

Tetrahedron Letters Vol. 51, No. 33, 2010

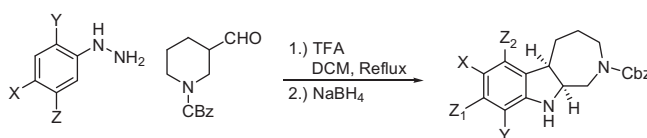
Contents

COMMUNICATIONS

Synthesis of azepino[3,4b]indoles via the Plancher rearrangement

pp 4303–4305

Shane A. Eisenbeis*, James R. Phillips, Diane Rescek, Yatsandra Oyola-Cintron



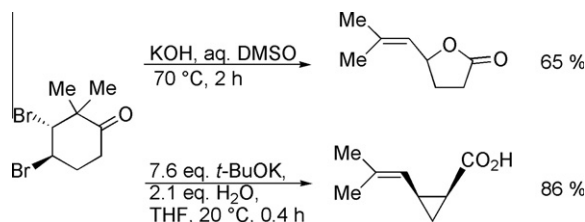
The reaction of benzyl 3-formylpiperidine-1-carboxylate and aryl hydrazines under standard Fisher indole conditions followed by reductive work-up affords azepino[3,4b]indoles in moderate to good yields. The products are proposed to be derived via a Plancher rearrangement [(a) Plancher, *Gazzetta* **1898**, 28, 374; (b) Plancher, *G. Atti. R. Accad. Lincei* **1900**, 9, 115; (c) Boyd-Barrett, *H. S. J. Chem. Soc.* **1932**, 321].



Unprecedented dual reactivity of anhydrous potassium hydroxide in cascade cyclopropanation/Haller–Bauer-scission/Grob-fragmentation reactions

pp 4306–4309

Alain Krief*, Adrian Kremer

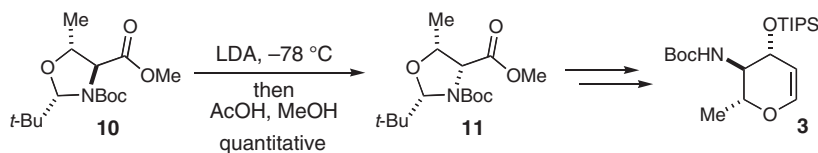


Whereas potassium hydroxide reacts with a large variety of 2,2-dimethyl-substituted cyclohexanones bearing two leaving groups at 3,4-positions to produce vinyl lactones or/and their vinyl cyclopropane carboxylic acid isomers, 'anhydrous potassium hydroxide' (from 3/1 *t*-BuOK/*H*₂O) exclusively produces the latter in very high yield under very mild conditions.

Synthesis of the *N*-(*tert*-butyloxycarbonyl)-*O*-triisopropylsilyl-*D*-pyrrolisamine glycol of lomaiviticins A and B via epimerization of *L*-Threonine

pp 4310–4312

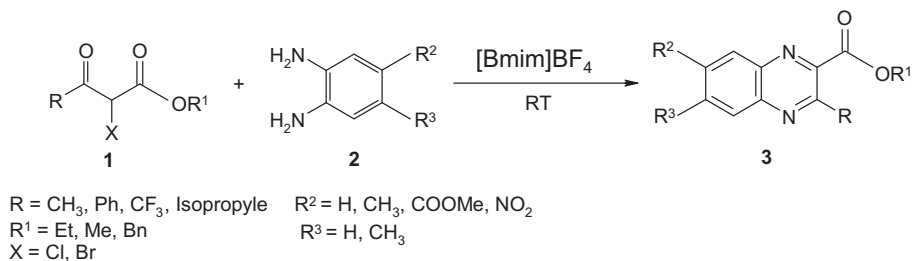
William J. Morris, Matthew D. Shair*



One-pot synthesis of quinoxaline-2-carboxylate derivatives using ionic liquid as reusable reaction media

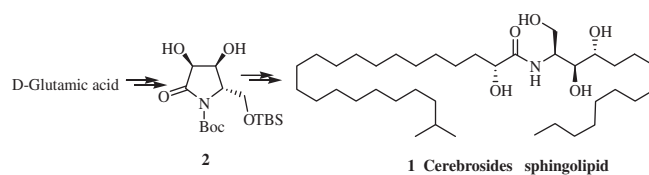
pp 4313–4316

H. M. Meshram*, P. Ramesh, G. Santosh Kumar, B. Chennakesava Reddy

**Asymmetric synthesis of ceramide sphingolipid based on (2S,3S,4S)-3,4-dihydroxy-5-(hydroxymethyl)pyrrolidine lactam**

pp 4317–4319

Wen-Feng Huang, Qian-Ru Li, Lu-Men Chao, Xin-Sheng Lei*, Bang-Guo Wei*

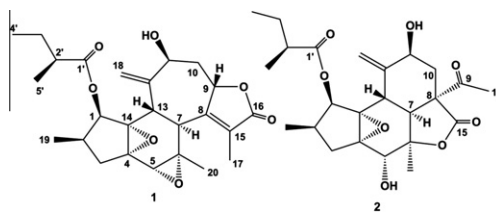


A convenient method for the preparation of multifunctional chiral building block **2** from D-glutamic acid was described. Cerebroside sphingolipid **1**, a sex pheromone of hair crab, was successfully synthesized based on such a readily available building block.

A crotofolane-type diterpenoid and a rearranged nor-crotofolane-type diterpenoid with a new skeleton from the stems of *Croton cascarilloides*

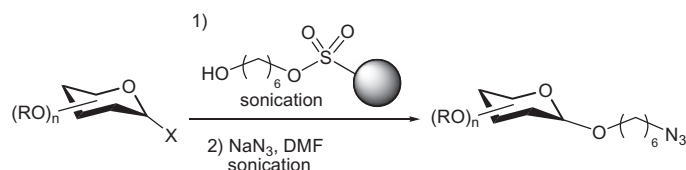
pp 4320–4322

Susumu Kawakami, Katsuyoshi Matsunami, Hideaki Otsuka*, Takakazu Shinzato, Yoshio Takeda, Masatoshi Kawahata, Kentaro Yamaguchi

**Combination of solid phase and solution phase synthesis of oligosaccharides using sonication**

pp 4323–4327

Christabel T. Tanifum, Jianjun Zhang, Cheng-Wei T. Chang*



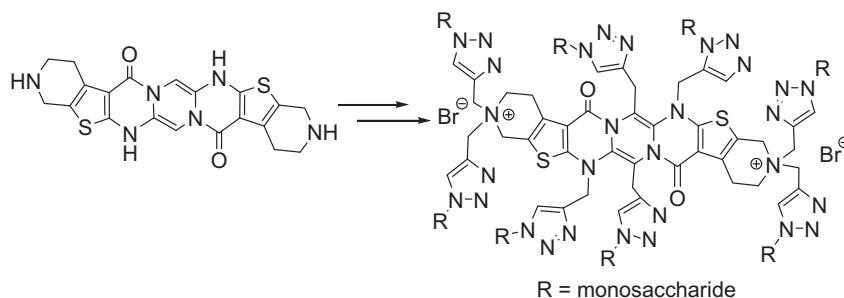
An approach that combines solid phase and solution phase synthesis of oligosaccharides via the assistance of sonication has been developed. By employing the traceless linker, the designed oligosaccharides can be obtained in pure form and, more importantly, ready for incorporation to aglycons of interest via 'Click' chemistry or amide linkage. The overall strategy will facilitate the studies of roles of carbohydrates in bioactive compounds.



Novel nanoscaled molecular rods consisting of seven annulated heterocycles as scaffold for multiple sugar units

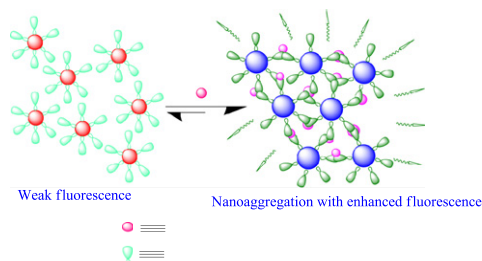
pp 4328–4330

Mohamed A. Ameen, Sebastian Karsten, Robert Fenger, Jürgen Liebscher*

**Colorimetric and fluorometric chemosensors for selective signaling toward Ca²⁺ and Mg²⁺ by aza-crown ether acridinedione-functionalized gold nanoparticles**

pp 4331–4335

Ranganathan Velu, Vayalakkavoor T. Ramakrishnan, Perumal Ramamurthy*

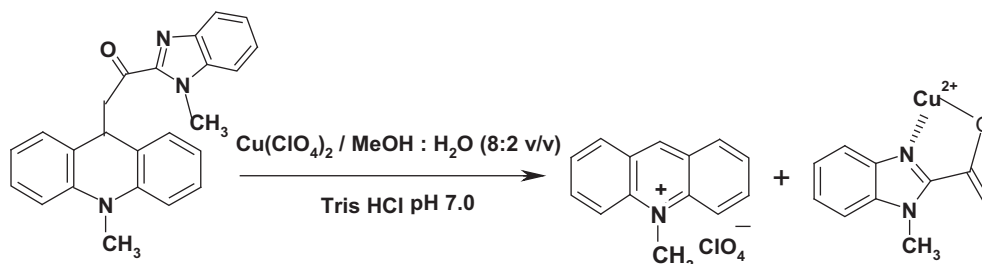


ACEADD-GNPs exhibit sandwich formation in the presence of metal ions resulting in nanoaggregation and fluorescence enhancement.

**A novel retro-reaction strategy toward designing a selective fluorescence Cu(II) chemodosimeter**

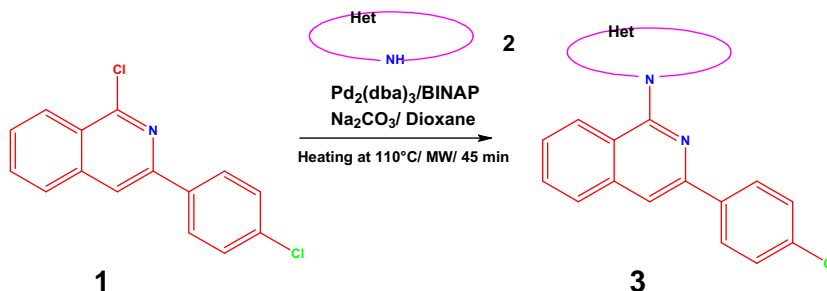
pp 4336–4339

Sabir H. Mashraqui*, Kiran Poonia, Rupesh Betkar, Mukesh Chandiramani

A novel retro-reaction strategy has been used to design a highly selective Cu²⁺ fluorescent chemodosimeter in the form of a C9 acridane-chelate. The fluorescence amplification is the result of the release of a strongly fluorescent acridinium ion at the expense of the weakly emitting probe.**An effective BINAP and microwave accelerated palladium-catalyzed amination of 1-chloroisoquinolines in the synthesis of new 1,3-disubstituted isoquinolines**

pp 4340–4343

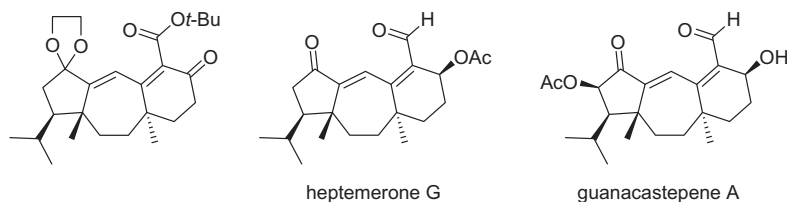
K. Prabakaran, P. Manivel, F. Nawaz Khan*



A facile construction of the tricyclic 5-7-6 scaffold of fungi-derived diterpenoids. The first total synthesis of (±)-heptemerone G and a new approach to Danishefsky's intermediate for a guanacastepene A synthesis

pp 4344–4346

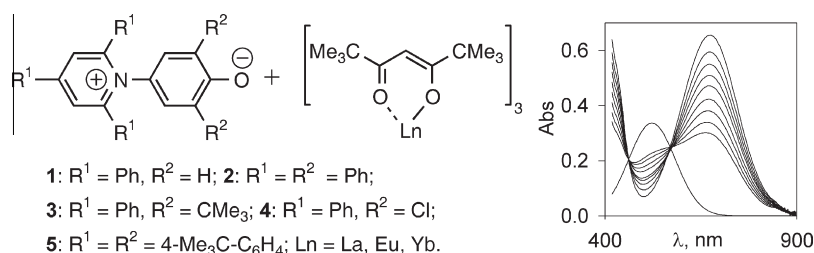
Karol Michalak, Michał Michalak, Jerzy Wicha*



A new application of solvatochromic pyridinium-*N*-phenolate betaine dyes: examining the electrophilicity of lanthanide shift reagents

pp 4347–4349

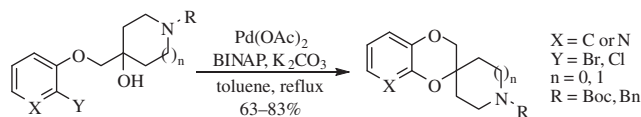
Sergey V. Shekhovtsov, Nikolay O. Mchedlov-Petrosyan*, Christian Reichardt



Regioselective synthesis of 2,3-dihydrospiro[1,4]dioxino[2,3-*b*]pyridine derivatives

pp 4350–4353

Tony Kurissery A.*, Santhosh Kumar Chittimalla, G. Abraham Rajkumar, Anjan Chakrabarti



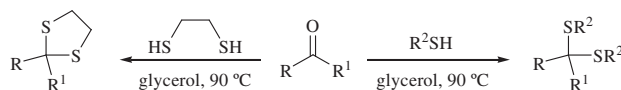
Intramolecular palladium-catalyzed C–O bond forming reactions of 2-chloropyridines or an aromatic bromide provided spirocyclic pyridinedioxins or benzodioxins.



Green, catalyst-free thioacetalization of carbonyl compounds using glycerol as recyclable solvent

pp 4354–4356

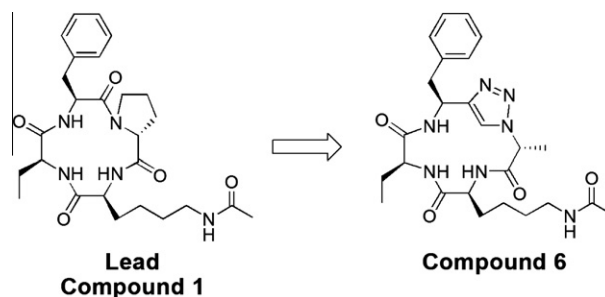
Gelson Perin*, Luzia G. Mello, Cátia S. Radatz, Lucielli Savegnago, Diego Alves, Raquel G. Jacob, Eder J. Lenardão



Histone deacetylase inhibitors: synthesis of cyclic tetrapeptides and their triazole analogs

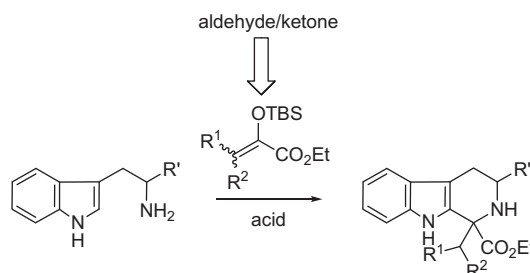
pp 4357–4360

Erinprit K. Singh, Lidia A. Nazarova, Stephanie A. Lopera, Leslie D. Alexander, Shelli R. McAlpine*

**Synthesis of β -carbolines from aldehydes and ketones via the α -siloxy α,β -unsaturated esters**

pp 4361–4364

Shuwen He*, Zhong Lai, David X. Yang, Qingmei Hong, Mikhail Reibarkh, Ravi P. Nargund, William K. Hagmann

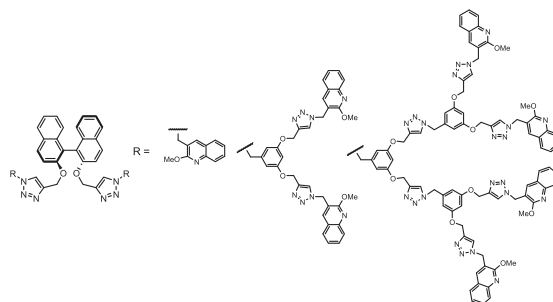


We report an efficient method for the synthesis of β -carbolines from α -siloxy α,β -unsaturated esters, which are accessible from a variety of aldehydes and ketones.

**Synthesis and photophysical properties of chiral dendrimers with quinoline surface group via click chemistry**

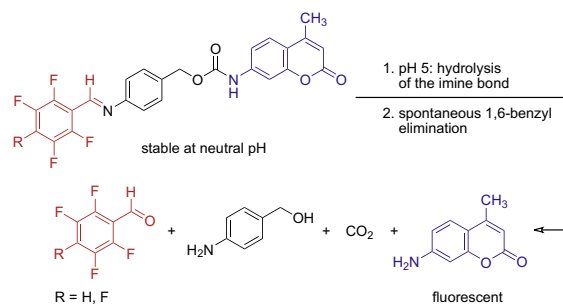
pp 4365–4370

Perumal Rajakumar*, Rathinam Raja

**Schiff bases derived from *p*-aminobenzyl alcohol as trigger groups for pH-dependent prodrug activation**

pp 4371–4374

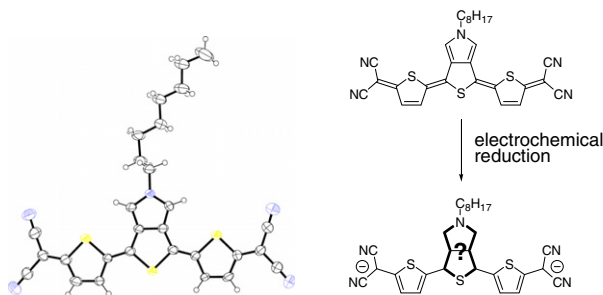
Ivonne A. Müller, Felix Kratz, Manfred Jung, André Warnecke*



Thieno[3,4-c]pyrrole-incorporated quinoidal terthiophene with dicyanomethylene termini: synthesis, characterization, and redox properties

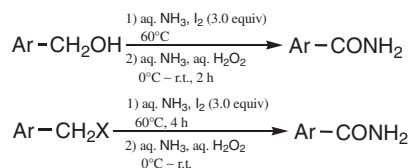
pp 4375–4377

Kyoko Takeda, Masafumi Shimawaki, Akiko Nakao, Itaru Osaka, Eigo Miyazaki, Kazuo Takimiya*


Metal-free one-pot oxidative conversion of benzylic alcohols and benzylic halides into aromatic amides with molecular iodine in aq ammonia, and hydrogen peroxide

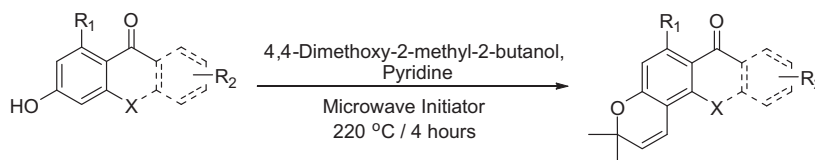
pp 4378–4381

Ryosuke Ohmura, Misato Takahata, Hideo Togo*


Anti-AIDS agents 83. Efficient microwave-assisted one-pot preparation of angular 2,2-dimethyl-2H-chromone containing compounds

pp 4382–4386

Ting Zhou, Qian Shi*, Kuo Hsing Lee*

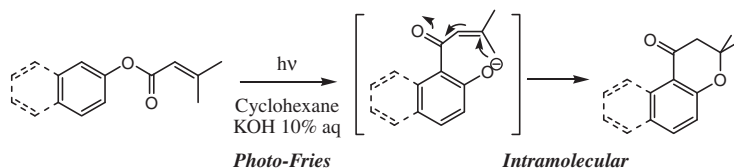


A novel and efficient one-pot microwave-assisted synthesis of angular 2,2-dimethyl-2H-chromone-containing compounds is reported.

A mild and convenient one-pot photochemical synthesis of chroman-4-one derivatives. The photo-Fries rearrangement of (hetero)aryl 3-methyl-2-butenolate esters under basic catalysis

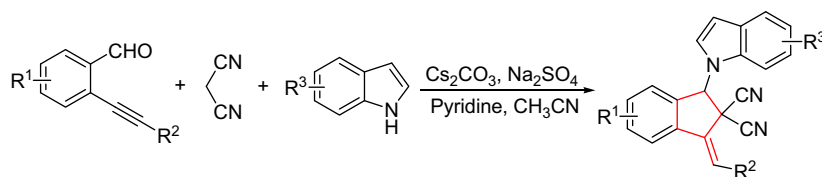
pp 4387–4390

Cecilia Samaniego López, Rosa Erra-Balsells, Sergio M. Bonesi*



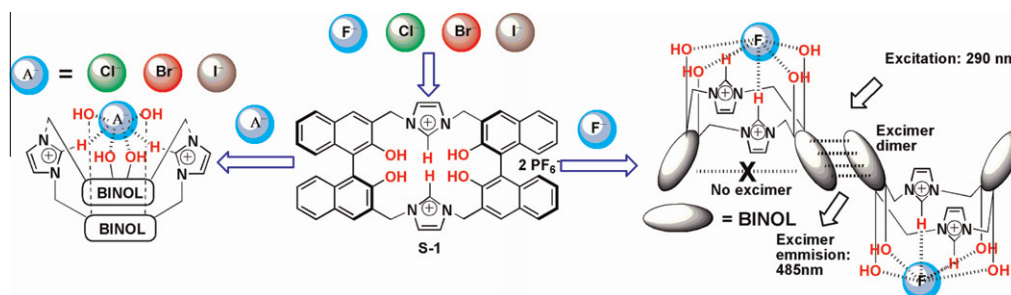
Synthesis of (Z)-1-benzylidene-3-(1H-indol-1-yl)-1H-indene-2,2(3H)-dicarbonitriles via three-component reaction of 2-alkynylbenzaldehyde, malononitrile, and indole pp 4391–4394

Guanyinsheng Qiu, Qiuping Ding, Yiyuan Peng*, Jie Wu*



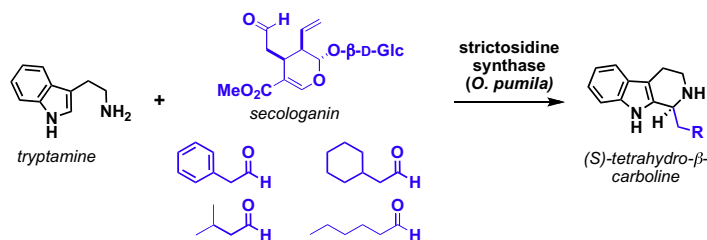
Highly selective ratiometric estimation of fluoride ion based on a BINOL imidazolium cyclophane with dual-channel pp 4395–4399

Qiao-Sen Lu, Ji Zhang, Lu Jiang, Ji-Ting Hou, Xiao-Qi Yu*



Biocatalytic asymmetric formation of tetrahydro-β-carbolines pp 4400–4402

Peter Bernhardt, Aimee R. Usera, Sarah E. O'Connor*

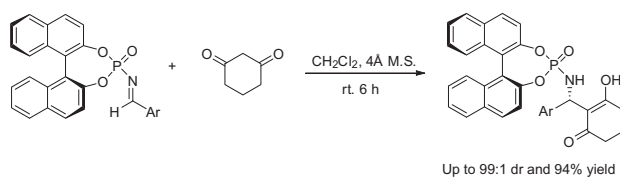


Strictosidine synthase from *Ophiorrhiza pumila* turns over a variety of aldehydes to yield a range of tetrahydro-β-carboline products with high stereoselectivity.



Chiral N-phosphoryl imines: design, synthesis and direct asymmetric addition reactions with diketones and diesters pp 4403–4407

Hao Sun, Trideep Rajale, Yi Pan*, Guigen Li*



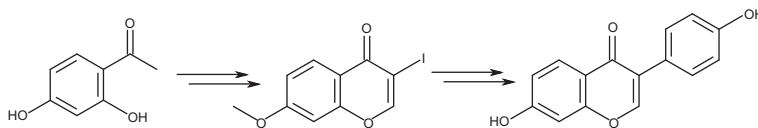
(S)-BINOL-based chiral N-phosphoryl imines have been designed and synthesized. These N-phosphoryl imines have been proven to be efficient for direct 1,2-addition reaction with both cyclic and linear diketones without the use of any bases. They can also serve as electrophiles for the reaction with diethyl malonate in the presence of potassium carbonate. The absolute configuration has been unambiguously determined by converting a product into an authentic sample.



An efficient synthesis of daidzein, dimethyldaidzein, and isoformononetin

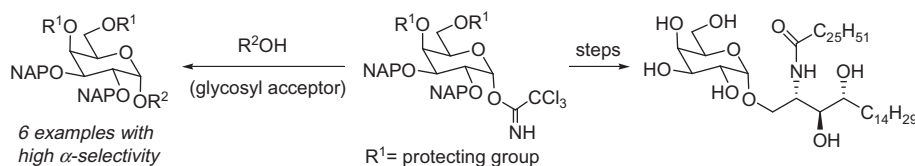
pp 4408–4410

Kyle F. Biegasiewicz, Jeffrey D. St. Denis, Vincent M. Carroll, Ronny Priefer*

**Novel galactosyl donor with 2-naphthylmethyl (NAP) as the non-participating group at C-2 position: efficient synthesis of α -galactosyl ceramide**

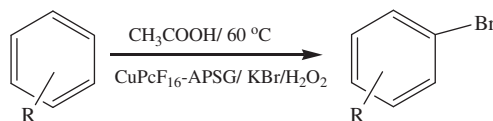
pp 4411–4414

Sirajud D. Khaja, Vipin Kumar, Misbah Ahmad, Jun Xue, Khushi L. Matta*

**Oxidative bromination reaction using Cu²⁺-perfluorophthalocyanine-immobilized silica gel catalyst under mild reaction conditions**

pp 4415–4418

R. K. Sharma*, Chetna Sharma

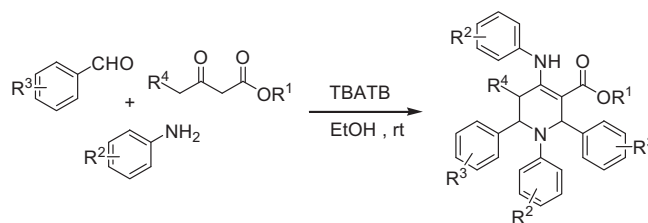


A silica gel-supported copper(II) perfluorophthalocyanine complex has been found to be an efficient and recyclable catalyst in the regioselective oxidative bromination of various aromatic substrates.

**Synthesis of highly functionalized piperidines by one-pot multicomponent reaction using tetrabutylammonium tribromide (TBATB)**

pp 4419–4424

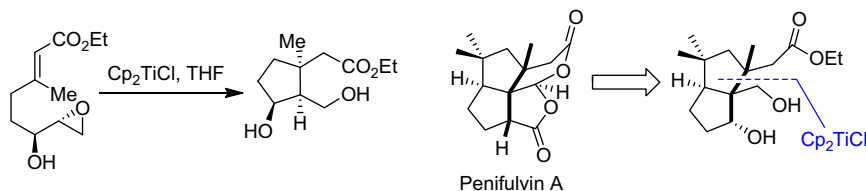
Abu T. Khan*, Mohan Lal, Md. Musawwer Khan



Stereoselective construction of quaternary chiral centers using Ti(III)-mediated opening of 2,3-epoxy alcohols: studies directed toward the synthesis of penifulvins

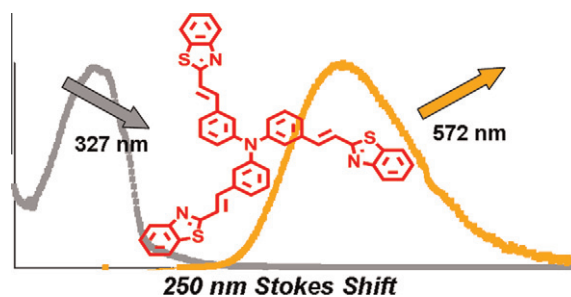
pp 4425–4428

Tushar Kanti Chakraborty*, Amit Kumar Chattopadhyay, Rajarshi Samanta, Ravi Sankar Ampapathi

**meta-Substituted triphenylamines as new dyes displaying exceptionally large Stokes shifts**

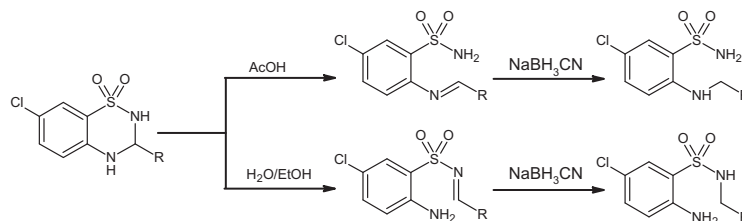
pp 4429–4432

Guillaume Bordeau, Rémy Lartia, Marie-Paule Teulade-Fichou*

**Regioselective reduction of 3-substituted 2,3-dihydrobenzothiadiazines with borohydrides**

pp 4433–4436

Umberto M. Battisti, Giuseppe Cannazza*, Marina M. Carrozzo, Daniela Braghiroli, Carlo Parenti, Francesca Rosato, Luigino Troisi

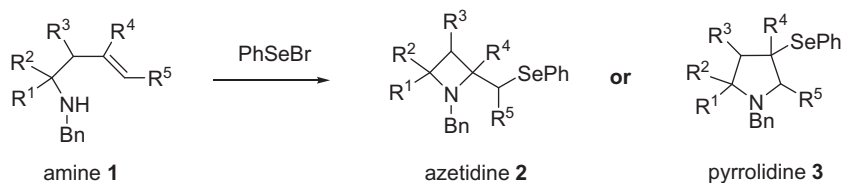


A simple and efficient synthetic path for N-1 or N-2 alkyl-substituted 2-aminobenzensulfonamides was developed based on regioselective reduction with NaBH_3CN in different solvents. This simple method could be adapted for the synthesis of more advanced intermediates.

**Regioselective synthesis of azetidines or pyrrolidines by selenium-induced cyclization of secondary homoallylic amines**

pp 4437–4440

Xavier Franck*, Stéphane Leleu, Francis Outurquin*

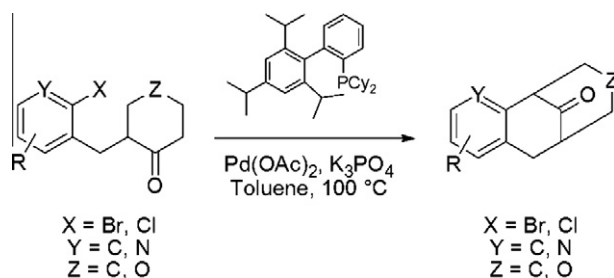


Azetidines or pyrrolidines can be regioselectively obtained by selenocyclization of homoallylic amines, according to the double bond substitution.

Optimization of a Pd-catalyzed intramolecular α -arylation synthesis of tricyclo-[7.3.1.0^{2,7}]-trideca-2,4,6-trien-13-ones

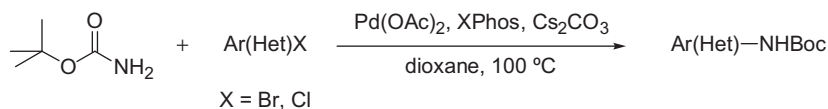
pp 4441–4444

Noel A. Powell*, Timothy J. Hagen, Fred L. Ciske, Cuiman Cai, Joseph E. Duran, Daniel D. Holsworth, Daniele Leonard, Robert M. Kennedy, Jeremy J. Edmunds

**Pd-catalyzed amidation of aryl(Het) halides with *tert*-butyl carbamate**

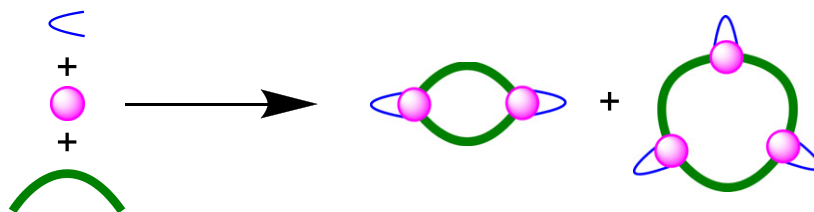
pp 4445–4448

Lijin Qin, Hongmeng Cui, Dapeng Zou*, Jingya Li, Yangjie Wu, Zhiwu Zhu, Yusheng Wu*

**Coordination-driven self-assembly in a single pot**

pp 4449–4451

Niladri B. Debata, Debakanta Tripathy, V. Ramkumar, Dillip Kumar Chand*

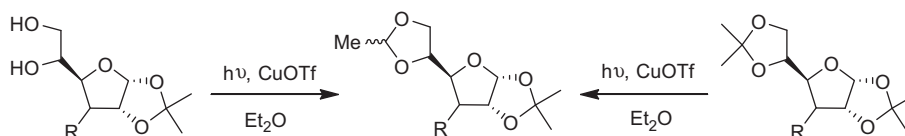


Multinuclear discrete heteroleptic complexes have been synthesized by mixing Pd(II), 2,2'-bipyridine and *N,N'*-(1,2-phenylene)diisonicotinamide in a single pot as a new approach. A dimeric molecular rhombus and a trimer in equilibrium are obtained as new complexes.

**Unprecedented copper(I)-catalyzed photochemical reaction of diethyl ether with vicinal diols and ketals**

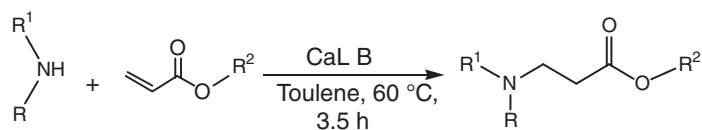
pp 4452–4454

Sujit Mondal, Ram Naresh Yadav, Subrata Ghosh*



Promiscuous *Candida antarctica* lipase B-catalyzed synthesis of β -amino esters via aza-Michael addition of amines to acrylates pp 4455–4458

Kishor P. Dhake, Pawan J. Tambade, Rekha S. Singhal, Bhalchandra M. Bhanage*

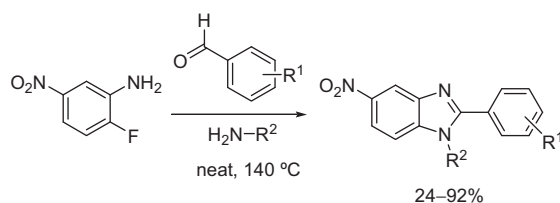


R, R¹ = H, alkyl
R² = methyl, ethyl, butyl

An efficient protocol has been developed to catalyze the regioselective aza-Michael addition of amines with acrylates using CaL B as a biocatalyst at 60 °C.

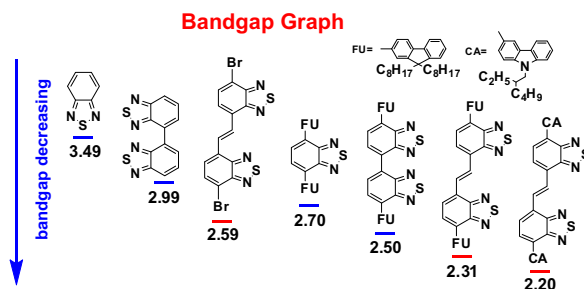
A one-pot three-component reaction to access 1-alkyl-2-aryl-5-nitrobenzimidazoles under solvent-free conditions pp 4459–4461

F. Anthony Romero*, Remond Moningka



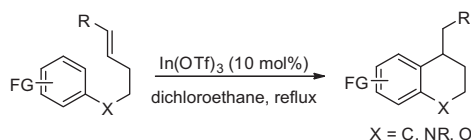
New low bandgap molecules based on ethylene-separated benzothiadiazoles: synthesis and bandgap comparison pp 4462–4465

Yanmei Liu, Hua Lai, Hongliang Zhong, Erjian Xu, Junping Du, Yuxue Li*, Qiang Fang*



Synthesis of tetralin and chromane derivatives via In-catalyzed intramolecular hydroarylation pp 4466–4469

Kai Xie, Sizhuo Wang, Ping Li, Xiujuan Li, Zhiyong Yang, Xiangyu An, Can-Cheng Guo, Ze Tan*



We report herein that In(OTf)₃ is an effective catalyst for the intramolecular hydroarylation of ω -aryl-1-alkenes to form tetralin and chromane derivatives. Though narrower in substrate scope when compared to the Ru-catalyzed version, the reaction catalyzed by In(OTf)₃ gave better and cleaner reactions in selected cases.



*Corresponding author

 Supplementary data available via 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 SCOPUS[®]. Full text available on ScienceDirect[®]



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