



Tetrahedron Vol. 64, No. 37, 2008

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REPORT

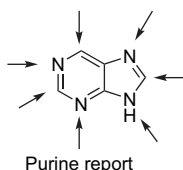
Recent advances in the synthesis of purine derivatives and their precursors

pp 8585–8603

Michel Legraverend

Purine precursors → Functionalisation at positions 2, 6, 7, 8 and 9

Imidazole or pyrimidine precursors → Functionalisation at positions 1, 3, 7, 8 and 9

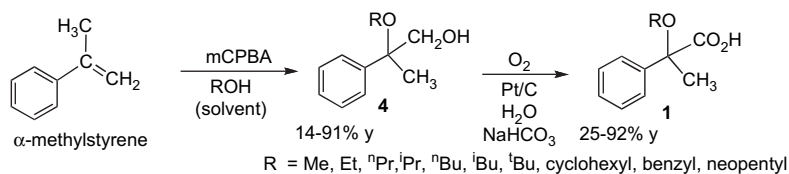


ARTICLES

A general synthesis of 2-alkoxy-2-phenylpropanoic acids

pp 8605–8609

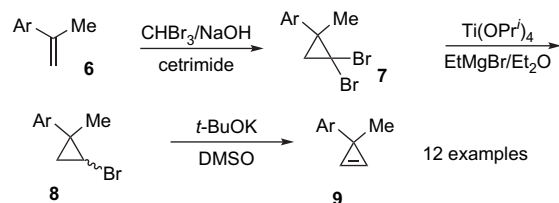
Keith A. Monk, Nathan C. Duncan, Eric A. Bauch, Charles M. Garner*



Improved preparative route toward 3-arylcyclopropenes

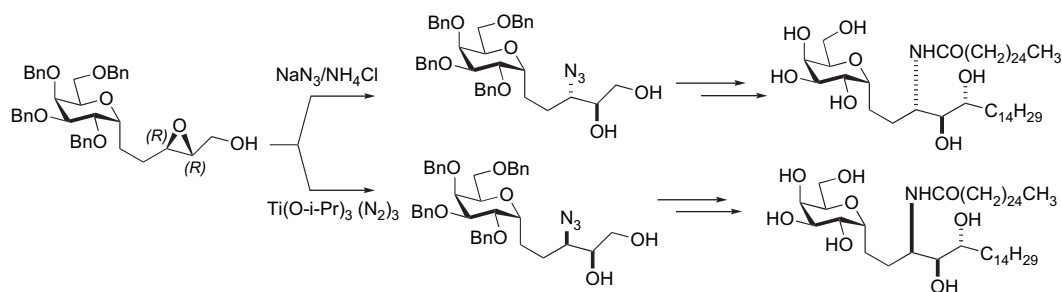
pp 8610–8617

William M. Sherrill, Ryan Kim, Michael Rubin*

**C-Galactosylceramide diastereomers via Sharpless asymmetric epoxidation chemistry**

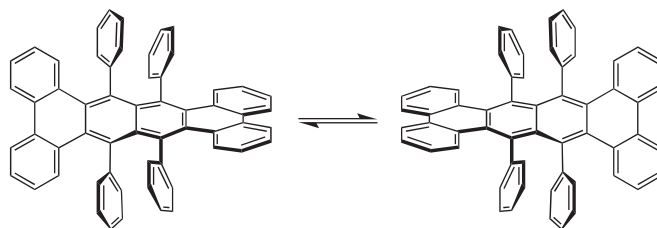
pp 8618–8629

Jun Pu, Richard W. Franck*

**Conformational reactions of D_2 -symmetric twisted acenes**

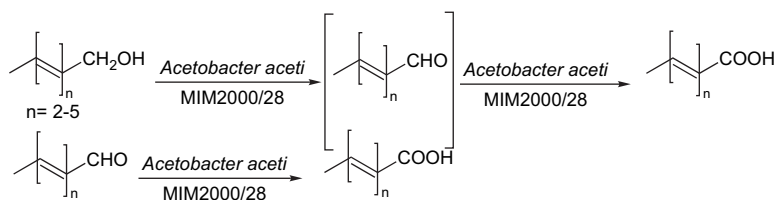
pp 8630–8637

Robert A. Pascal, Jr.*, Qian Qin

**Direct conversion of polyconjugated compounds into their corresponding carboxylic acids by *Acetobacter aceti***

pp 8638–8641

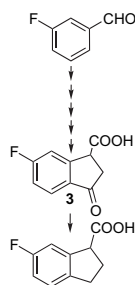
Elena Pini*, Vittorio Bertacche, Francesco Molinari, Diego Romano, Raffaella Gandolfi



Total synthesis and analgesic activity of 6-fluoroindan-1-carboxylic acid

pp 8642–8645

Sharmistha Das, Hasina Yasmin, M. Mehedi Masud, Suvas C. Roy, Lutfun Nahar, M. Mukhlesur Rahman, Simon Gibbons, Sitesh C. Bachar, Satyajit D. Sarker*

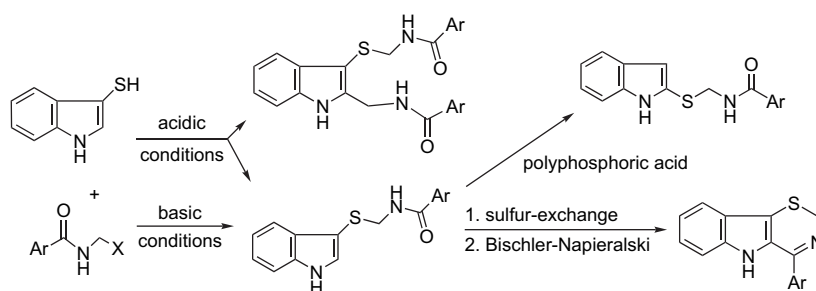


6-Fluoroindan-1-carboxylic acid (**4**) was conveniently synthesised from 3-fluorobenzaldehyde in six steps, and the analgesic activity of **4**, and one of the intermediates (**3**) was assessed by the acetic acid induced writhing in *Swiss albino* mice.

Synthesis of 4-thiaharmalan analogue 4-aryl-1,3-thiazino[5,6-*b*]indole derivatives by prevention of rearrangements to position two of the indole moiety

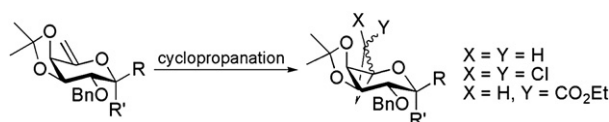
pp 8646–8651

Péter Csomós, Lajos Fodor*, Gábor Bernáth, Antal Csámpai, Pál Sohár

**Cyclopropanation of 5-methylene galactopyranosides by dihalo-, ethoxycarbonyl-, and unsubstituted carbenes**

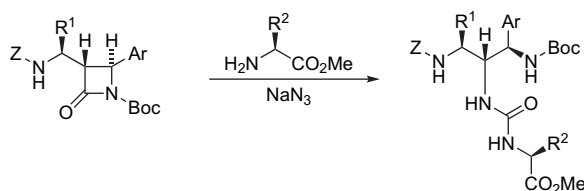
pp 8652–8658

Antonino Corsaro, Maria Assunta Chiacchio, Venerando Pistarà*, Antonio Rescifina*, Elisa Vittorino

**Synthesis of β,β' -diamino acids from α -amino acid-derived β -lactams by ring opening with nucleophiles. Utilization in the synthesis of peptidomimetics**

pp 8659–8667

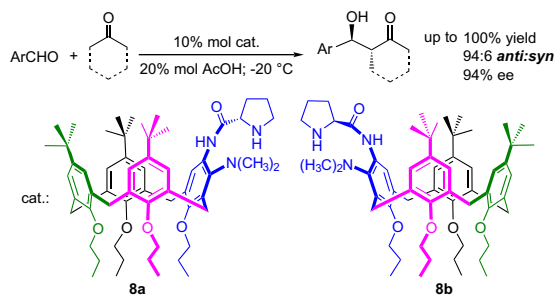
Alexander A. Taubinger, Dieter Fenske, Joachim Podlech*



Inherently chiral calix[4]arene-based bifunctional organocatalysts for enantioselective aldol reactions

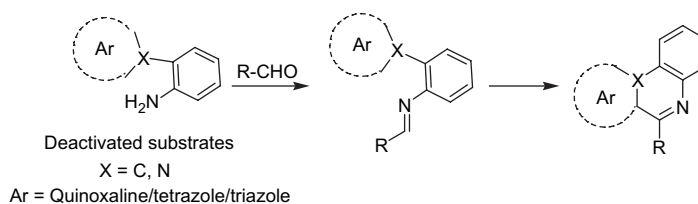
pp 8668–8675

Zhen-Xiang Xu, Guang-Ke Li, Chuan-Feng Chen*, Zhi-Tang Huang*

**Application of the Pictet–Spengler reaction to aryl amine substrates linked to deactivated aromatic heterosystems**

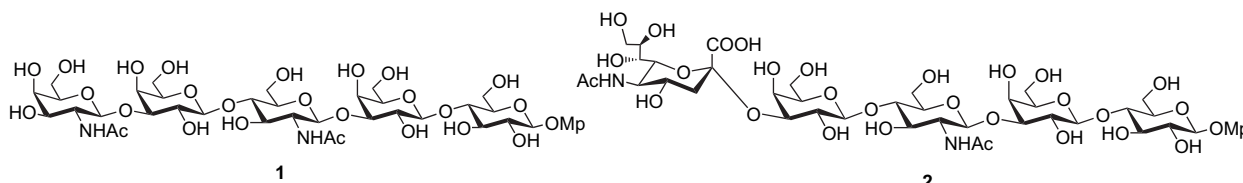
pp 8676–8684

B. Saha, S. Sharma, D. Sawant, B. Kundu*

**Concise synthesis of two pentasaccharides corresponding to the α-chain oligosaccharides of *Neisseria gonorrhoeae* and *Neisseria meningitidis***

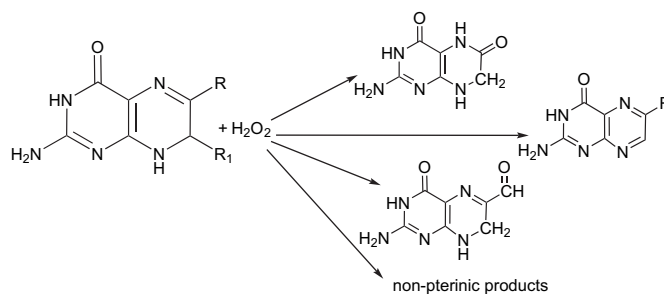
pp 8685–8691

Pintu Kumar Mandal, Anup Kumar Misra*

**Reaction between 7,8-dihydropterins and hydrogen peroxide under physiological conditions**

pp 8692–8699

M. Laura Dántola, Tobias M. Schuler, M. Paula Denofrio, Mariana Vignoni, Alberto L. Capparelli, Carolina Lorente, Andrés H. Thomas*

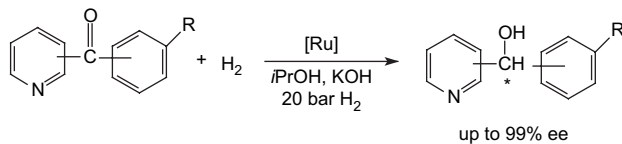


The rate of the biologically important reaction between 7,8-dihydropterins and H₂O₂, as well as the products formed strongly depend on the chemical structure of the substituent at position 6 of the pterin moiety.

Preparation of pyridinyl aryl methanol derivatives by enantioselective hydrogenation of ketones using chiral Ru(diphosphine)(diamine) complexes. Attribution of their absolute configuration by ^1H NMR spectroscopy using Mosher's reagent

pp 8700–8708

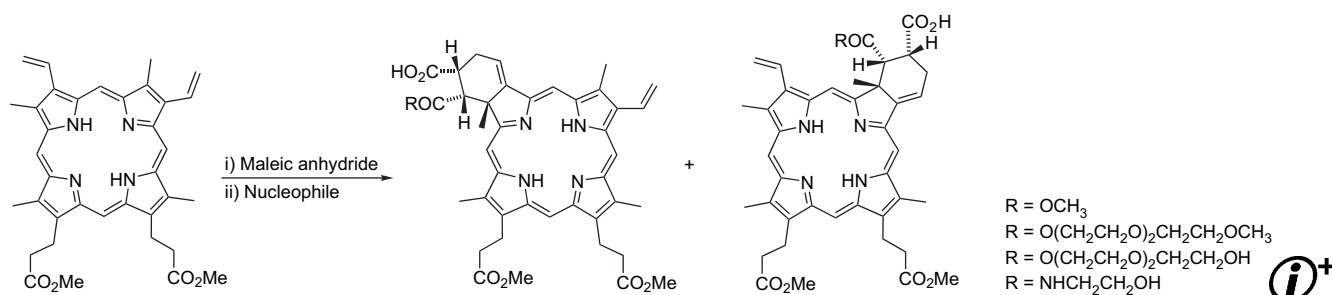
Eddy Maerten, Francine Agbossou-Niedercorn*, Yves Castanet*, André Mortreux



Synthesis of new amphiphilic chlorin derivatives from protoporphyrin-IX dimethyl ester

pp 8709–8715

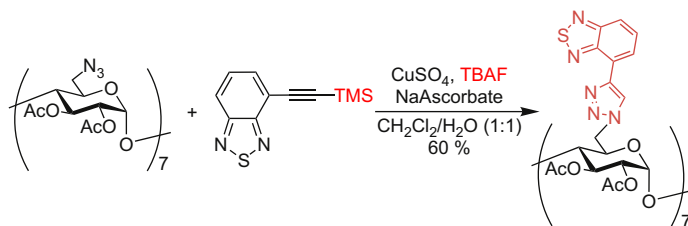
Kleber T. de Oliveira, Artur M. S. Silva, Augusto C. Tomé, Maria G. P. M. S. Neves, Cláudio R. Neri, Vinicius S. Garcia, Osvaldo A. Serra, Yassuko Iamamoto, José A. S. Cavaleiro*



Benzothiadiazoyl-triazoyl cyclodextrin: a selective fluoroionophore for Ni(II)

pp 8716–8720

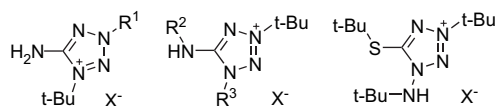
Stephane Maisonneuve, Qiang Fang, Juan Xie*



Endo- and exocyclic N-alkylation of 1- and 5-aminotetrazoles with *t*-BuOH–HClO₄: synthesis of mono-, di-, and tri-*tert*-butyl substituted aminotetrazolium salts

pp 8721–8725

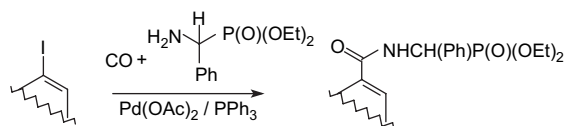
Sergei V. Voitekhovich*, Pavel N. Gaponik, Alexander S. Lyakhov, Oleg A. Ivashkevich

R¹ = Me, *t*-Bu; R² = H, *t*-Bu; R³ = Me, *t*-BuNH; X = Cl, ClO₄, PF₆

Palladium-catalysed aminocarbonylation of iodoarenes and iodoalkenes with aminophosphonate as *N*-nucleophile

pp 8726–8730

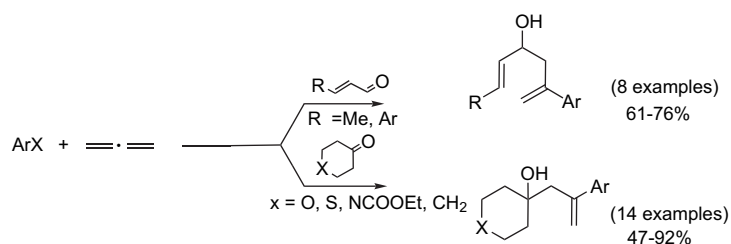
Attila Takács, Andrea Petz, László Kollár*



Reactive organoallyl species generated from aryl halides and allene: allylation of α,β -unsaturated aldehydes and cyclic ketones employing Pd/In transmetalation processes

pp 8731–8737

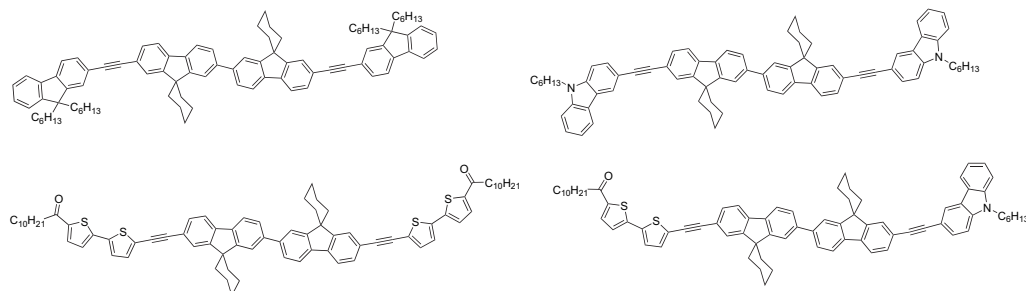
Laura A. T. Cleghorn, Ronald Grigg*, Vladimir Savic*, Milena Simic



Synthesis of bifluorene-based molecular materials: effect of C-9 spirocyclohexane functionalization and end-group tailoring

pp 8738–8745

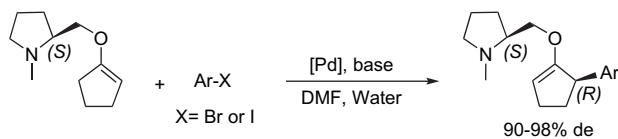
Roberto Grisorio, Claudia Piliago, Pinalysa Cosma, Paola Fini, Piero Mastrorilli, Giuseppe Gigli, Gian Paolo Suranna*, Cosimo Francesco Nobile



Stereoselective Heck arylation of a functionalized cyclopentenyl ether using (*S*)-*N*-methyl-pyrrolidine as the stereochemical controller

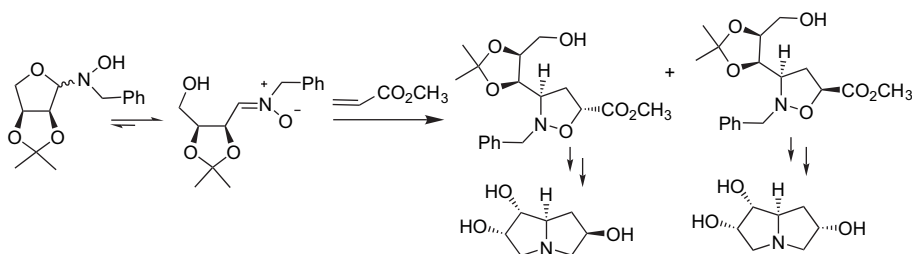
pp 8746–8751

Alejandro Trejos, Jonas Sävmarker, Stefanie Schlummer, Gopal K. Datta, Peter Nilsson, Mats Larhed*



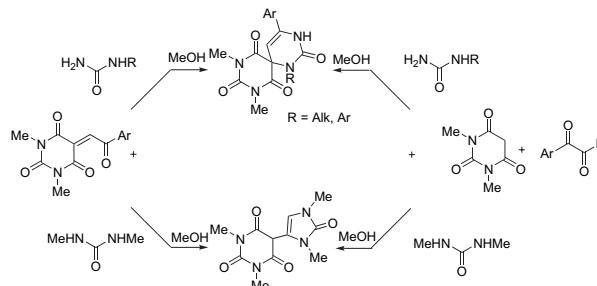
A convenient synthesis of new enantiomerically pure trihydroxypyrrolidines using L-erythrose glycosylhydroxylamine as a masked acyclic chiral nitron pp 8752–8758

Nikolaos G. Argyropoulos*, Petros Gkizis, Evdoxia Coutouli-Argyropoulou



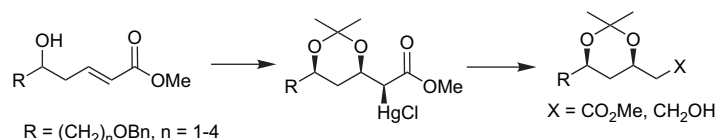
A rapid and facile synthesis of new spiroimidines from 5-(2-arylethylidene-2-oxo)-1,3-dimethylpyrimidine-2,4,6-triones pp 8759–8765

Lali L. Gozalishvili, Tetyana V. Beryozkina, Irina V. Omelchenko, Roman I. Zubatyuk, Oleg V. Shishkin, Nadezhda N. Kolos*



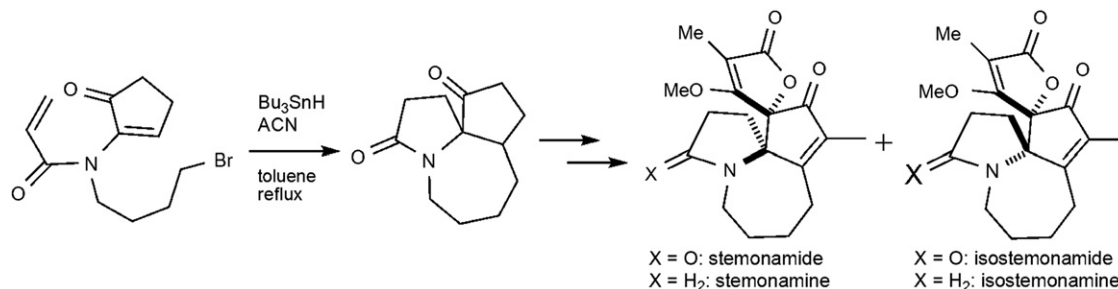
Stereoselective synthesis of versatile 2-chloromercurium-3,5-syn-dihydroxy esters via intramolecular oxymercuration pp 8766–8772

Carlo Bonini*, Maria Campaniello, Lucia Chiummiento*, Valeria Videtta



Total synthesis of (±)-stemonamide, (±)-isostemonamide, (±)-stemonamine, and (±)-isostemonamine using a radical cascade pp 8773–8779

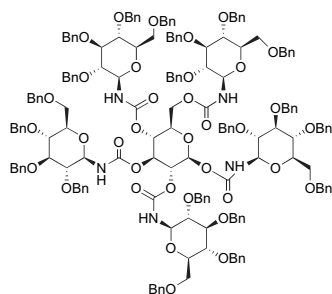
Tsuyoshi Taniguchi, Hiroyuki Ishibashi*



Novel synthesis of oligosaccharides linked with carbamate and urea bonds utilizing modified Curtius rearrangement

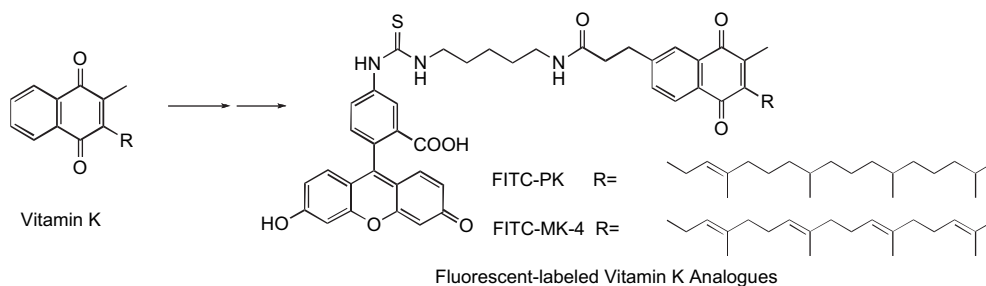
pp 8780–8788

Daisuke Sawada, Shinya Sasayama, Hideyo Takahashi, Shiro Ikegami*

**Synthesis and development of biologically active fluorescent-labeled vitamin K analogues and monitoring of their subcellular distribution**

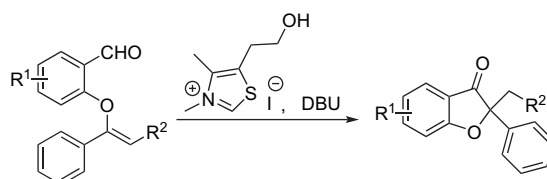
pp 8789–8796

Yoshitomo Suhara, Shinya Abe, Aya Murakami, Yuka Shimomura, Kimie Nakagawa, Maya Kamao, Naoko Tsugawa, Toshio Okano*

**N-Heterocyclic carbene catalyzed intramolecular nucleophilic addition of carbonyl anion equivalents to enol ethers**

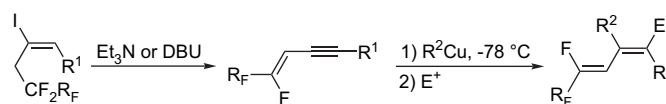
pp 8797–8800

Jinmei He, Shouchu Tang, Jian Liu, Yingpeng Su, Xinfu Pan, Xuegong She*

**Synthesis and selective carbocupration reaction of fluorine-containing enynic esters, enynylphosphine oxides, and enynylphosphates**

pp 8801–8806

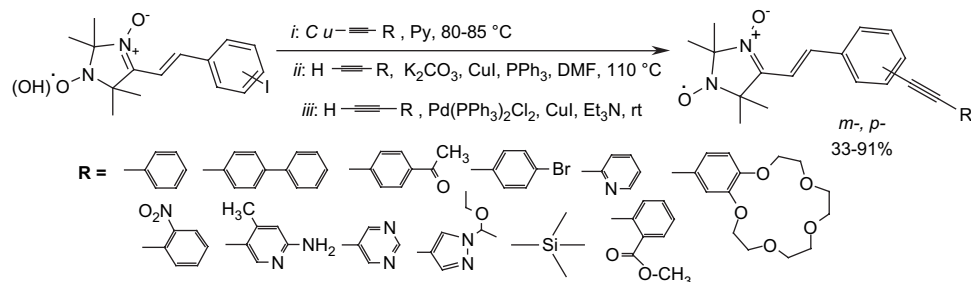
Ying-Qiao Mei, Jin-Tao Liu*

R_F = Per(poly)fluoroalkylR¹ = P(O)Ph₂, P(O)(OEt)₂, COOEt

Synthetic and mechanistic aspects of cross-coupling of nitroxyl radicals of 3-imidazole series with terminal alkynes

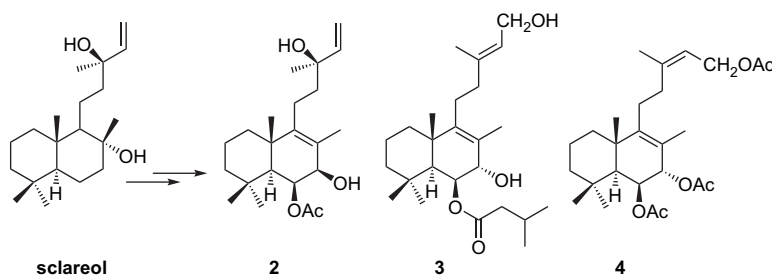
pp 8807–8814

Sergei F. Vasilevsky*, Olga L. Krivenko, Vitalii R. Gorelik, Igor V. Alabugin*

**Synthetic studies to highly functionalised B ring labdanes**

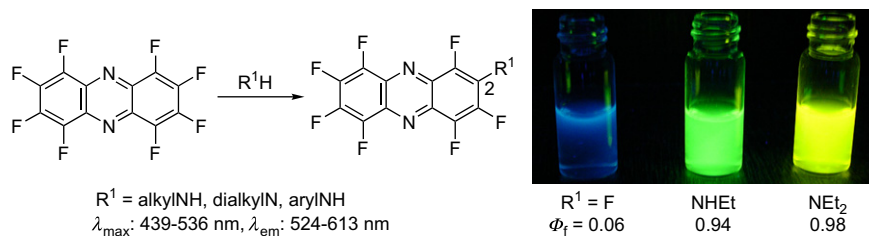
pp 8815–8829

I.S. Marcos*, L. Castañeda, P. Basabe, D. Díez, J.G. Urones

Several 6,7-dioxygenated (*cis* or *trans*) labdanes have been synthesised starting from sclareol.**Reaction, identification, and fluorescence of aminoperfluorophenazines**

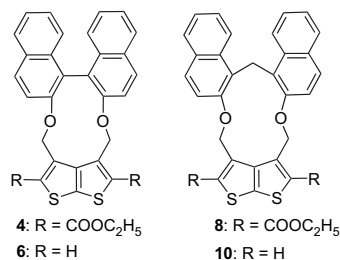
pp 8830–8836

Masaki Matsui*, Masayuki Suzuki, Izumi Nunome, Yasuhiro Kubota, Kazumasa Funabiki, Motoo Shiro, Shinya Matsumoto, Hisayoshi Shiozaki

**Oxa-bridged cyclophanes featuring thieno[2,3-*b*]thiophene and C_2 -symmetric binol or bis-naphthol rings: synthesis, structures, and conformational studies**

pp 8837–8842

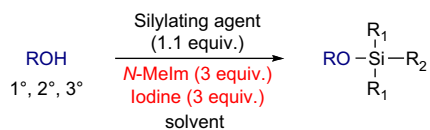
Sabir H. Mashraqui*, Yogesh S. Sangvikar, Shailesh G. Ghadigaonkar, Mohamed Ashraf, M. Meetsma

The structures of oxa-bridged cyclophanes were determined with the aid of 2D NMR analysis. Dynamic NMR study revealed that the conformations of cyclophanes are temperature dependent with the binol cyclophanes **4/6** having higher energy barriers relatively to the corresponding bis-naphthol cyclophanes **8/10**.

Iodine-promoted silylation of alcohols with silyl chlorides. Synthetic and mechanistic studies

pp 8843–8850

Agnieszka Bartoszewicz, Marcin Kalek, Jacek Stawinski*

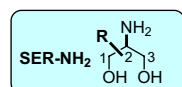
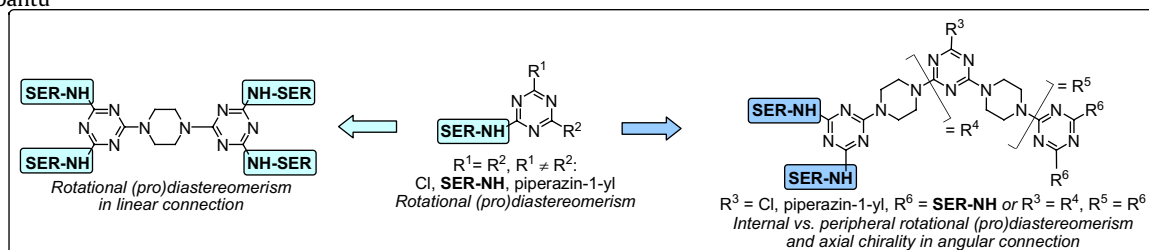


Silylating agent = TBDMS-Cl, TBDPS-Cl or TIPS-Cl

**Serinic amino-s-triazines: iterative synthesis and rotational stereochemistry phenomena as N-substituted derivatives of 2-aminopropane-1,3-diols**

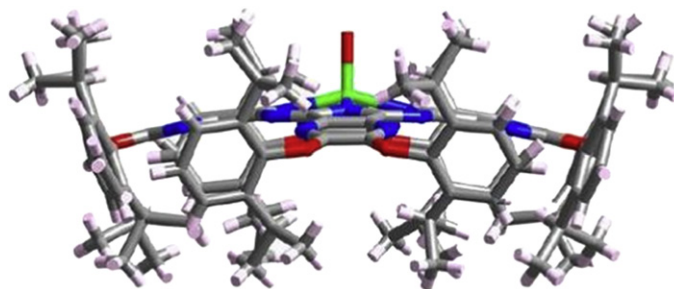
pp 8851–8870

Monica Pintea, Marijana Fazekas, Pedro Lameiras, Ionut Cadis, Camelia Berghian, Ioan Silaghi-Dumitrescu, Flavia Popa, Constantin Bele, Nelly Plé, Mircea Darabantu*

R (C-1): Ph, β -O₂N-C₆H₄R (C-2): Me, Et, CH₂OH**Synthesis and characterization of non-aggregating octa-substituted azaphthalocyanines bearing bulky phenoxy substituents**

pp 8871–8877

Saad Makhseed*, Jacob Samuel, Fadi Ibrahim

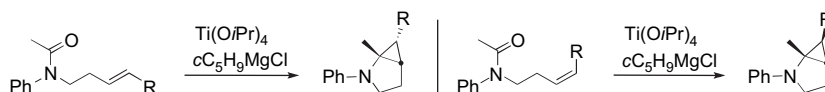


Conical shape of ZnAzaPc showing the bulky phenoxy groups lying almost perpendicular to the plane of the macrocycle core.

Intramolecular Kulinkovich–de Meijere reactions of various disubstituted alkenes bearing amide groups

pp 8878–8898

Claire Madelaine, Nouara Ouhamou, Angèle Chiaroni, Emeline Vedrenne, Laurence Grimaud, Yvan Six*



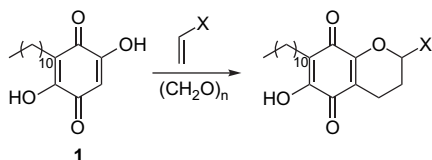
A range of amides fitted with (*E*) or (*Z*) disubstituted alkene groups were prepared and evaluated in intramolecular Kulinkovich–de Meijere reactions. The corresponding aminocyclopropanes were obtained with high diastereoselectivity. Good yields could be achieved with substrates bearing suitable substitutions at the olefin moieties.



An efficient synthesis of embelin derivatives through domino Knoevenagel hetero Diels–Alder reactions under microwave irradiation

pp 8938–8942

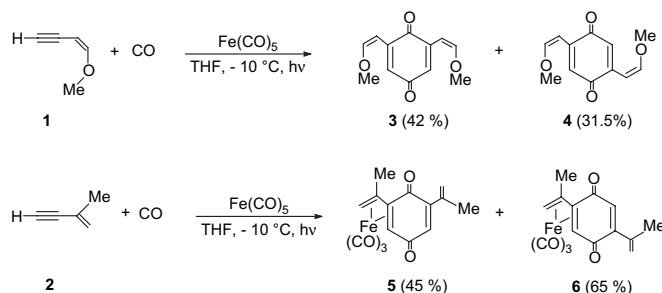
Sandra Jiménez-Alonso, Haydee Chávez, Ana Estévez-Braun*, Ángel G. Ravelo*, Gabriela Feresin, Alejandro Tapia



Iron pentacarbonyl assisted photochemical route to 2,5- and 2,6-divinyl-substituted 1,4-benzoquinones from 1-ene-3-yne

pp 8943–8946

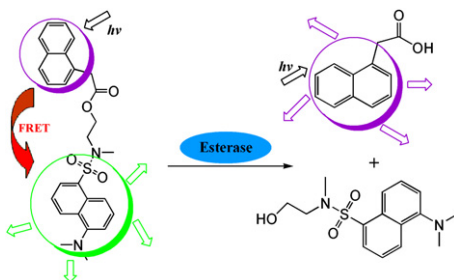
Pradeep Mathur*, Vidya D. Avasare, Shaikh M. Mobin



FRET-based fluorescence probes for hydrolysis study and pig liver esterase activity

pp 8947–8951

Long Yi, Li Cao, Liangliang Liu, Zhen Xi*

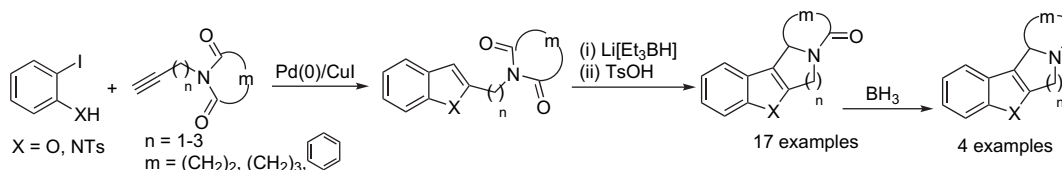


New FRET-based fluorescent probes for the real-time analysis of ester hydrolysis were designed and synthesized. Both base- and esterase-catalyzed kinetics were studied based on this fast and simple FRET assay.

Sonogashira/*N*-acyliminium ion aromatic π -cyclisation processes: access to tetra- and pentacyclic lactams

pp 8952–8962

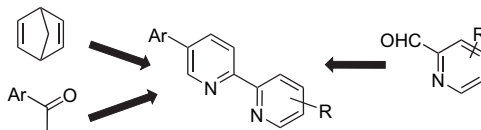
Ronald Grigg*, Visuvanathar Sridharan, David A. Sykes



Facile synthesis of 6-aryl-3-pyridyl-1,2,4-triazines as a key step toward highly fluorescent 5-substituted bipyridines and their Zn(II) and Ru(II) complexes

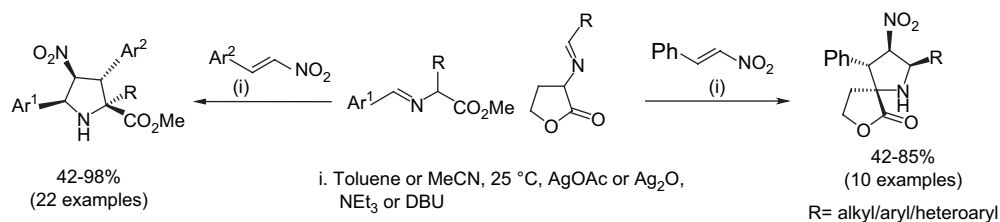
pp 8963–8973

Valery N. Kozhevnikov*, Olga V. Shabunina, Dmitry S. Kopchuk, Maria M. Ustinova, Burkhard König, Dmitry N. Kozhevnikov*

**X=Y-ZH compounds as potential 1,3-dipoles. Part 64: Synthesis of highly substituted conformationally restricted and spiro nitropyrrolidines via Ag(I) catalysed azomethine ylide cycloadditions**

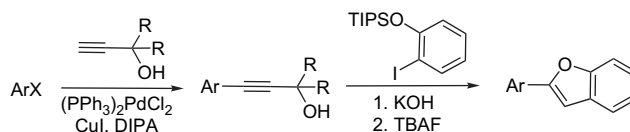
pp 8974–8991

Ronald Grigg*, Colin Kilner, Mohammed A.B. Sarker, Cecilia Orgaz de la Cierva, H. Ali Dondas


**Development of a one-pot sequential Sonogashira coupling for the synthesis of benzofurans**

pp 8992–8996

Márton Csékei, Zoltán Novák, András Kotschy*



*Corresponding author

 Supplementary data available via ScienceDirect

COVER

B3LYP/6-31G(d)-calculated transition states for phenyl rotation in the twisted hydrocarbon 9,10,11,20,21,22-hexaphenyltetrabenzo[*a,c,l,n*]pentacene; the phenyl groups undergoing rotation are drawn with red atoms. *Tetrahedron* **2008**, *64*, 8630–8637.

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