842

Pascal Guillo, Olivier Hamelin\*, Jacques Pécaut, Stéphane Ménage

**A catalytic, mild and efficient protocol for the C-3 aerial hydroxylation of oxindoles**

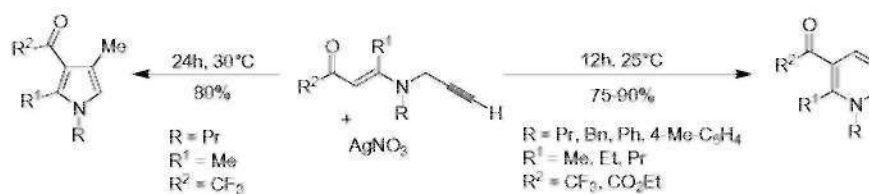
pp 843–846

Benjamin R. Buckley\*, Beatriz Fernández D.-R.

**Intramolecular cyclization of *N*-propargylic  $\beta$ -enaminones catalyzed by silver**

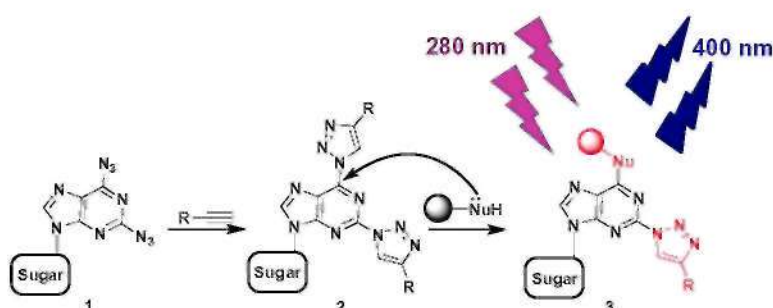
pp 847–849

Marcos A. P. Martins\*, Marcelo Rossatto, Clarissa P. Frizzo, Elisandra Scapin, Lilian Buriol, Nilo Zanatta, Helio G. Bonacorso

**1,2,3-Triazoles as leaving groups in purine chemistry: a three-step synthesis of *N*<sup>6</sup>-substituted-2-triazolyl-adenine nucleosides and photophysical properties thereof**

pp 850–853

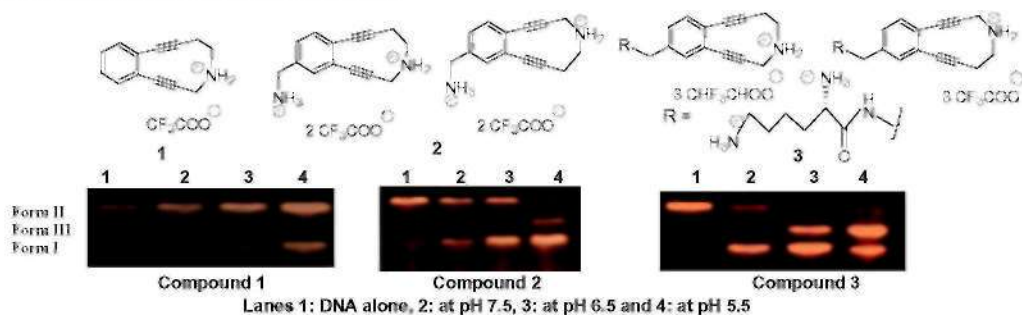
Armands Kovaļovs, Irina Novosjolova, Ērika Bizdēna, Inga Bižane, Lina Skardziute, Karolis Kazlauskas, Saulius Juršenas, Maris Turks\*



### Synthesis of highly efficient pH-sensitive DNA cleaving aminomethyl N-substituted cyclic enediyne and its L-lysine conjugate

pp 854–857

Ishita Hatial, Partha S. Addy, Ananta K. Ghosh, Amit Basak\*

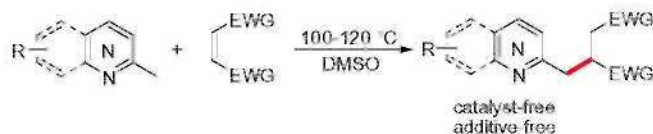


i+

### An addition of benzylic sp<sup>3</sup> C–H to electron-deficient olefins

pp 858–860

Hong-Ying Li, Li-Juan Xing, Tong Xu, Peng Wang, Rui-Hua Liu\*, Bin Wang\*

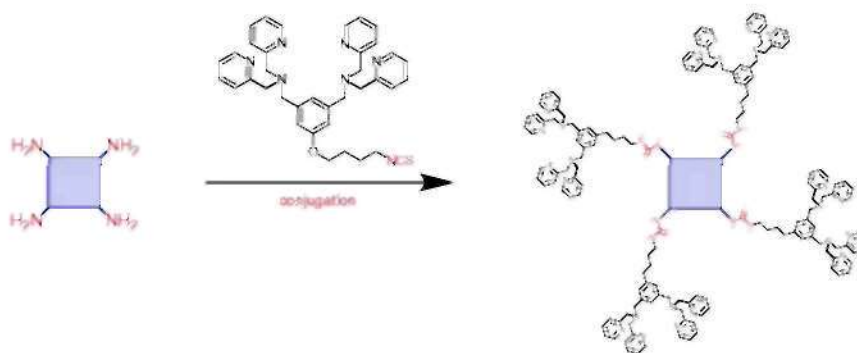


i+

### Convenient synthesis of multivalent zinc(II)-dipicolylamine complexes for molecular recognition

pp 861–864

Shuzhang Xiao, Serhan Turkyilmaz, Bradley D. Smith\*

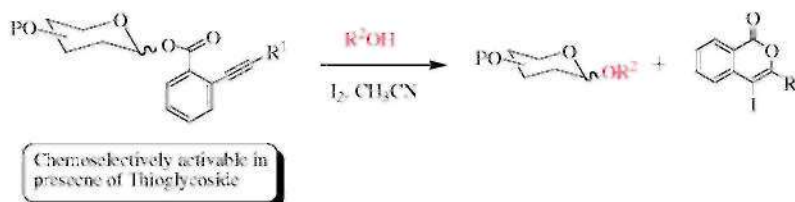


i+

### Use of iodine for efficient and chemoselective glycosylation with glycosyl *ortho*-alkynylbenzoates as donor in presence of thioglycosides

pp 865–870

Samrat Dutta, Swarbhanu Sarkar, Shyam Ji Gupta, Asish Kumar Sen\*

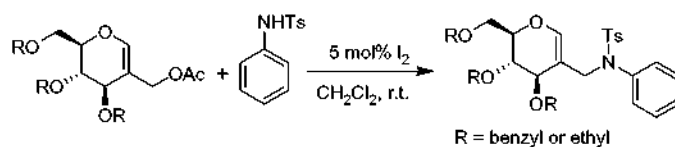


i+



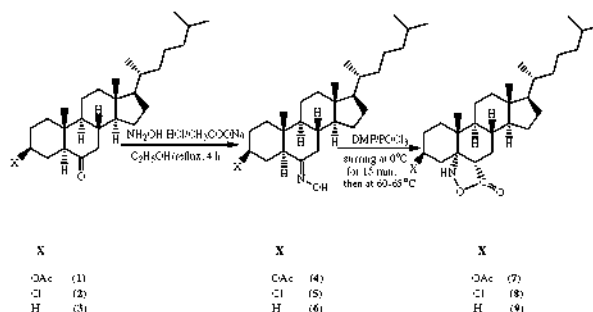
**$S_N2$  substitution reaction of 2-C-acetoxymethyl glycols catalyzed by iodine: a novel synthesis of 2-C-N-arylamidomethyl glycols** pp 871–873

J. S. Yadav, G. Narasimhulu, N. Umadevi, Y. Vikram Reddy, B. V. Subba Reddy\*



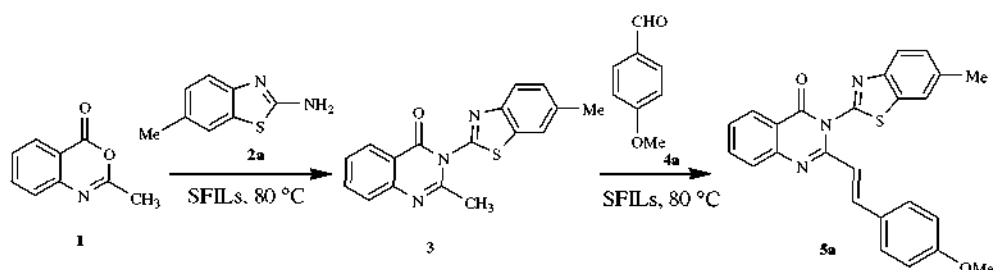
**Construction of novel steroidal isoxazolidinone derivatives under Vilsmeier–Haack conditions** pp 874–877

Shamsuzzaman\*, Hena Khanam, Ashraf Mashrai, Nazish Siddiqui



**An efficient, ionic liquid mediated one-pot, three component sequential synthesis of 3-benzothiazolyl-2-styrylquinazolin-4(3H)-ones** pp 878–882

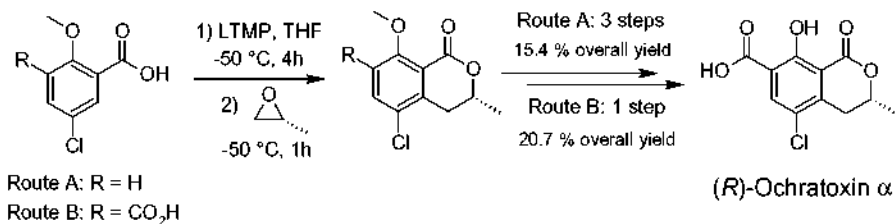
Mahendra Kumar\*, Kailash Sharma, Dinesh Kumar Sharma, Anand Kumar Arya



An efficient and diversity oriented one-pot three component sequential synthetic method has been presented for the synthesis of 3-benzothiazolyl-2-styrylquinazolin-4(3H)-ones. The synthetic method involves the reaction of 3,1-benzoxazinone with 2-aminobenzothiazole and subsequently with aromatic aldehyde using  $SO_3H$ -functionalized ionic liquids (SFILs) as solvent/catalyst.

**Efficient synthesis of (R)-ochratoxin alpha, the key precursor to the mycotoxin ochratoxin A** pp 883–886

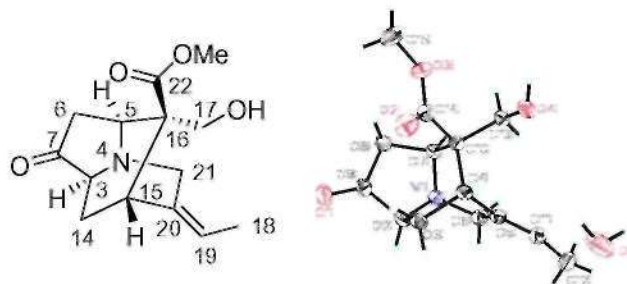
Cesar Antonio Lenz, Michael Rychlik\*



**Gelsoschalotine, a novel indole ring-degraded monoterpene indole alkaloid from *Gelsemium elegans***

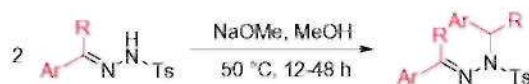
pp 887–890

Shuang Liang\*, Chun-Yong He, László F. Szabó, Yi Feng\*, Xiao Lin, Yuan Wang

**N-Alkylation of tosylhydrazones via a metal-free reductive coupling procedure**

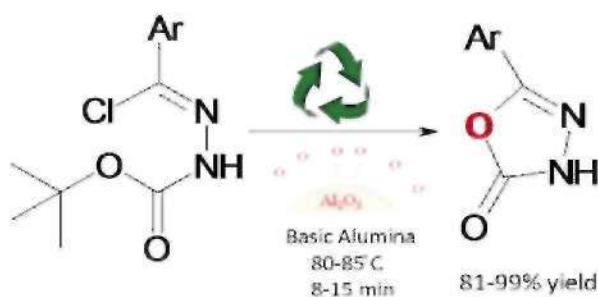
pp 891–895

Jin-Biao Liu, Hui Yan, Gui Lu\*

**Synthesis of 5-aryl-3H-[1,3,4]oxadiazol-2-ones from *N*-(chloro-aryl-methylene)-*tert*-butylcarbazates using basic alumina as an efficient and recyclable surface under solvent-free condition**

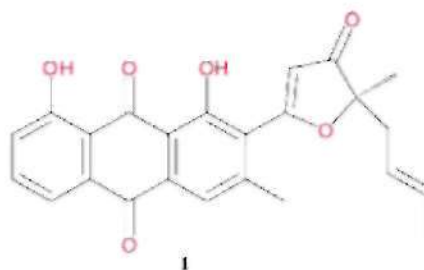
pp 896–899

Kamalesh Debnath, Sudipta Pathak, Animesh Pramanik\*

**Rubimycinone A, a new anthraquinone from a terrestrial *Streptomyces* sp.**

pp 900–902

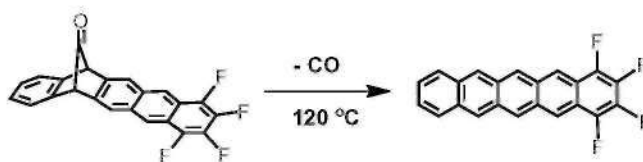
Ritesh Raju, Oleksandr Gromyko, Viktor Fedorenko, Jennifer Herrmann, Andriy Luzhetskyy, Rolf Müller\*



**The synthesis and ambipolar charge transport properties of 1,2,3,4-tetrafluoropentacene**

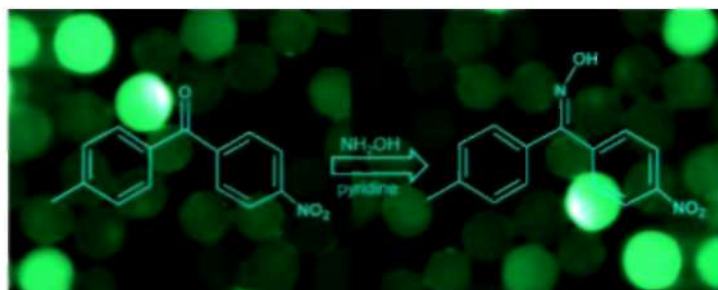
pp 903–906

Ching-Ting Chien, Ta-Chung Chiang, Motonori Watanabe, Ting-Han Chao, Yuan Jay Chang, Yan-Duo Lin, Hung-Kai Lee, Ching Yang Liu, Chih-Hsin Tu, Chia-Hsing Sun, Tahsin J. Chow\*

**A practical method for the regeneration of Kaiser-oxime resin**

pp 907–908

Sebastian Lüttenberg, Frank Sondermann, Jürgen Scherkenbeck\*

**A red fluorescent ‘turn-on’ chemosensor for Hg<sup>2+</sup> based on triphenylamine–triazines derivatives with aggregation-induced emission characteristics**

pp 909–912

Hao Zhang, Yi Qu, Yuting Gao, Jianli Hua\*, Jing Li, Bo Li

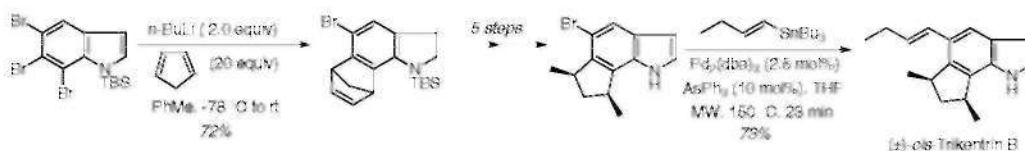


A new sensitive and selective red fluorescence ‘turn on’ chemosensor **1** for Hg<sup>2+</sup> was developed by taking advantage of AIE feature of triphenylamine–triazines motif and the specific binding of thymine with Hg<sup>2+</sup>. Moreover, chemosensor **1** exhibited large two-photon absorption cross-section (3328 GM).

**Total synthesis of (±)-cis-trikentrin B via intermolecular 6,7-indole aryne cycloaddition and Stille cross-coupling**

pp 913–917

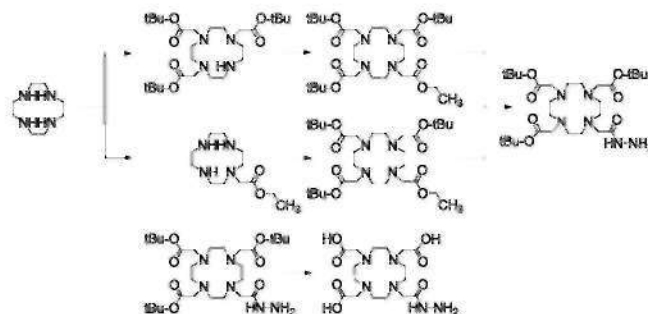
Nalin Chandrasoma, Neil Brown, Allen Brassfield, Alok Nerurkar, Susana Suarez, Keith R. Buszek\*



**Comparison and systematic optimization of synthetic protocols for DOTA-hydrazone generation**

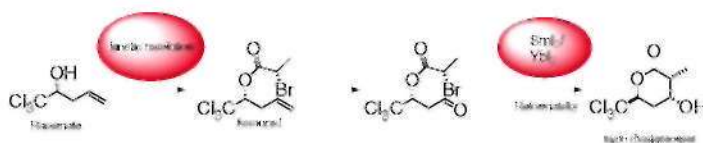
pp 918–920

Felix Fuge, Marek Weiler, Jessica Gätjens, Twan Lammers, Fabian Kiessling\*

**Synthesis of  $\beta$ -hydroxy- $\delta$ -trichloromethyl- $\delta$ -valerolactones by intramolecular samarium/ytterbium diiodide-mediated Reformatsky reaction**

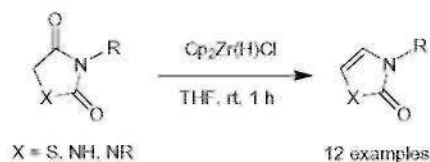
pp 921–924

Thies M. Schulze, Jörg Grunenberg, Stefan Schulz\*

**Schwartz reagent mediated synthesis of thiazolones and imidazolones from thiazolidine-2,4-diones and imidazolidine-2,4-diones**

pp 925–928

Srinivasa Reddy Dandepally, Radouane Elgoummadi, Alfred L. Williams\*

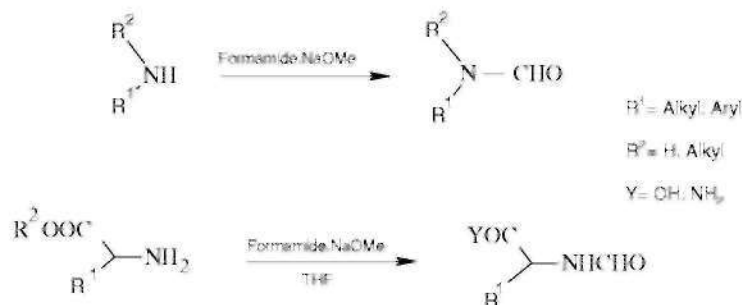


A novel reduction/elimination method of thiazolidine-2,4-dione and imidazolidine-2,4-dione derivatives using Schwartz reagent to synthesize numerous thiazolones and imidazolones in a single step is reported.

**A convenient procedure for N-formylation of amines**

pp 929–931

Sony Joseph, Prasenjit Das, Bindu Srivastava, Hashim Nizar\*, Mohan Prasad



**Diastereoselective formation of  $\beta$ -hydroxyketones by the reduction of Ketene dimers**

pp 932–935

Pei-Hsun Wei, Melanie A. Gary, Divya Nalla, Gero D. Harzmann, Ahmad A. Ibrahim, Kyle R. Dayak, Nessian J. Kerrigan\*

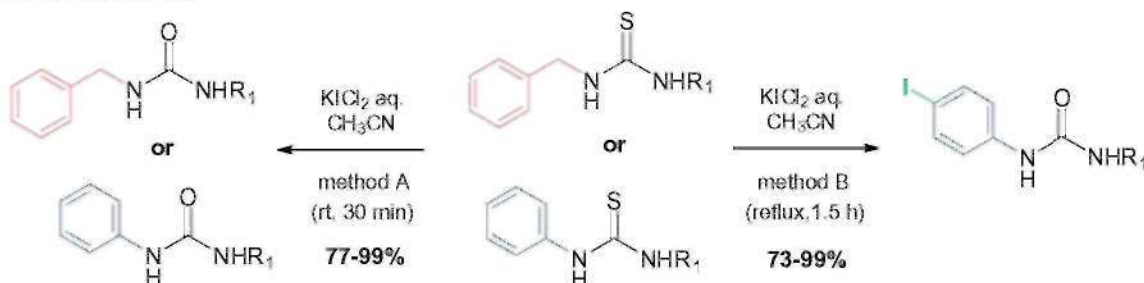


A general method for the diastereoselective formation of  $\beta$ -hydroxyketones by the reduction of ketene dimers was developed. Methylphenylketene dimer was reduced with optimal diastereoselectivity (dr up to 6:1) using  $\text{LiBH}_4$ . However, more generally  $\text{LiAlH}_4$  was found to be the most effective reducing system with respect to diastereoselectivity (dr up to >99:1) and yield (62–99% for 10 examples).

**The use of aqueous potassium dichloriodate for the synthesis of ureas**

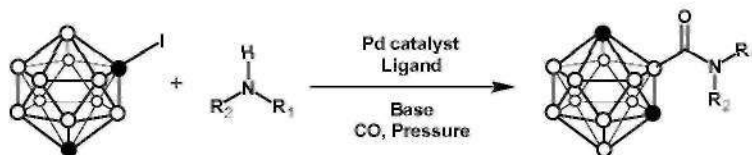
pp 936–940

Gil Mendes Viana, Lúcia Cruz de Sequeira Aguiar\*, Jonas de Araújo Ferrão, Alessandro Bolis Costa Simas, Marcela Guariento Vasconcelos

**Synthesis of *m*-carboranyl amides via palladium-catalyzed carbonylation**

pp 941–944

Kiran Babu Gona, Vanessa Gómez-Vallejo, Jordi Llop\*



One-pot one-step reaction for the synthesis of secondary and tertiary *m*-carboranyl amides via palladium-catalyzed carbonylation.

**Biocatalytic asymmetric aldol reaction in buffer solution**

pp 945–948

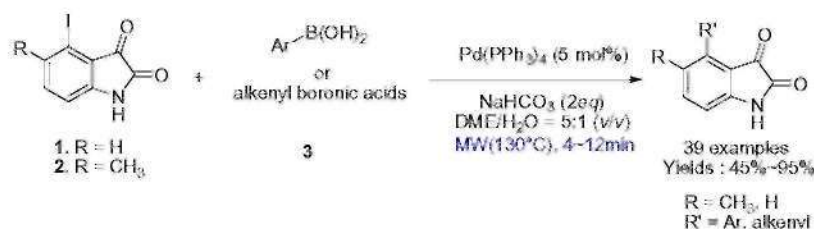
Zong-Bo Xie, Na Wang\*, Guo-Fang Jiang, Xiao-Qi Yu\*



**Efficient synthesis of bulky 4-substituted-isatins via microwave-promoted Suzuki cross-coupling reaction**

pp 949–955

Yu-Chao Liu, Chen-Jin Ye, Qiong Chen\*, Guang-Fu Yang\*

**Mechanistic aspect of ring transformations in the reaction of 5-nitro-4-pyrimidinone with acetophenone derivatives and cycloalkanones depending on the electron density/ring size of the ketone**

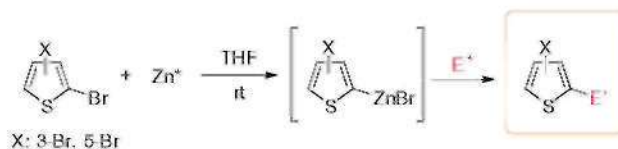
pp 956–959

Nagatoshi Nishiwaki\*, Ryuichi Sugimoto, Kazuhiko Saigo, Kazuya Kobiro

**Site-selective mono-oxidative addition of active zinc into carbon–bromine bond of dibrominated-thiophenes: preparation of thienylzinc reagents and their applications**

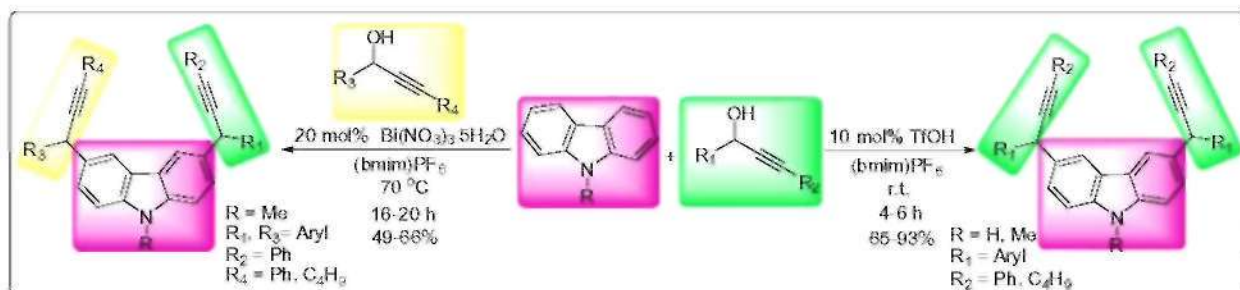
pp 960–964

Hye-Soo Jung, Hyun-Hee Cho, Seung-Hoi Kim\*

**Condensation of propargylic alcohols with N-methylcarbazole and carbazole in [bmim]PF<sub>6</sub> ionic liquid; synthesis of novel dipropargylic carbazoles using TfOH or Bi(NO<sub>3</sub>)<sub>3</sub>·5H<sub>2</sub>O as catalyst**

pp 965–969

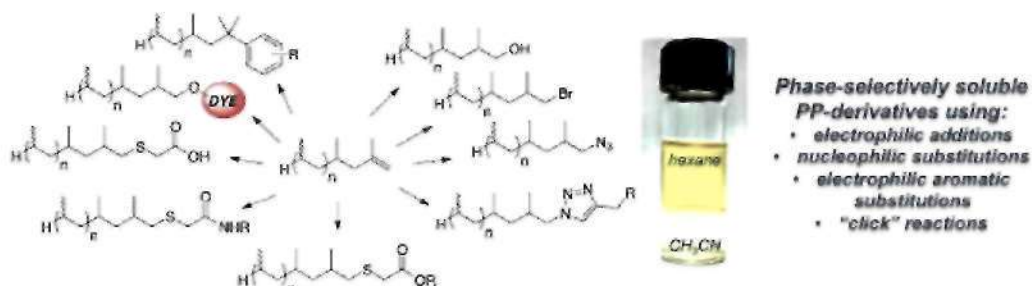
G. G. K. S. Narayana Kumar, Kenneth K. Laali\*



**Terminal functionalization of atactic polypropylene: a new soluble polymer support**

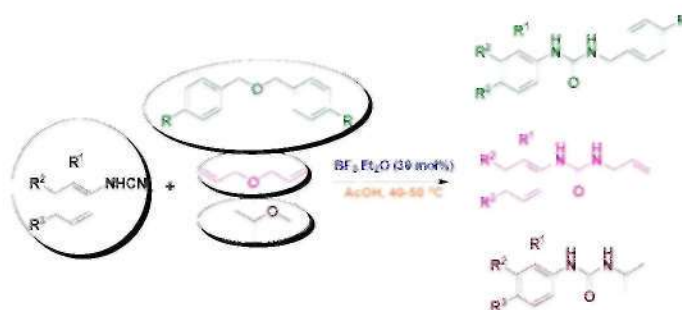
pp 970–974

Binhong Lin, Devin Lawler, Gregory P. McGovern, Christopher A. Bradley, Christopher E. Hobbs\*

**An efficient transformation of ethers to *N,N*-disubstituted ureas in a Ritter type reaction**

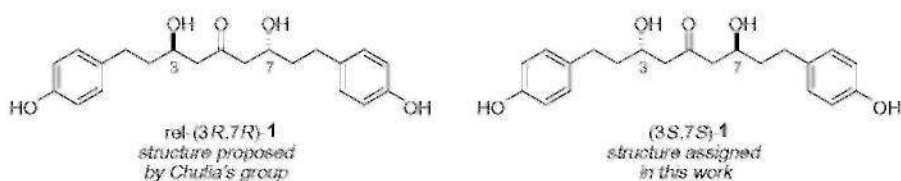
pp 975–979

Veladi Panduranga, Basavaprabhu, Vommina V. Sureshbabu\*

**Enantioselective total synthesis of (–)-ericanone**

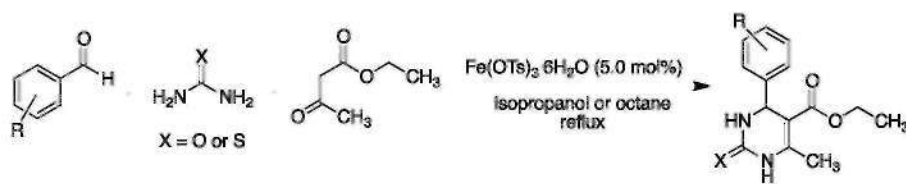
pp 980–982

Luiz C. Dias\*, Paula K. Kuroishi, Ellen C. Polo, Emílio C. de Lucca Jr.

**Iron(III) tosylate catalyzed synthesis of 3,4-dihydropyrimidin-2(1*H*)-ones/thiones via the Biginelli reaction**

pp 983–985

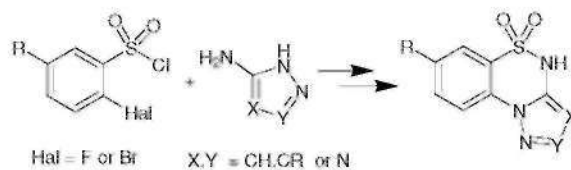
Jacob T. Starcevic, Thomas J. Laughlin, Ram S. Mohan\*



**A facile synthesis of annulated azolo[*c*][1,2,4]thiadiazine *S,S*-dioxides**

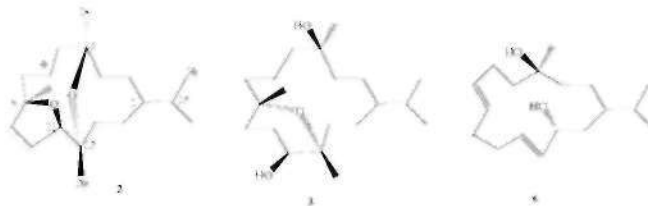
pp 986–988

Artem Cherepakha\*, Vladimir O. Kovtunenکو, Andrey Tolmachev

**Bioactive cembranoids from the Red Sea soft coral *Sarcophyton glaucum***

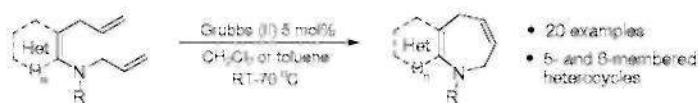
pp 989–992

Rania F. About El-Ezz, Safwat A. Ahmed, Mohamed M. Radwan, Nahla A. Ayoub, Manal S. Afifi, Samir A. Ross, Paweł T. Szymanski, Hesham Fahmy, Sherief I. Khalifa\*

**A ring-closing metathesis approach to heterocycle-fused azepines**

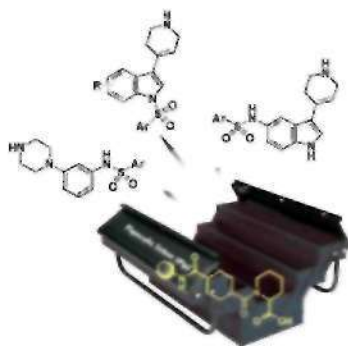
pp 993–997

Thomas A. Moss\*

**The pipecolic linker—an acid-labile handle for derivatization of secondary amines on a solid-support. Part 3**

pp 998–1002

Paweł Zajdel\*, Nicolas Masurier, Vittorio Canale, Pascal Verdier, Muriel Amblard, Maciej Pawłowski, Jean Martinez, Gilles Subra

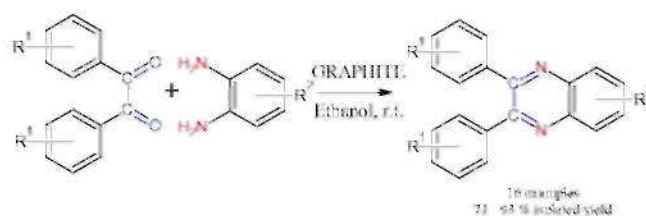




**Graphite catalyzed green synthesis of quinoxalines**

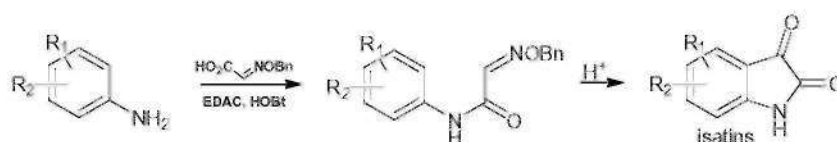
pp 1003–1007

Hari K. Kadam, Salman Khan, Rupesh A. Kulkarni, Santosh G. Tilve\*

**Synthesis of substituted isatins**

pp 1008–1011

Larry L. Klein\*, Michael D. Tufano

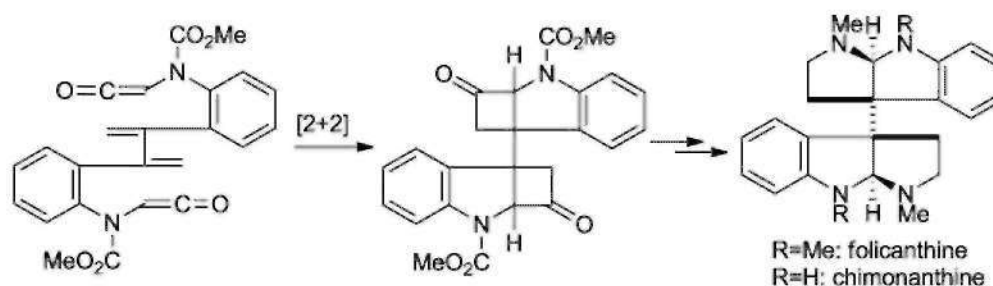


Isatins are valuable intermediates for heterocyclic chemistry. Most of the common methods for their production are less than adequate when the number and lipophilicity of substituents on the targeted isatin are increased. Our group desired such molecules and identified an alternative method for their production.

**Total syntheses of (±)-folicanthine and (±)-chimonanthine via a double intramolecular carbamoylketene–alkene [2+2] cycloaddition**

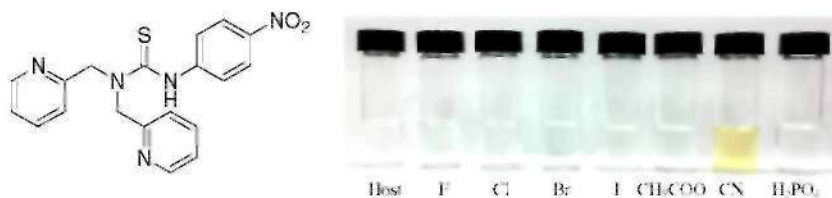
pp 1012–1014

Takaaki Araki, Yuki Manabe, Kosuke Fujioka, Hiromasa Yokoe, Makoto Kanematsu, Masahiro Yoshida, Koza Shishido\*

**Specific naked eye sensing of cyanide by chromogenic host: studies on the effect of solvents**

pp 1015–1019

Jongmin Kang\*, Eun Joo Song, Hyun Kim, Young-Hee Kim, Youngmee Kim, Sung-Jin Kim, Cheal Kim\*



**trans-3-Hydroxy-4-morpholinopiperidine—the pH-triggered conformational switch with a double flip**

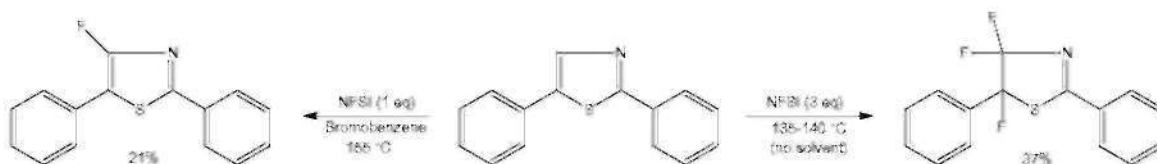
pp 1020–1024

Andrey V. Samoshin, Hyun Joo, Andrei Ya Korneichuk, Ivan S. Veselov, Galina V. Grishina, Vyacheslav V. Samoshin\*

**Mono- and trifluorination of the thiazole ring of 2,5-diarylthiazoles using N-fluorobenzenesulfonimide (NFSI)**

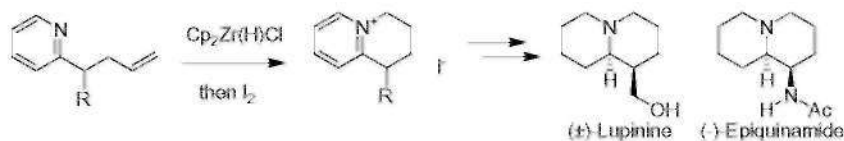
pp 1025–1028

Julie M. Hatfield, Cheryl K. Eidell, Chad E. Stephens\*

**A hydrozirconation/iodination-mediated access to tetrahydroquinolizinium salts. Application to the synthesis of Lupinine and (-)-Epiquinamide**

pp 1029–1031

Majdi Hajri, Clément Blondelle, Agathe Martinez, Jean-Luc Vasse\*, Jan Szymoniak

**OTHER CONTENTS**

Corrigendum to "Application of iron carbonyl complexation to the selective total synthesis of sanshools" [Tetrahedron Lett. 53 (2012) 6000–6003]

p 1032


---

Corrigendum to 'Synthesis of trifluoromethylated acetylenes via copper-catalyzed trifluoromethylation of alkynyltrifluoroborates' [*Tetrahedron Lett.* 53 (2012) 6646–6649]

p 1033

---

\*Corresponding author

 Supplementary data available via SciVerse ScienceDirect

---

Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Chemical Engineering and Biotechnology Abstracts, Current Biotechnology Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei Compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch. Also covered in the abstract and citation database SciVerse Scopus<sup>®</sup>. Full text available on SciVerse ScienceDirect<sup>®</sup>

---



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

**SciVerse ScienceDirect**

ISSN 0040-4039