



Tetrahedron Vol. 65, Issue 36, 2009

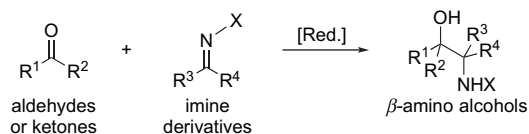
Contents

REPORT

Reductive cross-coupling reactions (RCCR) between C=N and C=O for β -amino alcohol synthesis

pp 7333–7356

Olga N. Burchak, Sandrine Py*

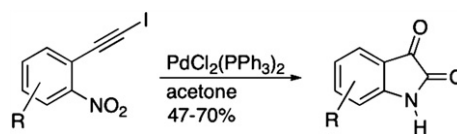


ARTICLES

A palladium-catalyzed synthesis of isatins (1*H*-Indole-2,3-diones) from 1-(2-haloethyl)-2-nitrobenzenes

pp 7357–7363

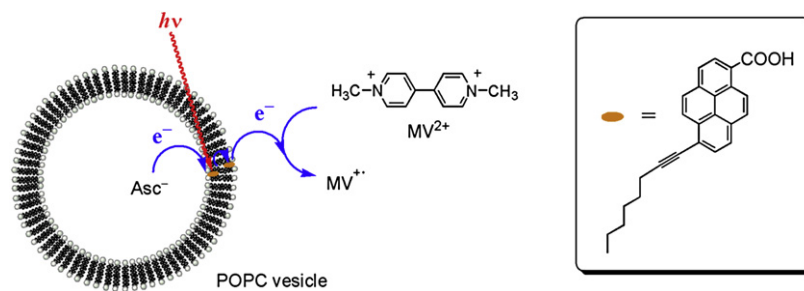
Björn C.G. Söderberg*, Sobha P. Gorugantula, Chet R. Howerton, Jeffrey L. Petersen, Shubhada W. Dantale



Amphiphilic pyrenecarboxylic acids: incorporation into vesicle membrane and ability as sensitizer for electron transport reactions

pp 7364–7371

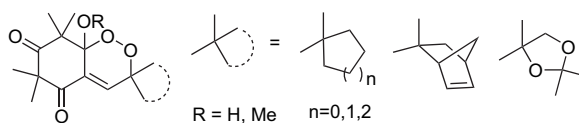
Ryo Sasaki, Yuki Nako, Shigeru Murata*



α -Spiro endoperoxides: synthesis and evaluation of their antimalarial activities

pp 7372–7379

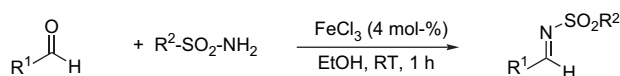
Virginie Bernat, Nathalie Saffon, Marjorie Maynadier, Henri Vial, Christiane André-Barrès*



Iron-catalyzed sulfonylimine synthesis under neutral conditions

pp 7380–7384

Xiao-Feng Wu, Chloé Vovard-Le Bray, Lazhar Bechki, Christophe Darcel*



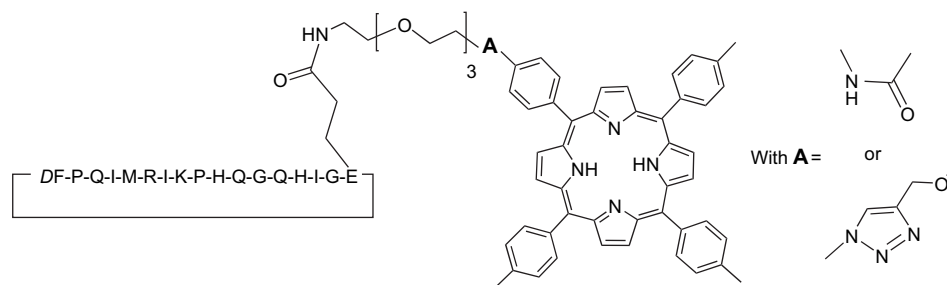
A convenient FeCl_3 -catalyzed synthesis of *N*-sulfonylimines via the condensation of aldehydes with *N*-sulfonylamides in mild and neutral conditions (in ethanol at room temperature) is reported. This procedure constitutes the first iron-catalyzed synthesis of *N*-sulfonylimines and is adapted to the condensation of both aromatic and aliphatic aldehydes.



An efficient route to VEGF-like peptide porphyrin conjugates via microwave-assisted 'click-chemistry'

pp 7385–7392

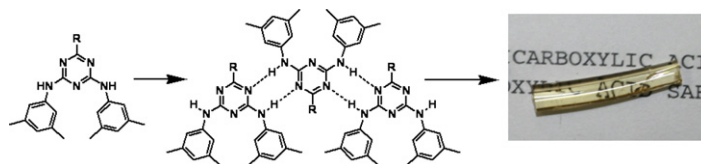
M.E. Bakleh, V. Sol*, K. Estieu-Gionnet, R. Granet, G. Délérís, P. Krausz



Anarchy in the solid state: structural dependence on glass-forming ability in triazine-based molecular glasses

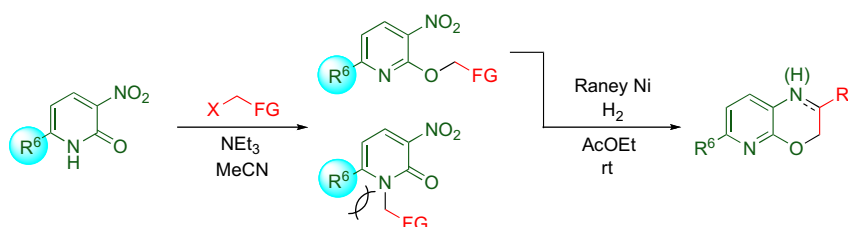
pp 7393–7402

James D. Wuest, Olivier Lebel*

**Synthesis of 2,6-disubstituted pyrido[2,3-b][1,4]oxazines**

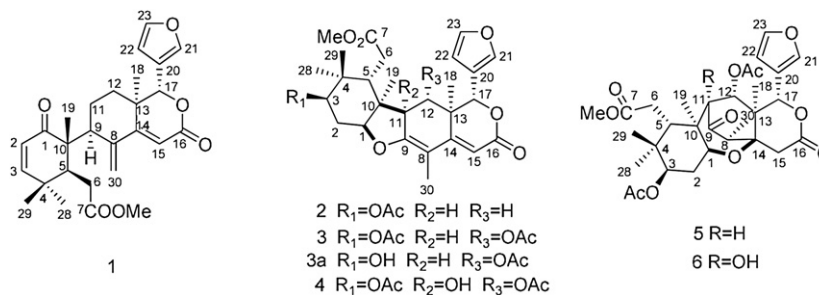
pp 7403–7407

Nagatoshi Nishiwaki*, Masataka Hisaki, Masaki Ono, Masahiro Ariga

**Cipadonoids B–G, six new limonoids from *Cipadessa cinerascens***

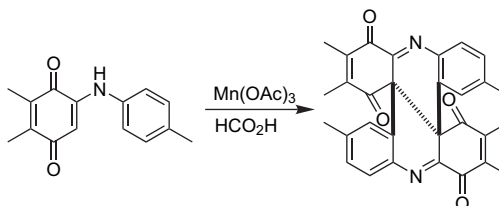
pp 7408–7414

Xin Fang, Qiang Zhang, Chen-Jian Tan, Shu-Zhen Mu, Yang Lü, Yong-Bin Lu, Qi-Tai Zheng, Ying-Tong Di, Xiao-Jiang Hao*

**The radical reactions of imine radicals produced from the metal salts oxidation of 2-amino-1,4-benzoquinones**

pp 7415–7421

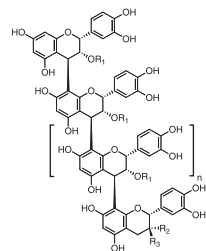
Po-Yuan Lu, Kuang-Po Chen, Che-Ping Chuang*



Versatile synthesis of epicatechin series procyanidin oligomers, and their antioxidant and DNA polymerase inhibitory activity

pp 7422–7428

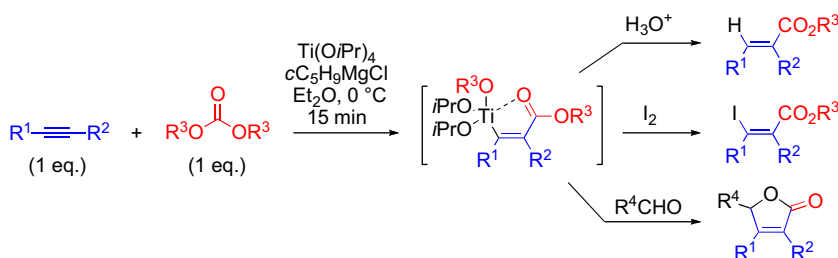
Akiko Saito*, Yoshiyuki Mizushima, Akira Tanaka, Noriyuki Nakajima*

R₁ = H or galloyl, R₂ = H or Ogalloyl, n = 0–2

A convenient titanium-mediated intermolecular alkyne–carbonate coupling reaction

pp 7429–7439

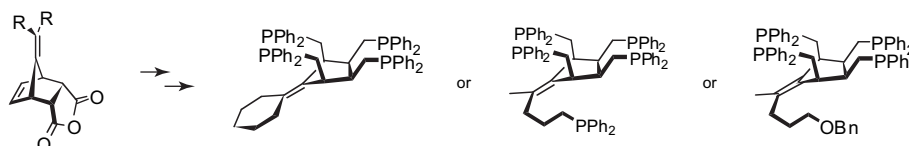
Andrzej Wolan, Frédéric Cadoret, Yvan Six*



Synthesis of *cis,cis,cis*-1-alkylidene-2,3,4,5-tetrakis(diphenylphosphinomethyl)cyclopentanes

pp 7440–7448

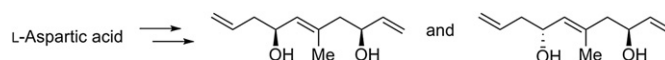
Céline Reynaud, Yacoub Fall, Marie Feuerstein, Henri Doucet*, Maurice Santelli*



Stereoselective synthesis and absolute configuration of the C33–C42 fragment of symbiodinolide

pp 7449–7456

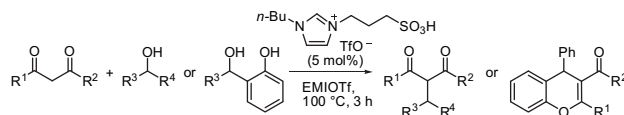
Hiroyoshi Takamura*, Yuichiro Kadonaga, Yoshi Yamano, Chunguang Han, Isao Kadota*, Daisuke Uemura



Brønsted acid ionic liquid-catalyzed direct benzylation, allylation and propargylation of 1,3-dicarbonyl compounds with alcohols as well as one-pot synthesis of 4*H*-chromenes

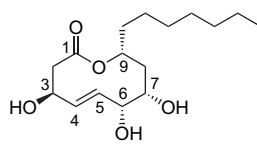
pp 7457–7463

Kazumasa Funabiki*, Takuya Komeda, Yasuhiro Kubota, Masaki Matsui

**Absolute stereochemistry and conformational analysis of a chaetolide isolated from *Ophiobolus* sp.**

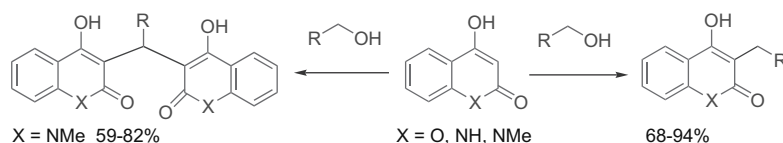
pp 7464–7467

Wilanfranco Caballero Tayone, Saori Shindo, Takanori Murakami, Masaru Hashimoto, Kazuaki Tanaka, Noboru Takada*

**Iridium catalysed alkylation of 4-hydroxy coumarin, 4-hydroxy-2-quinolones and quinolin-4(1*H*)-one with alcohols under solvent free thermal conditions**

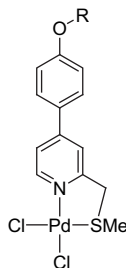
pp 7468–7473

Ronald Grigg*, Simon Whitney, Visuvanathar Sridharan, Ann Keep, Andrew Derrick

**Supported palladium catalysis using a heteroleptic 2-methylthiomethylpyridine-*N,S*-donor motif for Mizoroki–Heck and Suzuki–Miyaura coupling, including continuous organic monolith in capillary microscale flow-through mode**

pp 7474–7481

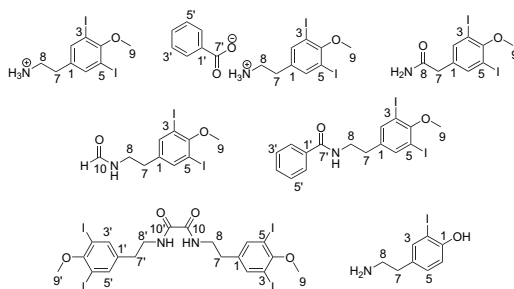
Roderick C. Jones*, Allan J. Canty*, Jeremy A. Deverell, Michael G. Gardiner, Rosanne M. Guijt, Thomas Rodemann, Jason A. Smith, Vicki-Anne Tolhurst



New iodotyramine derivatives from *Didemnum rubeum*

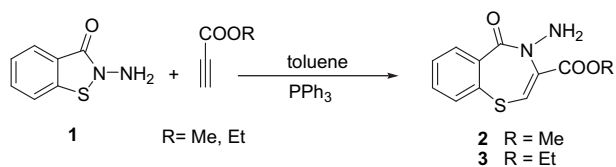
pp 7482–7486

Godofredo Solano, Cherie A. Motti, Marcel Jaspars*

**Synthesis and NMR spectral assignments of novel 1,4-benzothiazepine-5-one derivatives**

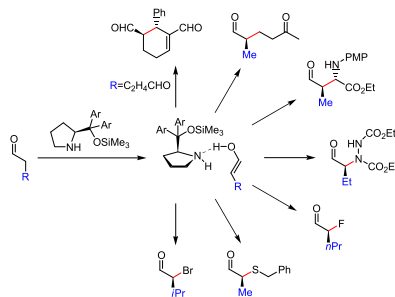
pp 7487–7490

Matteo Incerti, Domenico Acquotti, Peter Sandor, Paola Vicini*

**Mechanism of the α,α -diarylprolinol trimethylsilyl ether-catalyzed enantioselective C–C, C–N, C–F, C–S, and C–Br bond forming reactions**

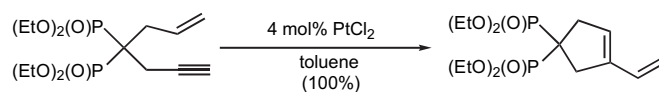
pp 7491–7497

Chiong Teck Wong

**Cyclisation of bisphosphonate substituted enynes**

pp 7498–7503

Susan E. Gibson*, Peter R. Haycock, Ayako Miyazaki

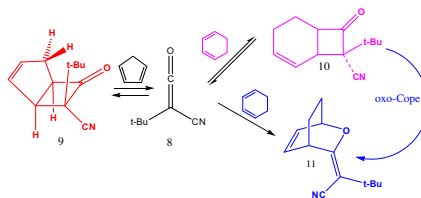


A bisphosphonate enyne undergoes a range of transition metal-catalysed cyclisations that give structurally varied products; monitoring the cyclisations by ^{31}P NMR spectroscopy led to the observation of reaction intermediates.

Reaction of Moore's ketene (*tert*-butylcyanoketene) with 1,3-cyclopentadiene and 1,3-cyclohexadiene. Is periselectivity controlled by the dynamic of trajectories at the bifurcation point?

pp 7504–7509

Anca Marton, Luminitza Pârvolescu*, Constantin Drăghici, Richard A. Varga, Mircea D. Gheorghiu*

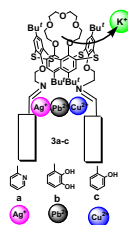


TBCK reacts reversibly with 1,3-cyclopentadiene to yield cyclobutanone **9** only. At low temperature ($-20\text{ }^{\circ}\text{C}$) TBCK and 1,3-cyclohexadiene afford cyclobutanone **10** (ca. 75%) and the ether **11** (ca. 25%). The preparation of ether **11** is increased by the oxo-Cope thermal rearrangement of cyclobutanone **10**. Ether **11** structure is supported by X-ray diffraction results. Only two transition states have been identified computationally (mPWB95/6-31+G(d,p)), one leading to cyclobutanone **10** and the other to oxo-Cope rearrangement to form ether **11**.

Regulation of metal ion recognition by allosteric effects in thiacalix[4]crown based receptors

pp 7510–7515

Manoj Kumar*, Abhimanew Dhir, Vandana Bhalla

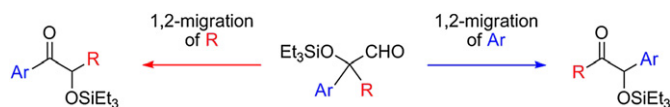


Three new ditopic receptors **3a–c** based on thiacalix[4]arene of 1,3 *alternate* conformation possessing two different complexation sites have been designed and synthesized. Compounds **3a–c** behave as ditopic receptors for Ag^+/K^+ , $\text{Pb}^{2+}/\text{K}^+$, and $\text{Cu}^{2+}/\text{K}^+$ ions, respectively. The formation of $\mathbf{3a}\cdot\text{Ag}^+$ / $\mathbf{3b}\cdot\text{Pb}^{2+}$ / $\mathbf{3c}\cdot\text{Cu}^{2+}$ complex triggers the decomplexation of K^+ ion from crown moiety and acts as a gateway, which regulates the binding of alkali metal to crown moiety. Thus, allosteric binding between metal ions 'switch off' the recognition ability of crown ether ring.


Al Lewis acid-catalyzed regiodivergent 1,2-rearrangement of α -siloxy aldehydes: scope and mechanism

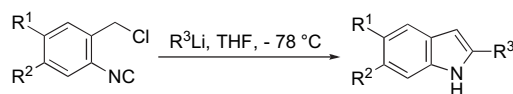
pp 7516–7522

Kohsuke Ohmatsu, Takayuki Tanaka, Takashi Ooi*, Keiji Maruoka*


A convenient synthesis of 2-substituted indoles by the reaction of 2-(chloromethyl)phenyl isocyanides with organolithiums

pp 7523–7526

Kazuhiro Kobayashi*, Daisuke Iitsuka, Shuhei Fukamachi, Hisatoshi Konishi

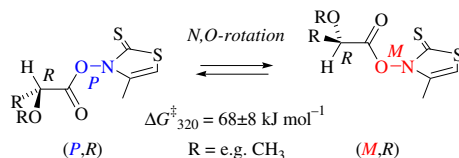


$\text{R}^1 = \text{H, Me}; \text{R}^2 = \text{H, Cl}; \text{R}^3 = \text{alkyl, aryl}$ 49–72%

Hindered rotation in *N*-acyloxy-4-methylthiazole-2(3*H*)-thiones

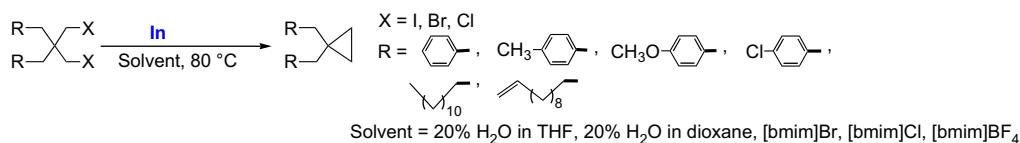
pp 7527–7532

Jens Hartung*, Christine Schur, Irina Kempter, Sabine Altermann, Georg Stapf, Uwe Bergsträßer, Thomas Gottwald, Markus Heubes

**3-*exo-tet* Cyclization of 2,2-disubstituted 1,3-dihalopropanes with indium in aqueous and ionic liquid solvent system**

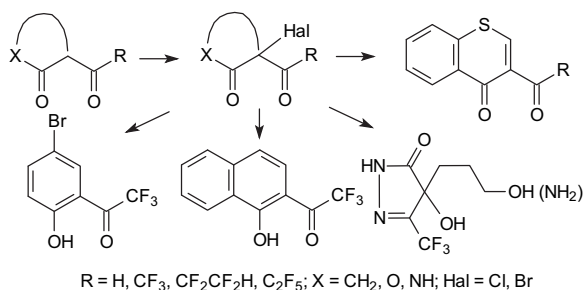
pp 7533–7537

Yuhsuke Tsuchiya, Yuhta Izumisawa, Hideo Togo*

**Halogenation of fluorinated cyclic 1,3-dicarbonyl compounds: new aspects of synthetic application**

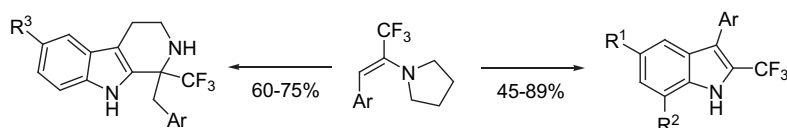
pp 7538–7552

Dmitri V. Sevenard*, Mikhail Vorobyev, Vyacheslav Ya. Sosnovskikh, Helma Wessel, Olesya Kazakova, Vera Vogel, Nikolay E. Shevchenko, Valentine G. Nenajdenko, Enno Lork, Gerd-Volker Röscenthaler*

 **α -Trifluoromethyl- β -aryl enamines in the synthesis of trifluoromethylated heterocycles by the Fischer and the Pictet–Spengler reactions**

pp 7553–7561

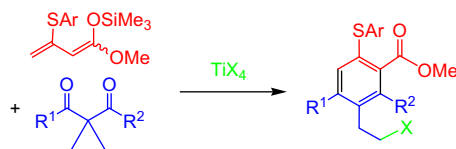
Vasiliy M. Muzalevskiy, Valentine G. Nenajdenko*, Aleksey V. Shastin, Elizabeth S. Balenkova, Günter Haufe*



Synthesis of functionalized 2-(arythio)benzoates by formal [3+3] cyclizations of 3-arythio-1-silyloxy-1,3-butadienes with 3-silyloxy-2-en-1-ones and 1,3-diacylcyclopropanes

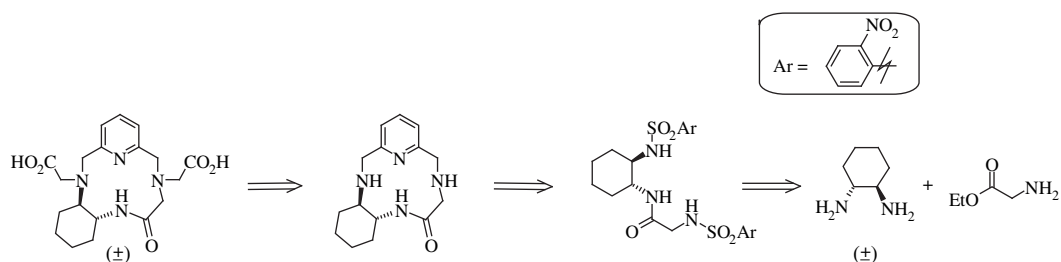
pp 7562–7572

Inam Iqbal, Muhammad Imran, Nasir Rasool, Muhammad A. Rashid, Munawar Hussain, Alexander Villinger, Christine Fischer, Peter Langer*

**Synthesis of an hexadentate tricyclic tetraazadiacetic ligand as precursor for MRI contrast enhancement agents**

pp 7573–7579

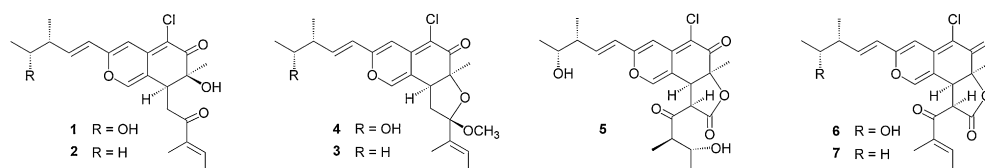
Fabienne Dioury, Clotilde Ferroud*, Alain Guy, Marc Port

**Chaetomugilins I–O, new potent cytotoxic metabolites from a marine-fish-derived *Chaetomium* species.**

pp 7580–7586

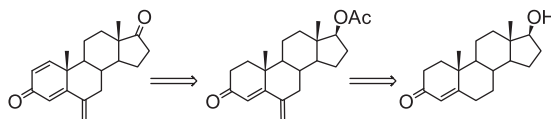
Stereochemistry and biological activities

Yasuhide Muroga, Takeshi Yamada*, Atsushi Numata, Reiko Tanaka

**1,2-Dehydrogenation of steroidal 6-methylen derivatives. Synthesis of exemestane**

pp 7587–7590

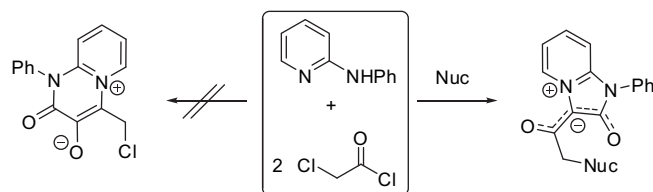
Andrés Marcos-Escribano, Francisco A. Bermejo*, Antonio Lorente Bonde-Larsen, Jesús Iglesias Retuerto, Ignacio Herráiz Sierra



Synthesis and properties of imidazo[1,2-a]pyridinium-3-olate. Some revised structures

pp 7591–7596

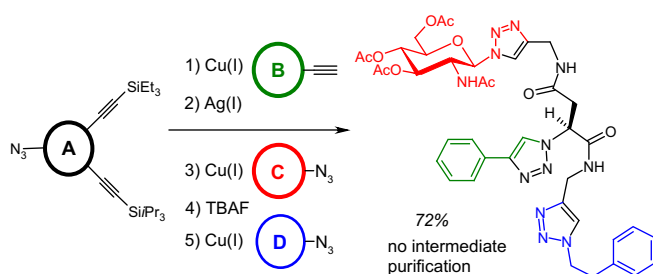
Anika Sabine Lindner, Martin Nieger, Andreas Schmidt*



Click à la carte: robust semi-orthogonal alkyne protecting groups for multiple successive azide/alkyne cycloadditions

pp 7597–7602

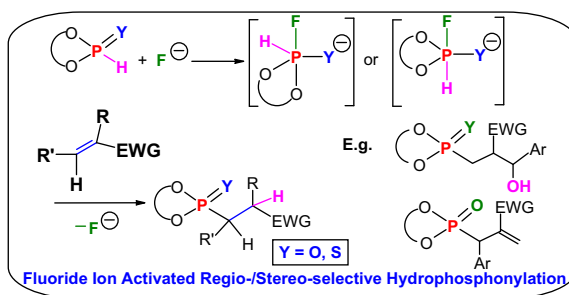
Ibai E. Valverde, Agnès F. Delmas, Vincent Aucagne*



Hydrophosphonylation of activated alkenes and alkynes via fluoride ion activation in ionic liquid medium

pp 7603–7610

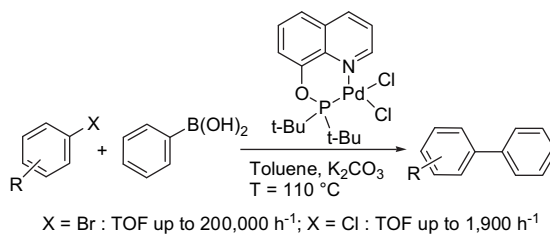
E. Balaraman, Venu Srinivas, K.C. Kumara Swamy*



[PdCl₂{8-(di-*tert*-butylphosphinooxy)quinoline}]: a highly efficient catalyst for Suzuki–Miyaura reaction

pp 7611–7615

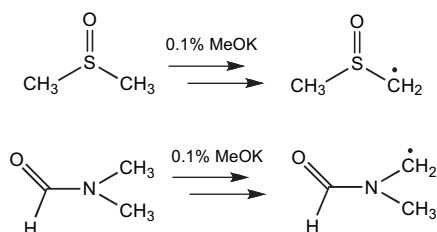
A. Scrivanti*, M. Bertoldini, U. Matteoli, S. Antonaroli, B. Crociani



Formation of DMSO and DMF radicals with minute amounts of base

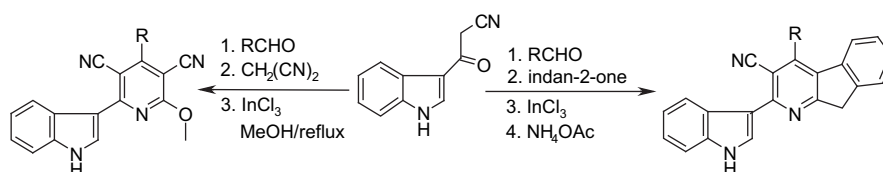
pp 7616–7619

Christer L. Øpstad, Thor-Bernt Melø, Hans-Richard Sliwka*, Vassilia Partali

**InCl₃ mediated one-pot synthesis of indol-3-yl pyridine and 2,2'-bipyridine derivatives through multi-component reaction**

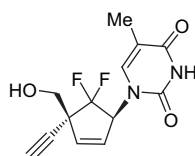
pp 7620–7629

Prakasam Thirumurugan, Paramasivan T. Perumal*

**Synthesis of (±)-4'-ethynyl-5',5'-difluoro-2',3'-dehydro-3'-deoxy- carbocyclic thymidine: a difluoromethylidene analogue of promising anti-HIV agent Ed4T**

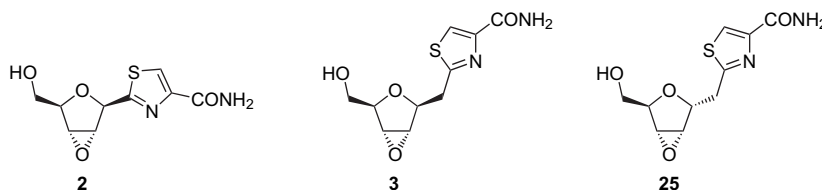
pp 7630–7636

Hiroki Kumamoto*, Kazuhiro Haraguchi, Mayumi Ida, Kazuo T. Nakamura, Yasuyuki Kitagawa, Takayuki Hamasaki, Masanori Baba, Satoko Shimbara Matsubayashi, Hiromichi Tanaka

**Synthesis of highly cytotoxic tiazofurin mimics bearing a 2,3-anhydro function in the furanose ring**

pp 7637–7645

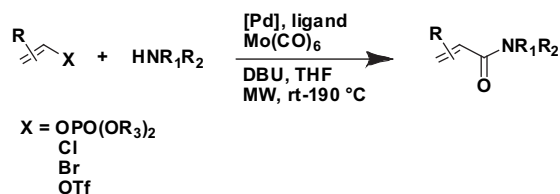
Mirjana Popsavin*, Saša Spaić, Miloš Svirčev, Vesna Kojić, Gordana Bogdanović, Vjera Pejanović, Velimir Popsavin



Novel tiazofurin derivatives, 2',3'-anhydro-tiazofurin (**2**) and the corresponding β -(**3**) and α -(**25**) homo-C-nucleosides, have been synthesized and evaluated for their *in vitro* antitumour activity.

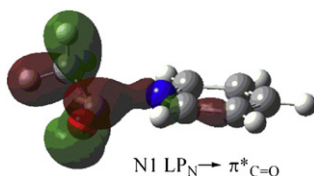
Aminocarbonylations of alkenyl phosphates, chlorides, bromides, and triflates with Mo(CO)₆ as a solid CO source
 Olof Lagerlund, Mette L.H. Mantel, Mats Larhed*

pp 7646–7652


Acyl radical addition to pyridine: multiorbital interactions

Ruth I.J. Amos, Jason A. Smith, Brian F. Yates, Carl H. Schiesser*

pp 7653–7657

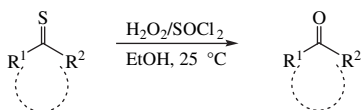


Acetyl radical reacts as a nucleophilic radical with pyridinium ions, and as an electrophilic radical with pyridine through a mechanism involving multiorbital interactions. Electron-withdrawing groups on the pyridinium ring accelerates these reactions and is likely to be responsible for the chemistry observed for the tuberculosis drug *isoniazid*.


H₂O₂/SOCl₂: a useful reagent system for the conversion of thiocarbonyls to carbonyl compounds

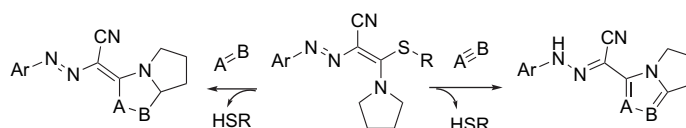
Kiumars Bahrami*, Mohammad M. Khodaei*, Azita Farrokhi

pp 7658–7661


3-Alkylsulfanyl-2-aryldiazo-3-(pyrrolidin-1-yl)acrylonitriles as masked 1,3-dipoles

Nataliya P. Belskaya*, Vasiliy A. Bakulev, Tatyana G. Deryabina, Julia O. Subbotina, Mikhail I. Kodess, Wim Dehaen, Suzanne Toppet, Koen Robeyns, Luc Van Meervelt

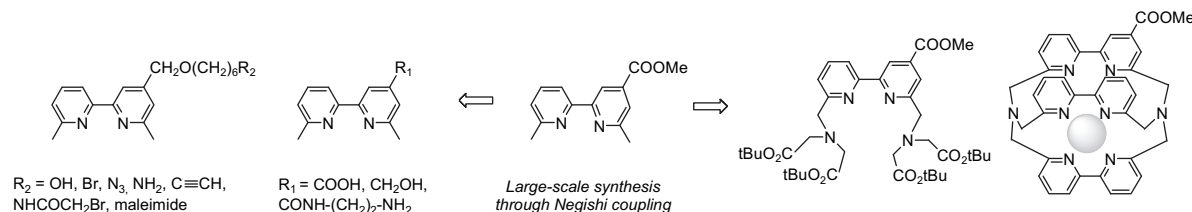
pp 7662–7672



6,6'-Dimethyl-2,2'-bipyridine-4-ester: A pivotal synthon for building tethered bipyridine ligands

pp 7673–7686

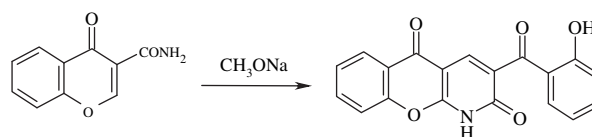
Fabien Havas, Nadine Leygue, Mathieu Danel, Béatrice Mestre, Chantal Galaup, Claude Picard*



Ring transformation of chromone-3-carboxamide

pp 7687–7690

Magdy A. Ibrahim*

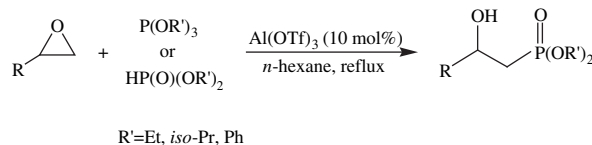


The action of bases (NH_4OH , NaOH , RNH_2 and sodium methoxide) on chromone-3-carboxamide was studied.

Efficient one-pot synthesis of β -hydroxyphosphonates: regioselective nucleophilic ring opening reaction of epoxides with triethyl phosphite catalyzed by $\text{Al}(\text{OTf})_3$

pp 7691–7695

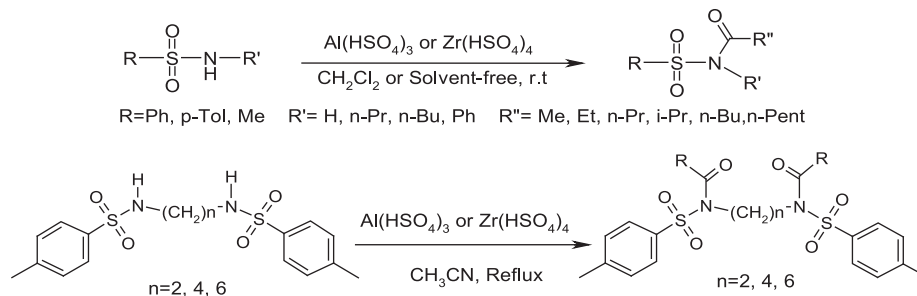
Sara Sobhani*, Asieh Vafaee



A novel and efficient solvent-free and heterogeneous method for the synthesis of primary, secondary and bis-N-acylsulfonamides using metal hydrogen sulfate catalysts

pp 7696–7705

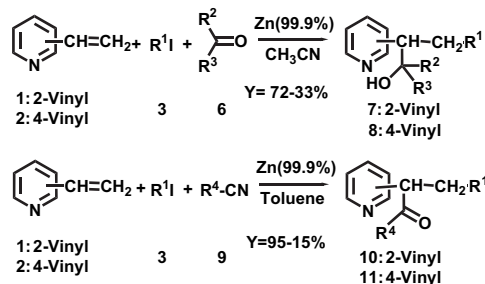
Ahmad Reza Massah*, Beheshteh Asadi, Mahdieh Hoseinpour, Azadeh Molseghi, Roozbeh Javad Kalbasi, Hamid Javaherian Naghash



Zn-promoted regio- and sequence-selective one-pot joining reactions of three components: vinylpyridines, alkyl iodides, and carbonyl compounds (or nitriles)

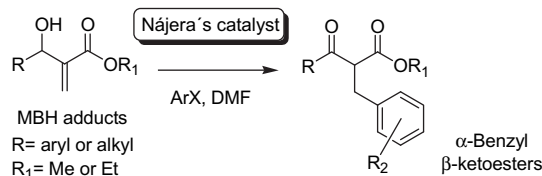
pp 7706–7711

Kenji Mineyama, Hirofumi Maekawa, Akihiro Kohsaka, Yoshimasa Yamamoto, Ikuzo Nishiguchi*


Nájera oxime-derived palladacycles catalyze intermolecular Heck reaction with Morita–Baylis–Hillman adducts. An improved and highly efficient synthesis of α -benzyl- β -ketoesters

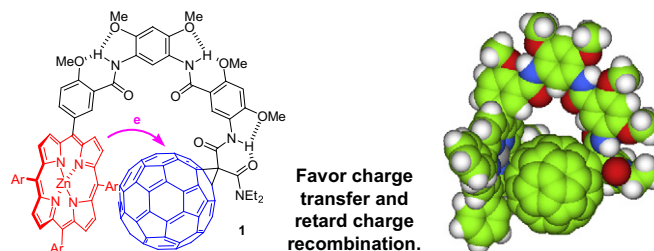
pp 7712–7717

Bruno R.V. Ferreira, Rodrigo V. Pirovani, Luis G. Souza-Filho, Fernando Coelho*


Hydrogen bonding-mediated foldamer-bridged zinc porphyrin-C₆₀ dyads: ideal face-to-face orientation and tunable donor–acceptor interaction

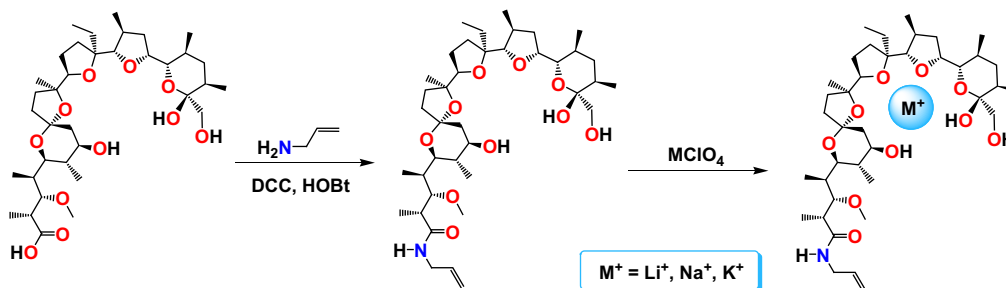
pp 7718–7729

Kui Wang, Yi-Shi Wu, Gui-Tao Wang, Ren-Xiao Wang, Xi-Kui Jiang, Hong-Bing Fu*, Zhan-Ting Li*


Syntheses, structural and antimicrobial studies of a new *N*-allylamide of monensin A and its complexes with monovalent metal cations

pp 7730–7740

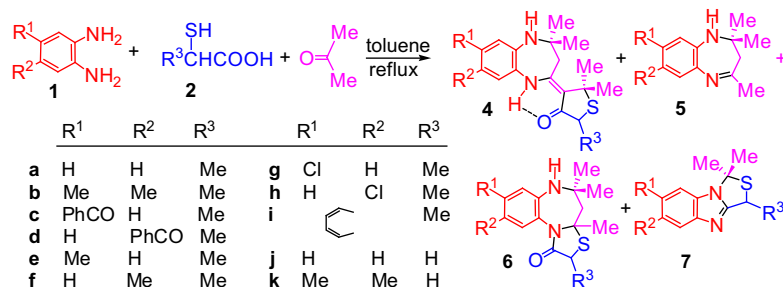
Daniel Łowicki, Adam Huczynski, Joanna Stefańska, Bogumil Brzezinski*



A combinatorial access to 1,5-benzodiazepine derivatives and their evaluation for aldose reductase inhibition

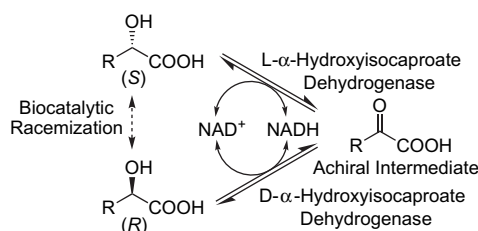
pp 7741–7751

Minodora Pozarentzi, Julia Stephanidou-Stephanatou*, Constantinos A. Tsoleridis*, Chariklia Zika, Vassilis Demopoulos

**Biocatalytic racemization of α -hydroxycarboxylic acids using a stereo-complementary pair of α -hydroxycarboxylic acid dehydrogenases**

pp 7752–7755

Anne Bodlener, Silvia M. Glueck, Bettina M. Nestl, Christian C. Gruber, Nina Baudendistel, Bernhard Hauer, Wolfgang Kroutil, Kurt Faber*

**OTHER CONTENT****Calendar**

p I

*Corresponding author

Supplementary data available via ScienceDirect

Full text of this journal is available, on-line from **ScienceDirect**. Visit www.sciencedirect.com for more information.

Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical 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

ISSN 0040-4020