



Tetrahedron Vol. 64, No. 27, 2008

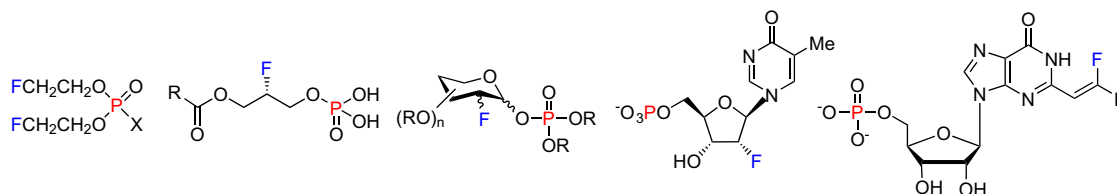
Contents

REPORT

Fluorinated organophosphates for biomedical targets

pp 6153–6190

Vadim D. Romanenko, Valery P. Kukhar*



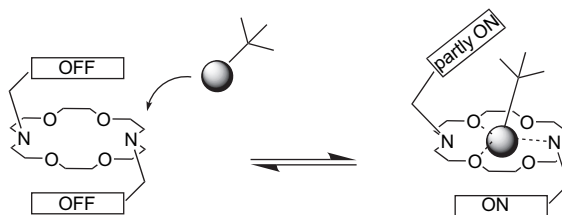
Incorporating fluorine as either a bioisosteric replacement for hydrogen (small size) or an isoelectronic replacement for the hydroxyl group (similar polarity) has considerable impact on the behaviour of a phosphate in a biological environment.

ARTICLES

Substituent dependent fluorescence response of diazacrown-based PET sensors

pp 6191–6195

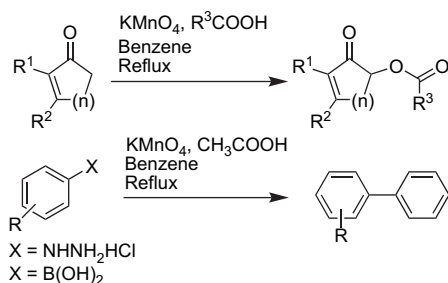
Krisztina Nagy, Szabolcs Béni, Zoltán Szakács, Attila C. Bényei, Béla Noszál, Péter Kele*, András Kotschy*



Potassium permanganate/carboxylic acid/organic solvent: a powerful reagent for enone oxidation and aryl coupling reactions

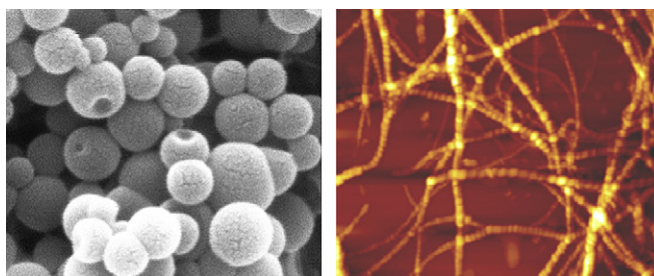
pp 6196–6201

Ayhan S. Demir*, Hamide Findik


Solvent-mediated morphological transformations in peptide-based soft structures

pp 6202–6208

Surajit Ghosh, Sandeep Verma*



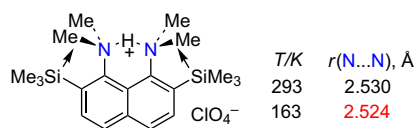
The tris-palmitoylated ditryptophan conjugate **5** forms hollow spheres in CH₂Cl₂-MeOH mixture and fibrous network in hot toluene.

2,7-Disubstituted proton sponges as borderline systems for investigating barrier-free intramolecular hydrogen bonds.

pp 6209–6214

Protonated 2,7-bis(trimethylsilyl)- and 2,7-di(hydroxymethyl)-1,8-bis(dimethylamino)naphthalenes

Alexander V. Degtyarev, Oxana V. Ryabtsova, Alexander F. Pozharskii, Valery A. Ozeryanskii*, Zoya A. Starikova, Lucjan Sobczyk, Alexander Filarowski

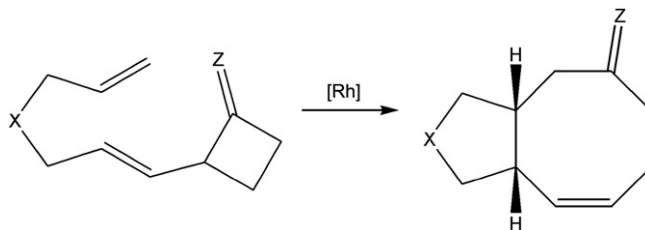


The experimental evidence of the shortest [NHN]⁺ but yet asymmetric intramolecular hydrogen bond among all known aromatic diamine systems is reported, supported by IR, NMR and theoretical calculations of this and related cation with *ortho*-CH₂OH groups.


On the mechanism of rhodium-catalyzed [6 + 2] cycloaddition of 2-vinylcyclobutanones and alkenes

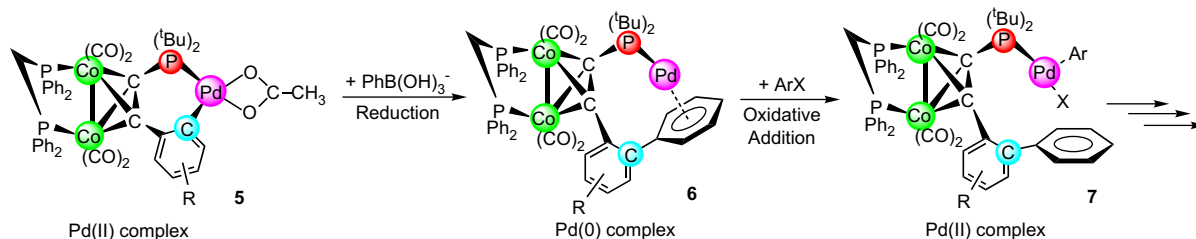
pp 6215–6220

M. Merced Montero-Campillo, Jesús Rodríguez-Otero*, Enrique M. Cabaleiro-Lago



Preparation of cobalt-containing bulky monodentate phosphines with electron-withdrawing/donating substituents on bridged arylethynyl and their applications in Suzuki coupling reactions pp 6221–6229

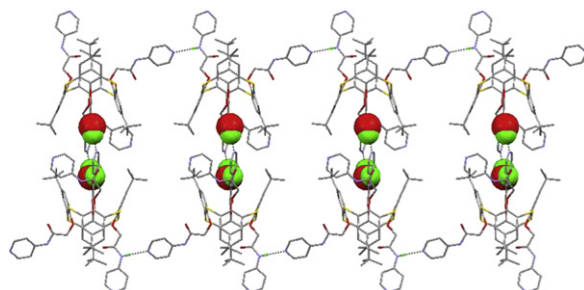
Bo-Yuan Shiu, Po-Cheng Huang, Yi-Luen Huang, Fung-E Hong*



The strong electron-withdrawing substituents assist the *ortho*-metalation process during the formation of **5**. The more positively charged palladium centers in **5** enhance the probability for PhB(OH)_3^- to attack the metal center and the rate of reduction thereafter in **5** catalyzed Suzuki reaction.

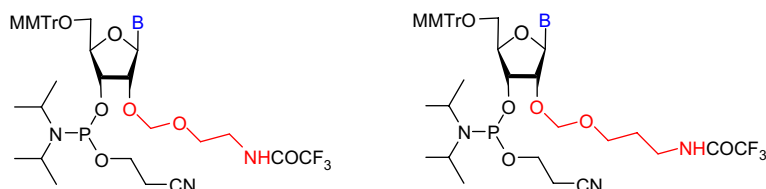
The influence of isomerism on the self-assembly behavior and complexation property of 1,3-alternate tetraaminopyridyl-thiacalix[4]arene derivatives pp 6230–6237

Xiong Li, Shu-Ling Gong*, Wei-Ping Yang, Yuan-Yin Chen, Xiang-Gao Meng



Phosphoramidite building blocks for efficient incorporation of 2'-O-aminoethoxy(and propoxy)methyl nucleosides into oligonucleotides pp 6238–6251

Georgii V. Bobkov, Sergey N. Mikhailov*, Arthur Van Aerschot, Piet Herdewijn

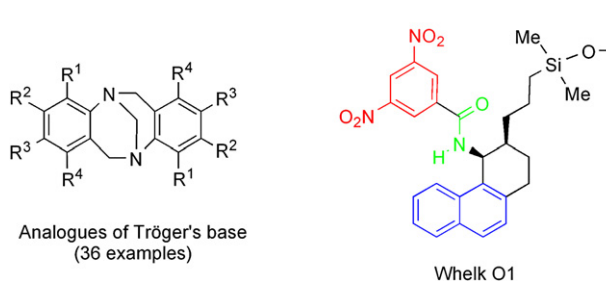


Phosphoramidites for solid-phase synthesis
 B=Ura, B=Cyt^{Bz}, B=Gua^{iBu}, B=Ade^{Bz}



Functionalized analogues of Tröger's base: scope and limitations of a general synthetic procedure and facile, predictable method for the separation of enantiomers pp 6252–6262

Delphine Didier, Benoît Tylleman, Natacha Lambert, Christophe M. L. Vande Velde, Frank Blockhuys, Alain Collas, Sergey Sergeyev*



Analogues of Tröger's base
 (36 examples)

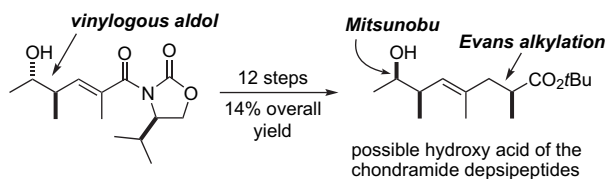
Whelk O1



Concise route to defined stereoisomers of the hydroxy acid of the chondramides

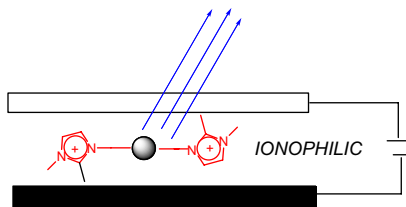
pp 6263–6269

Anke Schmauder, Sven Müller, Martin E. Maier*

**Imidazolium ionic liquids in OLEDs: synthesis and improved electroluminescence of an 'ionophilic' diphenylanthracene**

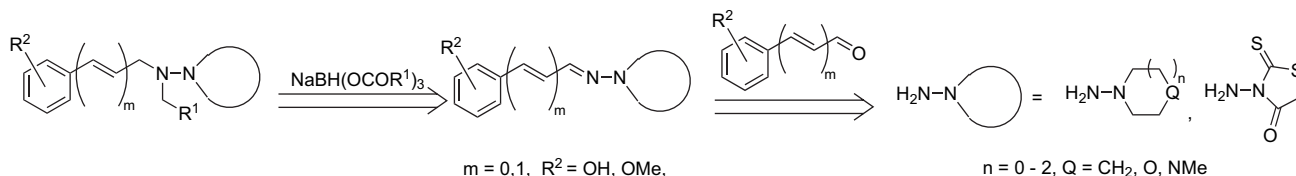
pp 6270–6274

Roberto Martín, Laura Teruel, Carmela Aprile, Jose F. Cabeza, Mercedes Álvaro, Hermenegildo García*

**A new efficient synthetic strategy for *N*-(dialkylamino)azacycle as a tetrasubstituted hydrazine derivative using sodium triacyloxyborohydride**

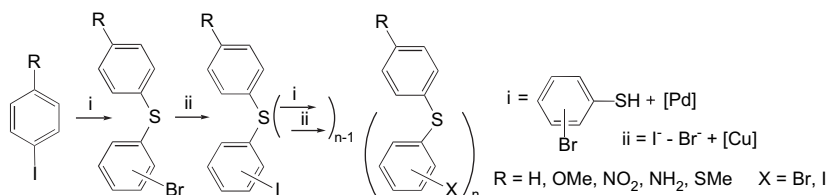
pp 6275–6280

Hideya Mizufune*, Hiroaki Yamamoto, Minoru Nakamura, Shokyo Miki

**Synthesis of molecular chains: phenylene thioether and sulfoxide oligomers**

pp 6281–6288

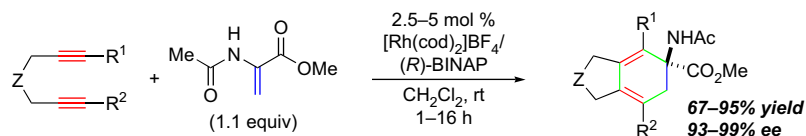
José Vicente*, José A. Abad, Rosa M. López-Nicolás



Enantioselective synthesis of α,α -disubstituted α -amino acids by Rh-catalyzed [2+2+2] cycloaddition of 1,6-diynes with protected dehydroamino acid

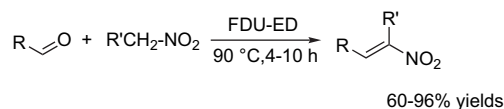
pp 6289–6293

Ken Tanaka*, Maho Takahashi, Hidetomo Imase, Takuya Osaka, Keiichi Noguchi, Masao Hirano

**An efficient synthesis of (*E*)-nitroalkenes catalyzed by recoverable diamino-functionalized mesostructured polymers**

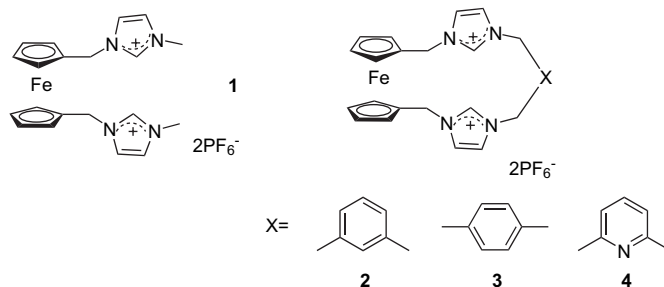
pp 6294–6299

Shaoyu Yan, Yuan Gao, Rong Xing, Yali Shen, Yueming Liu, Peng Wu*, Haihong Wu*

**Ferrocene-based imidazolium receptors for anions**

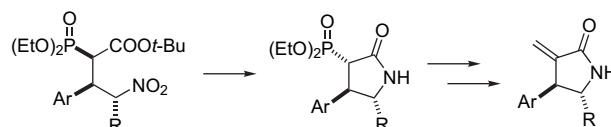
pp 6300–6306

Hao-Tao Niu, Zhenming Yin, Dongdong Su, Dong Niu, Yinbatu Ao, Jiaqi He, Jin-Pei Cheng*

**A convenient synthesis and cytotoxic evaluation of *N*-unsubstituted α -methylene- γ -lactams**

pp 6307–6314

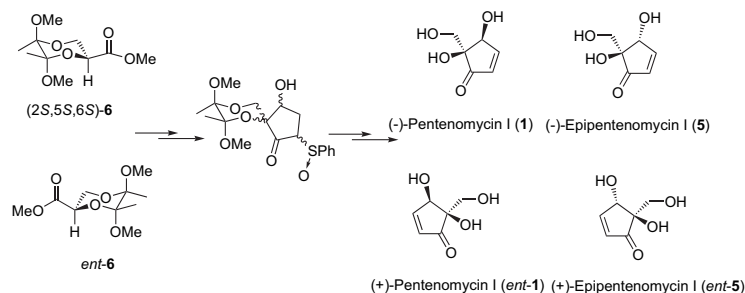
Henryk Krawczyk*, Łukasz Albrecht, Jakub Wojciechowski, Wojciech M. Wolf, Urszula Krajewska, Marek Różalski



Asymmetric synthesis of pentenomycin I, epipentenomycin I, and their analogs

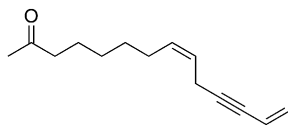
pp 6315–6323

Manat Pohmakotr*, Supakeat Kambutong, Patoomratana Tuchinda, Chutima Kuhakarn

**Total synthesis of a dienynone from *Echinacea pallida***

pp 6324–6328

Stefania Morandi, Federica Pellati, Stefania Benvenuti*, Fabio Prati*

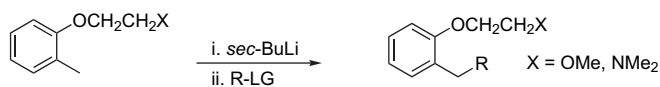


The first total synthesis of naturally occurring cytotoxic dienynone (8Z,13Z)-pentadeca-8,13-dien-11-yn-2-one is described.

New stabilising groups for lateral lithiation of *ortho*-cresol derivatives and a new route to 2-substituted chromans

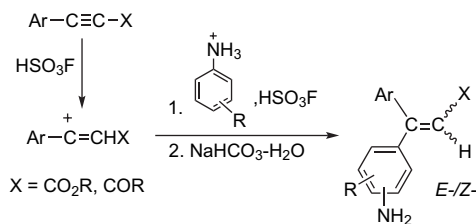
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James A. Wilkinson*, Eun-Ang Raiber, Sylvie Ducki

**New method of alkenylation of anilines by acetylene compounds in the superacid HSO_3F**

pp 6334–6340

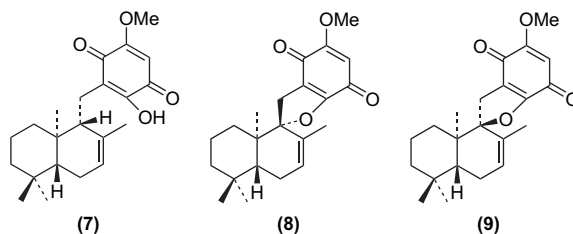
Andrey O. Shchukin, Aleksander V. Vasilyev*, Andrey P. Rudenko



Stereochemical evaluation of sesquiterpene quinones from two sponges of the genus *Dactylospongia* and the implication for enantioselective processes in marine terpene biosynthesis

pp 6341–6348

Ken W. L. Yong, Aroon Jankam, John N. A. Hooper, Apichart Suksamrarn, Mary J. Garson*

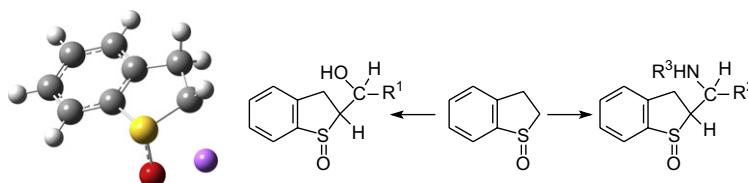


The structure and stereochemistry of some sesquiterpene quinones, including 7–9, has been deduced by 2D NMR spectroscopy.

Reactivity of lithium 2,3-dihydro-1-benzothiophene-1-oxide toward aldehydes and imines and DFT calculations

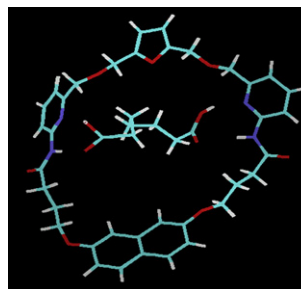
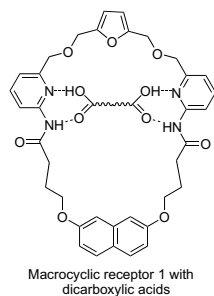
pp 6349–6357

Enzo Cadoni*, Massimiliano Arca, Michele Usai, Claudia Fattuoni, Efisio Perra, Maria G. Cabiddu, Stefania De Montis, Salvatore Cabiddu

**Design and synthesis of a unique ditopic macrocyclic fluorescent receptor containing furan ring as a spacer for the recognition of dicarboxylic acids**

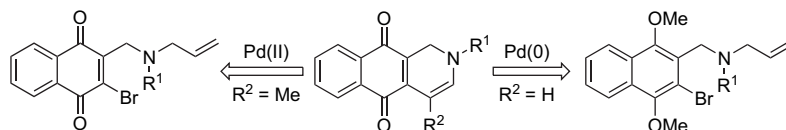
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Shyamaprosad Goswami*, Swapan Dey, Subrata Jana

**Straightforward palladium-mediated synthesis of *N*-substituted 1,2-dihydrobenz[*g*]isoquinoline-5,10-diones**

pp 6364–6371

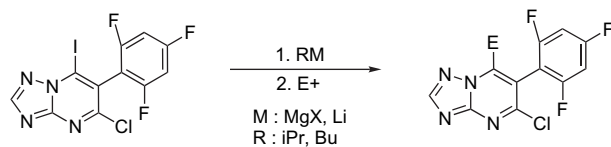
Jan Jacobs, Blaise Mavinga Mbala, Bart Kesteleyn, Gaston Diels, Norbert De Kimpe*



First synthesis of 7-amido-[1,2,4]triazolo[1,5-*a*]pyrimidines using halogen–metal exchange

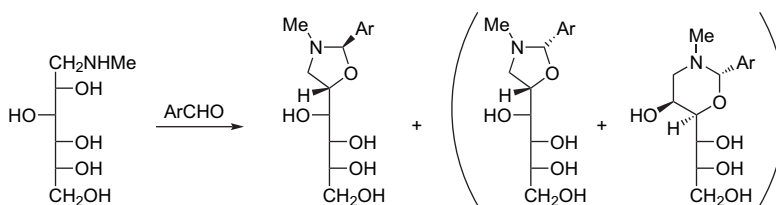
pp 6372–6376

Florian Montel, Clemens Lamberth, Pierre M. J. Jung*

**An efficient and highly diastereoselective synthesis of C-glycosylated 1,3-oxazolidines from *N*-methyl-D-glucamine**

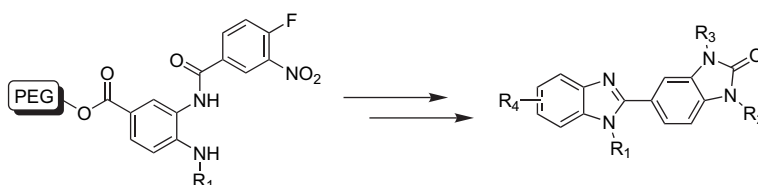
pp 6377–6386

R. Fernando Martínez*, Martín Ávalos, Reyes Babiano, Pedro Cintas, José L. Jiménez, Mark E. Light, Juan C. Palacios, Esther M. S. Pérez

**Synthesis of structurally diverse benzimidazolyl benzimidazolones by application of soluble polymer support**

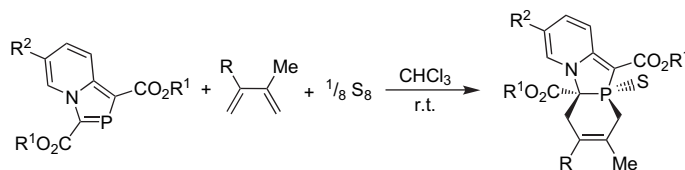
pp 6387–6394

Hsia-Yuan Chen, Manohar V. Kulkarni, Chih-Hau Chen, Chung-Ming Sun*

**Diastereo- and regioselective Diels–Alder reactions of 2-phosphaindolizines**

pp 6395–6401

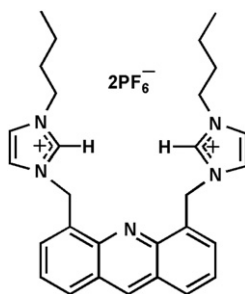
Raj K. Bansal*, Neelima Gupta, Surendra K. Kumawat, Govind Dixit



A new imidazolium acridine derivative as fluorescent chemosensor for pyrophosphate and dihydrogen phosphate

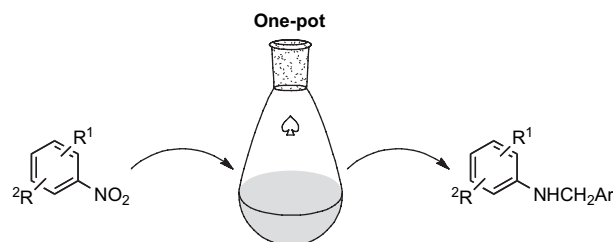
pp 6402–6405

Sook Kyung Kim, Dongwon Seo, Su Jung Han, Guiyoup Son, In-Ja Lee, Chongmok Lee, Kap Duk Lee*, Juyoung Yoon*

**Reductive monoalkylation of nitro aryls in one-pot**

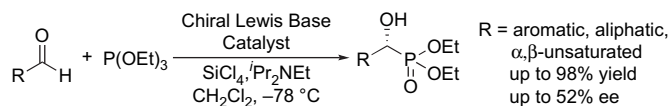
pp 6406–6414

Magne O. Sydnes*, Masaki Kuse, Minoru Isobe

**First asymmetric Abramov-type phosphonylation of aldehydes with trialkyl phosphites catalyzed by chiral Lewis bases**

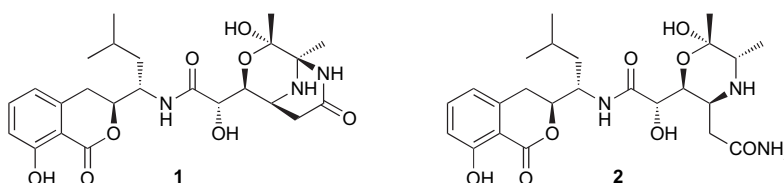
pp 6415–6419

Kyoko Nakanishi, Shunsuke Kotani, Masaharu Sugiura*, Makoto Nakajima*

**Bacilosarcins A and B, novel bioactive isocoumarins with unusual heterocyclic cores from the marine-derived bacterium *Bacillus subtilis***

pp 6420–6425

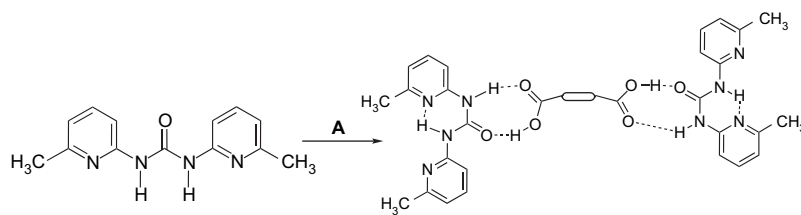
Miwa Azumi, Ken-ichi Ogawa, Tsuyoshi Fujita, Michinori Takeshita, Ryuji Yoshida, Tamotsu Furumai, Yasuhiro Igarashi*

Two novel isocoumarins, bacilosarcins A (**1**) and B (**2**) were isolated from a culture broth of the marine-derived bacterium *Bacillus subtilis*.

Recognition of a dicarboxylic acid with dipicolyl urea in solution and in solid phases: intramolecular hydrogen bond inhibiting both pyridine nitrogens from binding carboxyl groups

pp 6426–6433

Shyamaprosad Goswami*, Subrata Jana, Swapan Dey, Debabrata Sen, Hoong-Kun Fun, Suchada Chantrapromma

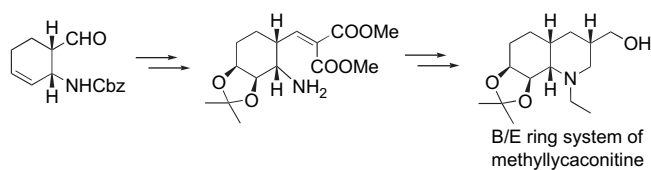


A = 1,4-phenylenediacetic acid


Diastereoselective synthesis of a highly substituted *cis*-decahydroquinoline via a Knoevenagel condensation

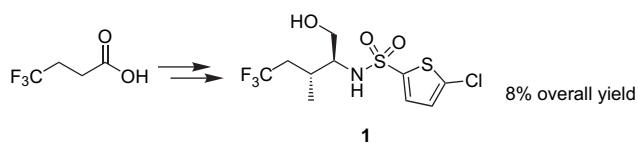
pp 6434–6439

Junfeng Huang, Stephen C. Bergmeier*


Practical asymmetric synthesis of a novel γ -secretase inhibitor

pp 6440–6443

Zheng Wang*, Lynn Resnick*

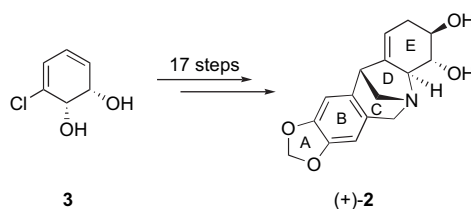


An efficient route to γ -secretase inhibitor hydroxyl thiophene sulfonamide **1** is described. It highlights a diastereoselective methylation using Evans' oxazolidinone method and a chiral Strecker reaction via Davis' sulfonimine protocol.

Chemoenzymatic approaches to the montanine alkaloids: a total synthesis of (+)-nangustine

pp 6444–6451

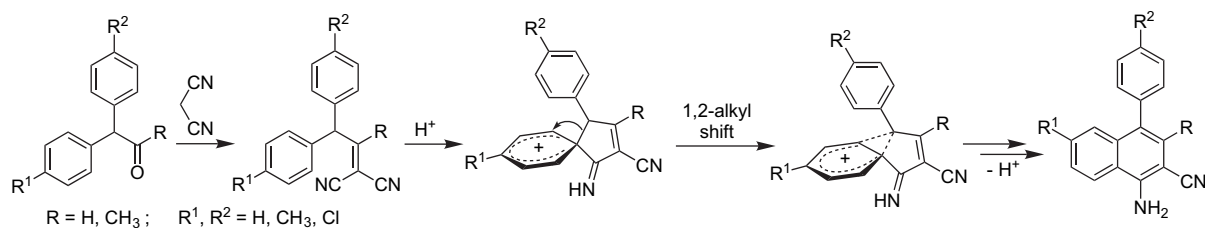
Okanya J. Kokas, Martin G. Banwell*, Anthony C. Willis



Synthesis of α -arylnaphthalenes from diphenylacetaldehydes and 1,1-diphenylacetones

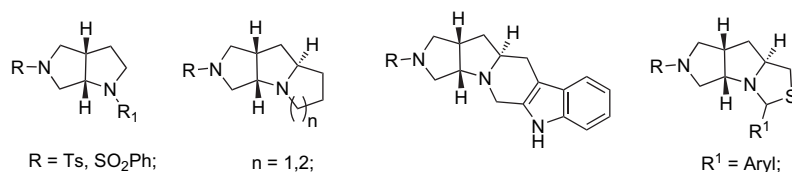
pp 6452–6460

Bartłomiej Kozik*, Jarosław Wilamowski, Maciej Góra, Janusz J. Sepioł

**Synthesis of pyrrolo[3,4-*b*]pyrroles and perhydrothiazolo[3',4'-2,3]pyrrolo[4,5-*c*]pyrroles**

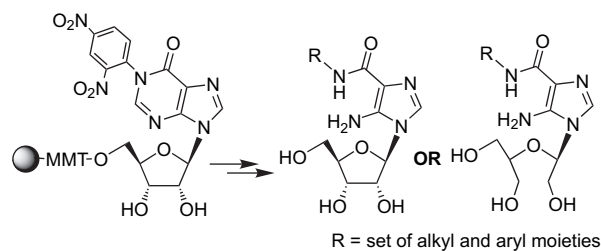
pp 6461–6474

Mahalingam Poornachandran, Raghavachary Raghunathan*

**Synthesis of 4-*N*-alkyl and ribose-modified AICAR analogues on solid support**

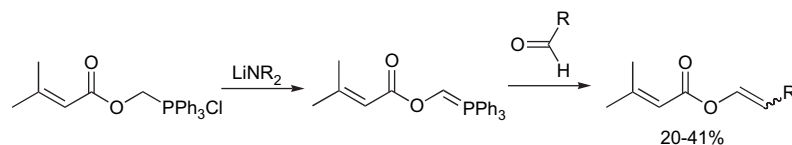
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Giorgia Oliviero, Jussara Amato, Nicola Borbone, Stefano D'Errico, Gennaro Piccialli*, Enrico Bucci, Vincenzo Piccialli, Luciano Mayol

**Exploiting the Anders–Gaßner variant on the Wittig reaction: new methodology for the synthesis of 3,3-dimethylacroyl enol esters**

pp 6482–6487

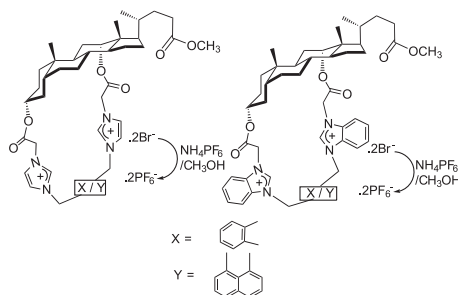
Brett D. Schwartz, Craig M. Williams*, Ernst Anders, Paul V. Bernhardt



Design of steroid-based imidazolium receptors for fluoride ion recognition

Mamta Chahar, Pramod S. Pandey*

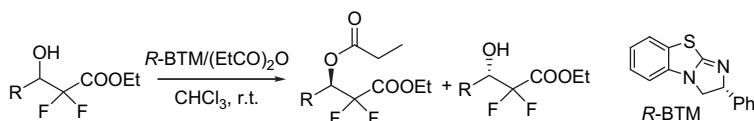
pp 6488–6493



Kinetic resolution of 2,2-difluoro-3-hydroxy-3-aryl-propionates catalyzed by organocatalyst (*R*)-benzotetramisole

Hui Zhou, Qing Xu, Peiran Chen*

pp 6494–6499



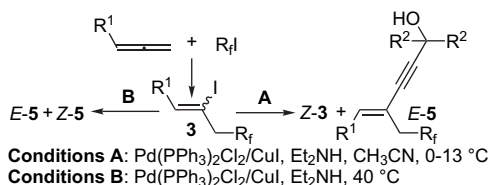
Thirteen examples. When *R*=phenyl, 4-MeO-phenyl, 4-MeS-phenyl, 1-naphthyl, and 2-naphthyl, the enantio-selectivity factor reaches 20–47. The aryl substituent effect on the selectivity factor is examined. Two examples of preparative KR are provided.



Stereoselective synthesis of 2-iodo-1-perfluoroalkyl-2(*Z*)-alkenes and *E* or *Z*-4-perfluoroalkylmethyl-4-en-2-ynol via Na₂S₂O₄-promoted radical addition reaction of perfluoroalkyl iodides with allenes and the palladium-catalyzed kinetic resolution with Sonogashira coupling reaction

Zhichao Ma, Shengming Ma*

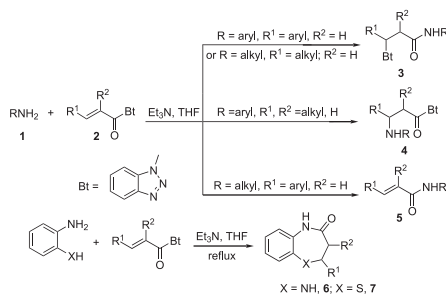
pp 6500–6509



Features and applications of reactions of α,β-unsaturated *N*-acylbenzotriazoles with amino compounds

Xiaoxia Wang*, Zhifang Li, Xiangming Zhu*, Hui Mao, Xuefei Zou, Lichun Kong, Xinsheng Li

pp 6510–6521

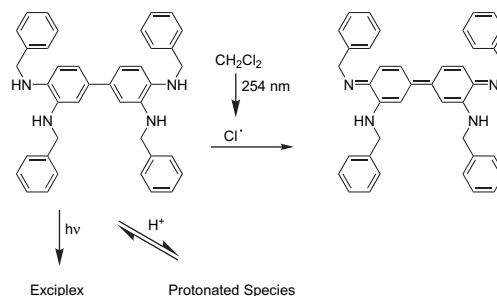


Synthesis, characterization and photophysical properties of benzidine-based compounds

pp 6522–6529

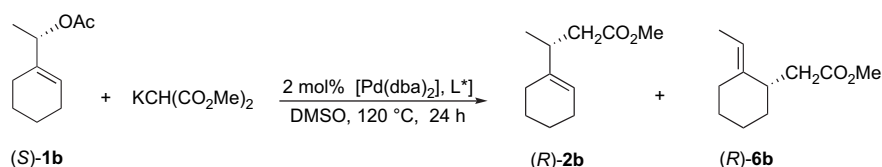
Mohamad Hmadeh, Hassan Traboulsi, Mourad Elhabiri, Pierre Braunstein*, Anne-Marie Albrecht-Gary*, Olivier Siri*

Emission of the benzidine core can be fine-tuned by subtle modifications and, interestingly, N-benylation results in photoinduced exciplex. These photoinduced processes could be modulated by proton input.

**Regio- and stereoselectivity control in palladium-catalyzed allylic alkylation of 1-cycloalkenylmethyl acetates**

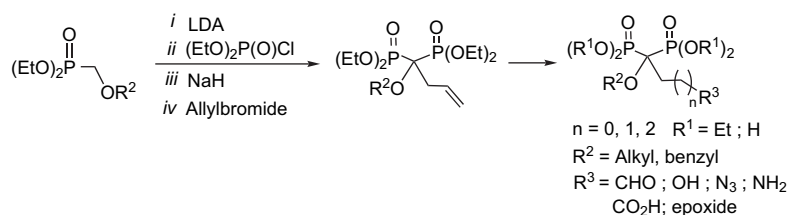
pp 6530–6536

Olivier Jacquet, Jean-Yves Legros, Matthieu Coliboeuf, Jean-Claude Fiaud*

**Synthesis of functionalized alkoxyalkylidene gem-bisphosphonates**

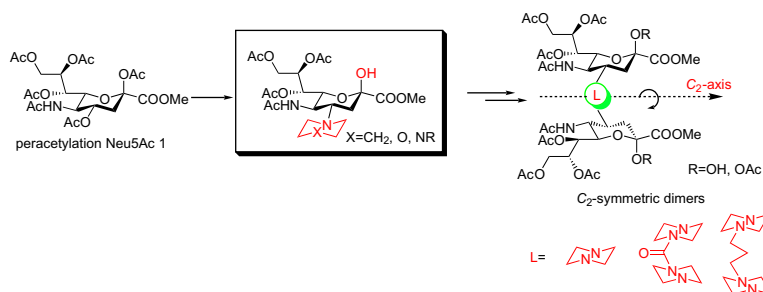
pp 6537–6543

Jean-Pierre Haelters*, H  l  ne Couthon-Gourv  s, Alan Le Goff, Gaelle Simon, Bernard Corbel, Paul-Alain Jaffr  s

**Simultaneous 2-O-deacetylation and 4-amination of peracetylated Neu5Ac: application to the synthesis of (4→4)-piperazine derivatives linked sialic acid dimers**

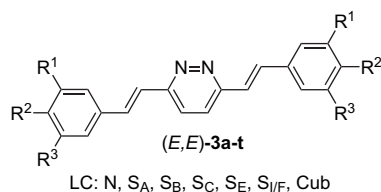
pp 6544–6550

Deju Ye, Guanghui Deng, Wenfeng Liu, Yu Zhou, Enguang Feng, Hualiang Jiang, Hong Liu*

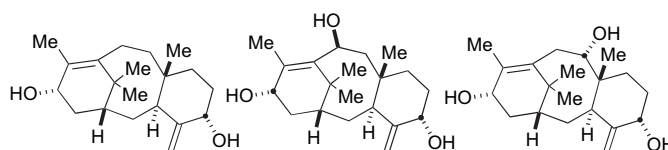


Alkoxy substituted (*E,E*)-3,6-bis(styryl)pyridazine—a photosensitive mesogen for liquid crystals**pp 6551–6560**

Thorsten Lifka, Georg Zerban, Peter Seus, Annette Oehlhof, Herbert Meier*

**Studies on Taxol biosynthesis: preparation of taxadiene-diol and triol derivatives by deoxygenation of taxusin****pp 6561–6567**

Hui Li, Tohru Horiguchi, Rodney Croteau, Robert M. Williams*



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