

Tetrahedron Letters Vol. 50, No. 23, 2009

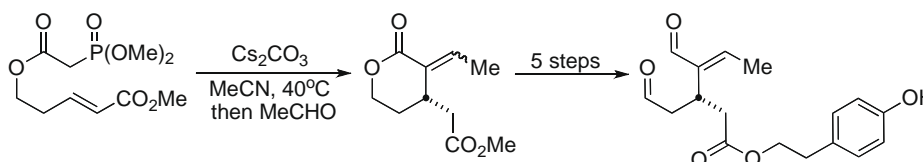
Contents

Communications

Synthesis of (±)-oleocanthal via a tandem intramolecular Michael cyclization–HWE olefination

pp 2713–2715

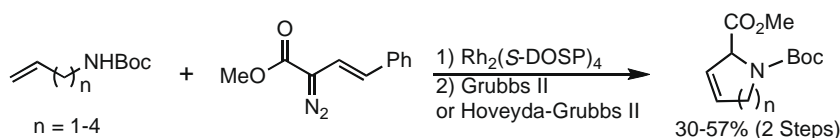
Brandon J. English, Robert M. Williams *



An efficient synthesis of nitrogen-containing heterocycles via a tandem carbenoid N–H insertion/ring-closing metathesis sequence

pp 2716–2718

Oksana Pavlyuk, Henrik Teller, Mark C. McMills *



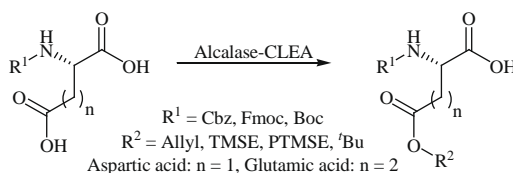
A tandem, rhodium-catalyzed N–H insertion/ruthenium-catalyzed ring-closing metathesis sequence for the synthesis of highly functionalized azaheterocycles is described.



A versatile and selective chemo-enzymatic synthesis of β-protected aspartic and γ-protected glutamic acid derivatives

pp 2719–2721

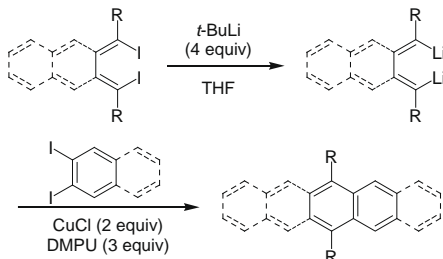
Timo Nuijens, John A. W. Kruijtzter, Claudia Cusan, Dirk T. S. Rijkers, Rob M. J. Liskamp *, Peter J. L. M. Quaedflieg *



Synthesis of acenes via coupling of 1,4-dithiobutadienes with diiodoarenes in the presence of CuCl

pp 2722–2726

Lishan Zhou, Kiyohiko Nakajima, Ken-ichiro Kanno, Tamotsu Takahashi *



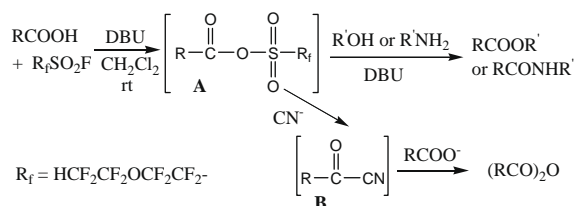
Dithiobutadienes prepared from diiodobutadienes reacted with diiodobenzene or diiodonaphthalene to afford substituted naphthalene, anthracene, dihydronaphthalene, and dihydropentacene derivatives in the presence of CuCl and DMPU. Dihydronaphthalene and dihydropentacene derivatives were converted into the corresponding naphthalene and pentacene derivatives.



5*H*-3-oxa-Octafluoropentanesulfonyl fluoride: a novel and efficient condensing agent for esterification, amidation and anhydridization

pp 2727–2729

Zhaohua Yan *, Weisheng Tian *, Fanrong Zeng, Yanfeng Dai

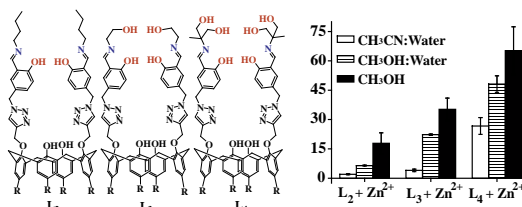


The use of 5*H*-3-oxa-octafluoropentanesulfonyl fluoride ($\text{HCF}_2\text{CF}_2\text{OCF}_2\text{CF}_2\text{SO}_2\text{F}$) as a novel and efficient condensing reagent for esterification of carboxylic acids with alcohols and amidation of carboxylic acids with amines in the presence of 1,3-diazabicyclo[5.4.0]-undec-7-ene (DBU) is reported. $\text{HCF}_2\text{CF}_2\text{OCF}_2\text{CF}_2\text{SO}_2\text{F}$ cannot serve as a condensing agent for anhydridization of carboxylic acids, however, $\text{HCF}_2\text{CF}_2\text{OCF}_2\text{CF}_2\text{SO}_2\text{F}/(\text{CH}_3)_3\text{SiCN}$ system can mediate anhydridization of some aromatic carboxylic acids.

Selective recognition of Zn^{2+} by salicylaldehyde appended triazole-linked di-derivatives of calix[4]arene by enhanced fluorescence emission in aqueous-organic solutions: role of terminal $-\text{CH}_2\text{OH}$ moieties in conjunction with the imine in recognition

pp 2730–2734

Rakesh K. Pathak, Sk. Md. Ibrahim, Chebrolu P. Rao *



A series of lower rim 1,3-di-derivatives possessing Schiff's base cores were synthesized using triazole unit as linker moiety by further introducing butyl (L_2), one $-\text{CH}_2\text{OH}$ (L_3) and two $-\text{CH}_2\text{OH}$ (L_4)-containing moieties respectively, in order to bring additional support for ion binding. Based on fluorescence and absorption spectroscopies it has been shown that Zn^{2+} could be selectively recognized by the Schiff's base core and not by the triazole core among the ten metal ions studied both in methanol and in aqueous solutions of methanol and acetonitrile, wherein the $-\text{CH}_2\text{OH}$ moieties augment the fluorescence response by providing additional coordinations to the Zn^{2+} . Thus L_4 exhibited a fluorescence enhancement of ~ 65 , ~ 48 and ~ 25 -fold in methanol, aqueous solutions of methanol and acetonitrile, with minimum detection limits of 174, 313 and 320 ppb, respectively. Both the excitation and emission wavelengths fall in visible region.

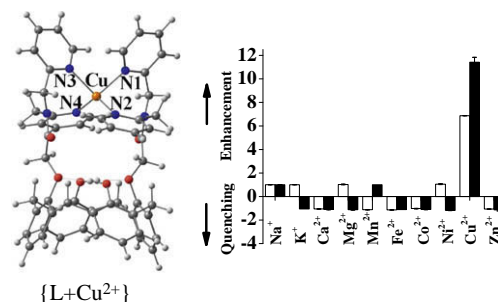


Fluorescence switch-on sensor for Cu^{2+} by an amide linked lower rim 1,3-bis(2-picolyl)amine derivative of calix[4]arene in aqueous methanol

pp 2735–2739

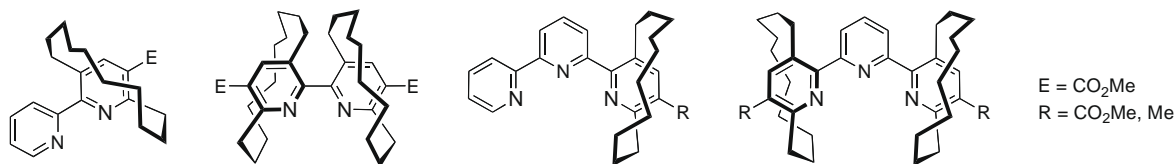
Roymon Joseph, Balaji Ramanujam, Amitabha Acharya, Chebrolu P. Rao *

A highly selective fluorescence switch on sensor, **L** for detecting Cu^{2+} has been synthesized, characterized, and studied for its metal ion binding properties toward ten different biologically relevant M^{n+} . **L** was able to detect Cu^{2+} selectively, down to a concentration of 196 ppb, even in the presence of other ions and forms a 1:1 complex as proven based on absorption and ESI MS. Based on computations, a highly distorted Cu^{2+} center bound to four pyridyl nitrogens was observed in the complex. **L** and its Cu^{2+} complex could very well be differentiated based on the nano-structural features observed in SEM and AFM.

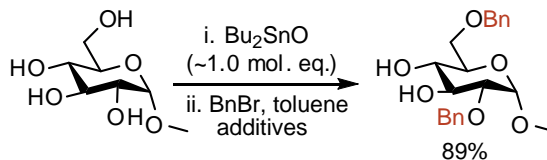


Synthesis of planar-chiral bridged bipyridines and terpyridines by metal-mediated coupling reactions of pyridinophanes

pp 2740–2743

Nobuhiro Kanomata ^{*}, Jun Suzuki, Hironobu Kubota, Kiichiro Nishimura, Terumichi Enomoto**Direct selective and controlled protection of multiple hydroxyl groups in polyols via iterative regeneration of stannylene acetals**

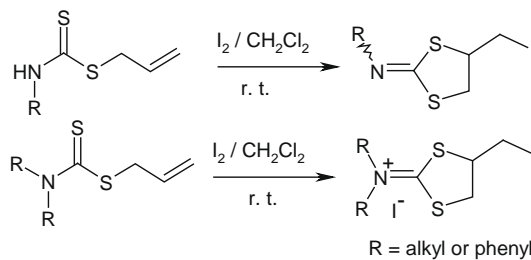
pp 2744–2746

Alessandro B. C. Simas ^{*}, Angelo A. T. da Silva, Tarcizio J. dos Santos Filho, Pedro T. W. Barroso

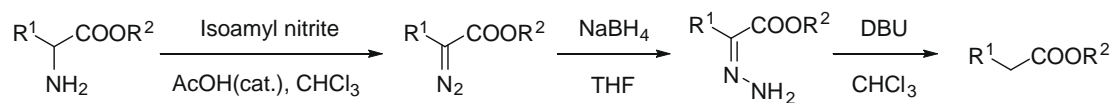
Nine other cases. A successful reaction relying on substoichiometric tin (~0.15 mol equiv) is also reported.

**Regiospecific iodocyclization of *S*-allyl dithiocarbamates: synthesis of 2-imino-1,3-dithiolane and 2-iminium-1,3-dithiolane derivatives**

pp 2747–2749

Azim Ziyaei Halimehjani, Hajar Maleki, Mohammad R. Saidi ^{*}Regiospecific iodocyclization of *S*-allyl dithiocarbamate with I₂ has been performed under mild reaction conditions. Dehydrohalogenation of the corresponding 4-alkyl-2-imino-1,3-dithiolanes gave 4-alkylidene-2-imino-1,3-dithiolanes in excellent yields.**Efficient three-step sequence for the deamination of α -aminoesters. Application to the synthesis of CysLT1 antagonists**

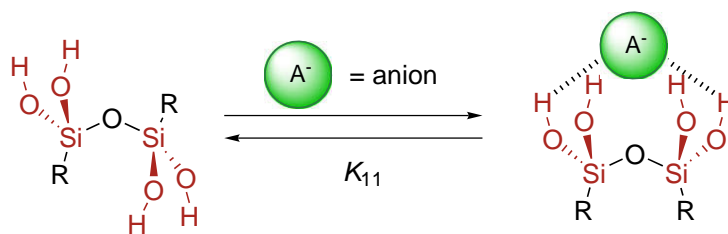
pp 2750–2753

Alfredo González, Daniel Pérez, Carles Puig, Hamish Ryder, Jordi Sanahuja, Laia Solé, Jordi Bach ^{*}A practical three-step sequence for the deamination of α -aminoesters is described. This method has been successfully applied to the synthesis of a series of CysLT1 antagonists.

Anion recognition by 1,3-disiloxane-1,1,3,3-tetraols in organic solvents

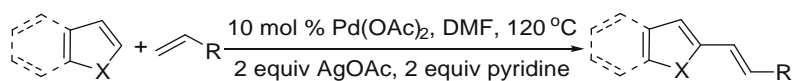
pp 2754–2757

Shin-ichi Kondo *, Natsumi Okada, Ryoji Tanaka, Masaki Yamamura, Masafumi Unno *

**Palladium-catalyzed alkenation of thiophenes and furans by regioselective C–H bond functionalization**

pp 2758–2761

Jinlong Zhao, Lehao Huang, Kai Cheng, Yuhong Zhang *

R=CO₂Bu-*n*, CO₂Bu-*t*, CO₂N(CH₃)₂, CN

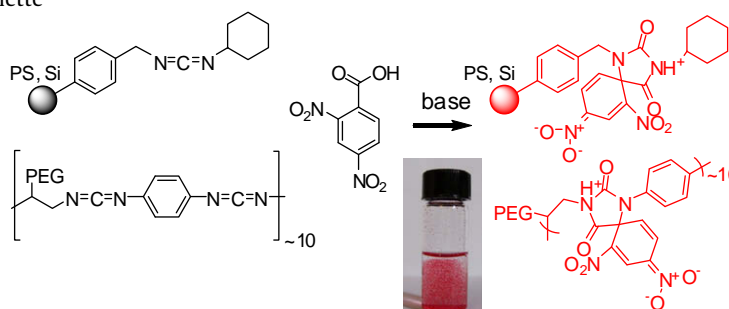
X=S, O

A palladium-catalyzed direct alkenation of thiophenes and furans has been developed in the presence of AgOAc and pyridine. A variety of olefinic substrates such as acrylates, acrylamides, and acrylonitrile can perform the direct oxidative coupling reactions with various thiophenes and furans to give the mono-alkenylated products in good yields. In most cases, the (*E*)-isomers were isolated as the major products.

Polymeric and polymer-ligated spirobicyclic zwitterionic Janovsky complexes

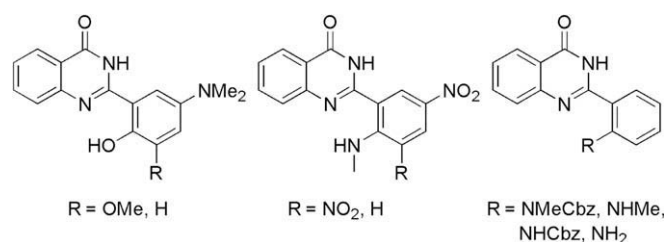
pp 2762–2766

Adrian S. Culf *, Ulrike Werner-Zwanziger, Katherine N. Robertson, Banghao Chen, Miroslava Čuperlović-Culf, David A. Barnett, Rodney J. Ouellette

**Efficient synthesis and fluorescence properties of highly functionalized 2-aryl-quinazolin-4(3H)-ones**

pp 2767–2769

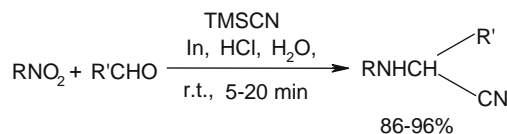
Michael Waibel, Jens Hasserodt *



Convenient and rapid synthesis of α -aminonitriles starting directly from nitro compounds in water

pp 2770–2773

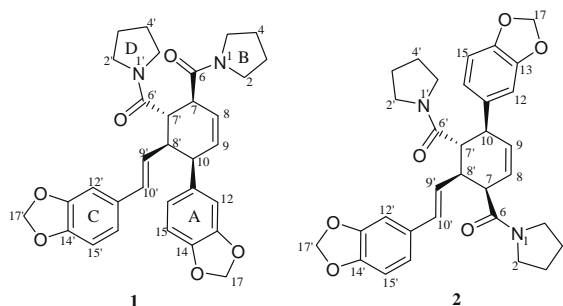
Biswanath Das *, Gandham Satyalakshmi, Kanaparthi Suneel



Chabamides F and G, two novel dimeric alkaloids from the roots of *piper chaba* hunter

pp 2774–2777

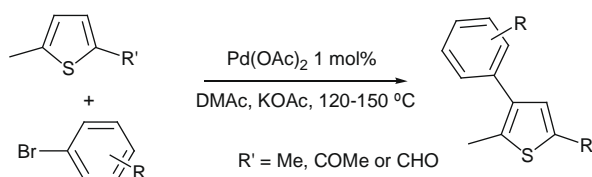
V. Rama Subba Rao, G. Suresh Kumar, V. U. M. Sarma, S. Satyanarayana Raju, K. Hari Babu, K. Suresh Babu, T. Hari Babu, K. Rekha, J. Madhusudana Rao *



Palladium-catalysed direct 3- or 4-arylation of thiophene derivatives using aryl bromides

pp 2778–2781

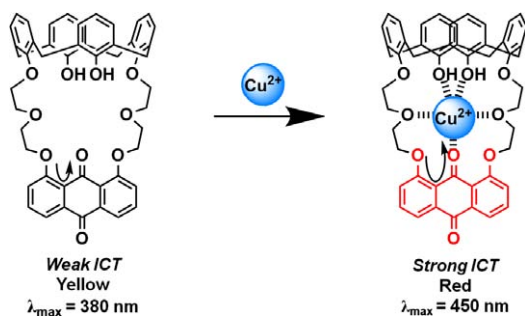
Jia Jia Dong, Julien Roger, Henri Doucet *



ICT-based Cu(II)-sensing 9,10-anthraquinonecalix[4]crown

pp 2782–2786

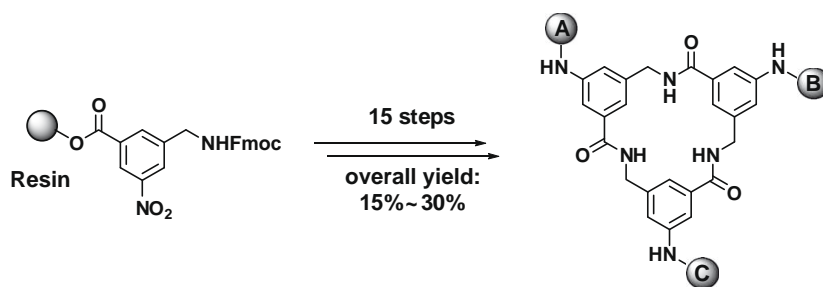
Hyun Jung Kim, Sang Hoon Kim, Ja Hyung Kim, Le Ngoc Anh, Joung Hae Lee, Chang-Hee Lee, Jong Seung Kim *



Combined solid/solution phase synthesis of large surface area scaffolds derived from aminomethyl-benzoates

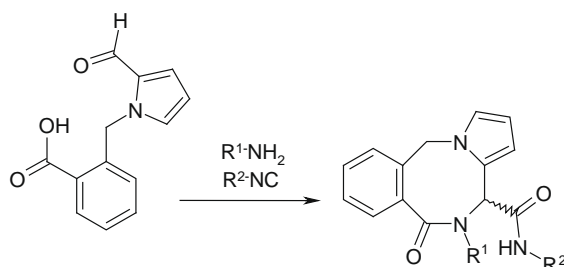
pp 2787–2789

Rishi K. Jain, Lun K. Tsou, Andrew D. Hamilton *

**One-step assembly of novel carbamoyl substituted 6-oxo-4,5,6,11-tetrahydropyrrolo[1,2-b][2,5]benzodiazocine**

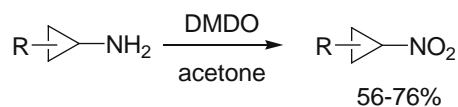
pp 2790–2792

Victor V. Potapov, Nataliya A. Fetisova, Alexandr V. Nikitin, Alexandre V. Ivachtchenko *

**The first synthesis of nitro-substituted cyclopropanes and spiropentanes via oxidation of the corresponding amino derivatives**

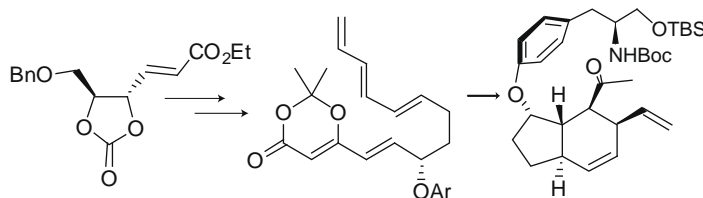
pp 2793–2796

Yuliya A. Volkova, Olga A. Ivanova *, Ekaterina M. Budynina, Eugene V. Revunov, Elena B. Averina

**Studies toward the total synthesis of the hirsutellones**

pp 2797–2800

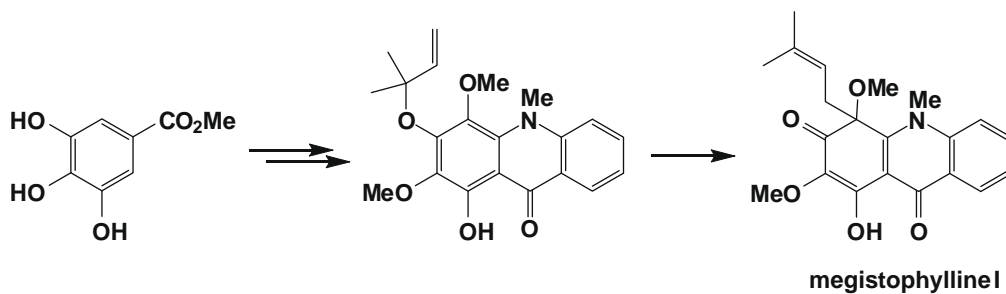
Mingzheng Huang, Chong Huang, Bo Liu *



Total synthesis of (±)-megistophylline I

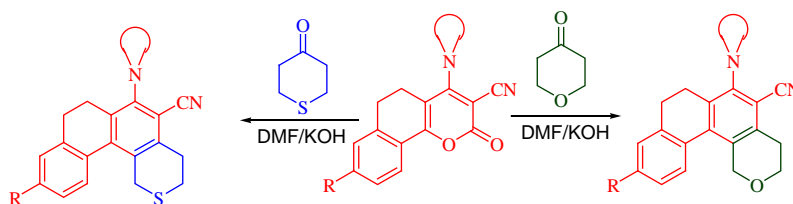
pp 2801–2804

Yuko Nishihama, Yuichi Ishikawa, Shigeru Nishiyama *

**Economical synthesis of novel class of heteroatom containing partially reduced polycyclic aromatic hydrocarbons**

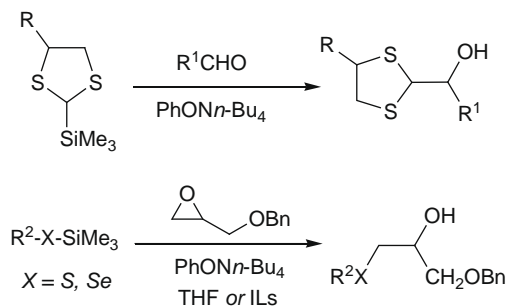
pp 2805–2807

Ramendra Pratap *, Vishnu Ji Ram *

**Tetrabutylammonium phenoxide induced reaction of silyl nucleophiles**

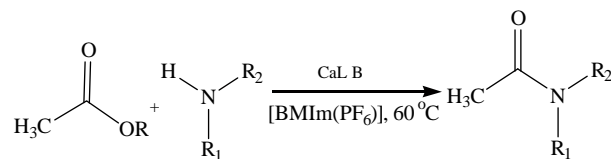
pp 2808–2810

Antonella Capperucci *, Caterina Tiberi, Salvatore Pollicino, Alessandro Degl'Innocenti *

Silyl dithiolanes, silyl sulfides, and selenosilanes can be efficiently reacted with aldehydes and oxiranes under catalysis of PhONn-Bu₄.**Candida antarctica lipase B-catalyzed synthesis of acetamides using [BMIm(PF₆)] as a reaction medium**

pp 2811–2814

Kishor P. Dhake, Ziyauddin S. Qureshi, Rekha S. Singhal, Bhalchandra M. Bhanage *



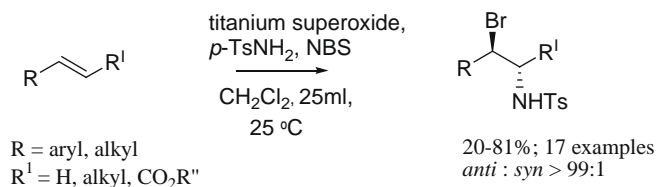
R = Benzyl, vinyl, ethyl, butyl, H.
R₁, R₂ = H, alkyl

An efficient protocol has been developed for synthesis of acetamides using *Candida antarctica* lipase B (CaL B) in [BMIm(PF₆)] as a greener reaction medium.

Titanium superoxide: a heterogeneous catalyst for *anti*-Markovnikov aminobromination of olefins

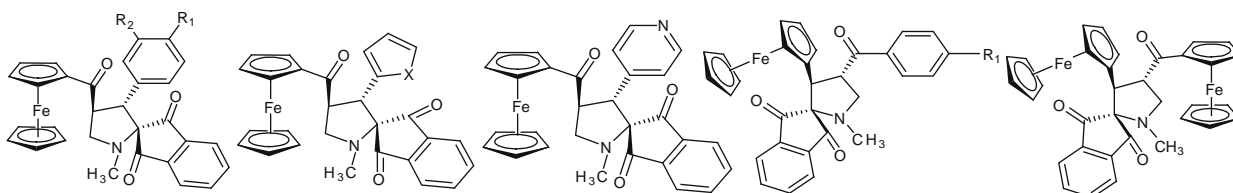
pp 2815–2817

Tanveer Mahamadali Shaikh, Pratibha U. Karabal, Gurunath Suryavanshi, Arumugam Sudalai *

**A facile synthesis of ferrocene grafted *N*-methyl-spiropyrrolidines through 1,3-dipolar cycloaddition of azomethine ylides**

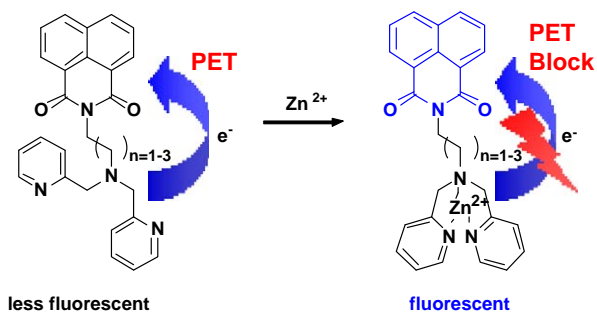
pp 2818–2821

A. R. Sureshbabu, R. Raghunathan *, B. K. Satskumar

**Naphthalimide-based fluorescent Zn²⁺ chemosensors showing PET effect according to their linker length in water**

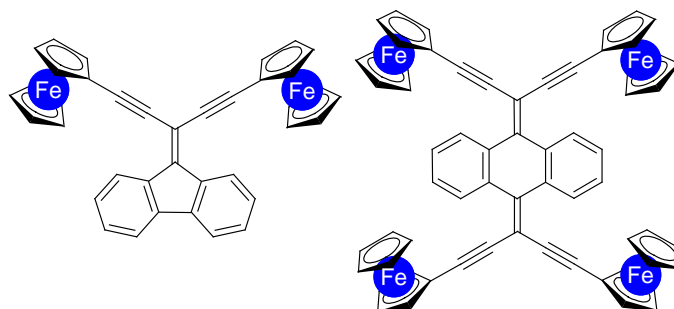
pp 2822–2824

Soon Young Kim, Jong-In Hong *

**Synthesis and redox behavior of ene–diyne scaffolds that bear ferrocenes at the periphery**

pp 2825–2827

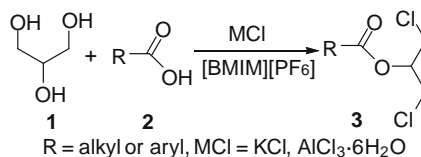
Taku Shoji *, Shunji Ito, Kozo Toyota, Noboru Morita *



Combining $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$ and an ionic liquid to prepare chlorohydrin esters from glycerol

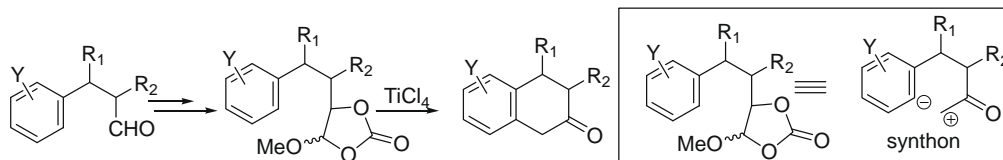
pp 2828–2830

Gemma Villorbina, Albert Tomàs, Marc Escribà, Mireia Oromí-Farrús, Jordi Eras, Mercè Balcells, Ramon Canela *

 **TiCl_4 -promoted intramolecular cyclization of 4-methoxy-5-arylethyl-1,3-dioxolan-2-ones: an expedient method to prepare 2-tetralones**

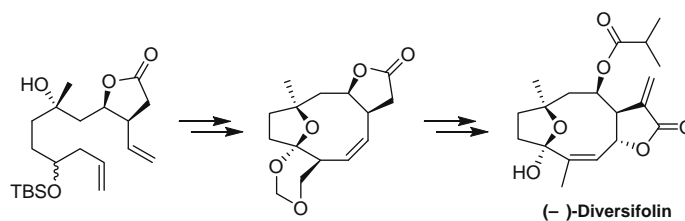
pp 2831–2834

Yung-Son Hon *, Rammohan Devulapally


**Total synthesis of (–)-diversifolin**

pp 2835–2839

Tomoaki Nakamura, Kazuma Tsuboi, Motoko Oshida, Tomoko Nomura, Atsuo Nakazaki, Susumu Kobayashi *



*Corresponding author

 Supplementary data available via ScienceDirect

COVER

A total synthesis of (–)-diversifolin has been carried out. Key steps include (i) ring-closing metathesis to give a 10-membered carbocycle, (ii) regioselective Mukaiyama aldol reaction of silyl dienol ether with formaldehyde at the α -position, and (iii) lactone transposition of the fully functionalized 11-oxabicyclo[6.2.1]undecane system.

Tetrahedron Letters **2009**, 50, 2835–2839.

© 2009 S. Kobayashi Published by Elsevier Ltd.

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[®]



ELSEVIER

Available online at www.sciencedirect.com

 ScienceDirect

ISSN 0040-4039