

Tetrahedron Letters Vol. 45, No. 48, 2004

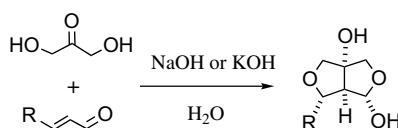
Contents

COMMUNICATIONS

Reaction of C₃ and C₄ ketoses with alkenals and alkenones in water

pp 8777–8780

Hiroyuki Saimoto,* Tomoyuki Onitsuka, Hironobu Motobe, Satoko Okabe, Yoshimori Takamori, Minoru Morimoto and Yoshihiro Shigemasa

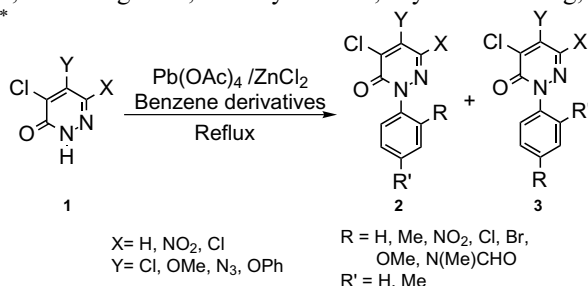


Tetrahydrofuran derivatives were synthesized by the one-pot reaction of 1,3-dihydroxyacetone with α,β -unsaturated aldehydes and ketones in aqueous NaOH or KOH. This sequence is successfully applied to the reaction of L-(S)-erythrulose with 2-cyclopentenone to give tricyclic tetrahydrofuran derivatives in the absence of any protecting groups.

Efficient N-arylation of pyridazin-3(2H)-ones

pp 8781–8784

Jeum-Jong Kim, Yong-Dae Park, Su-Dong Cho, Ho-Kyun Kim, Hyun A. Chung, Sang-Gyeong Lee,* J. R. Falck and Yong-Jin Yoon*



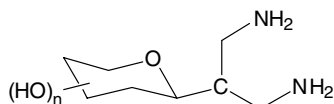
A variety of substituted pyridazin-3(2H)-ones are directly N-arylated in good yield using lead tetraacetate/zinc chloride in benzene or in substituted benzenes including chloro- and bromobenzene.



General synthesis of sugar-pendant 1,3-propanediamines containing a C-glycoside linkage

pp 8785–8788

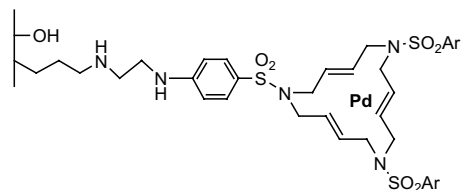
Yuji Mikata,* Yoko Inaba, Mika Morioka and Shigenobu Yano



A macrocyclic triolefinic palladium(0) complex covalently anchored to a mesostructured silica as active and reusable catalyst for Suzuki cross-coupling reactions

pp 8789–8791

Belén Blanco, Ahmad Mehdi,* Marcial Moreno-Mañas, Roser Pleixats* and Catherine Reyé

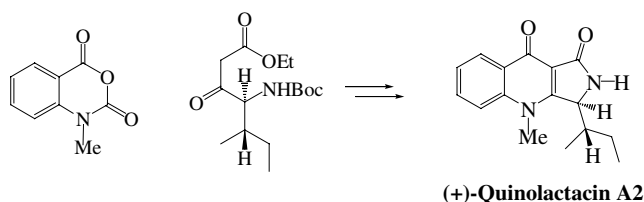


A mesostructured hybrid material containing a 15-membered triazamacrocyclic triolefinic palladium(0) complex was prepared and tested as a reusable heterogeneous catalyst for Suzuki cross-couplings in organic solvents.

An expedient synthesis of (+)-quinolactacin A2

pp 8793–8795

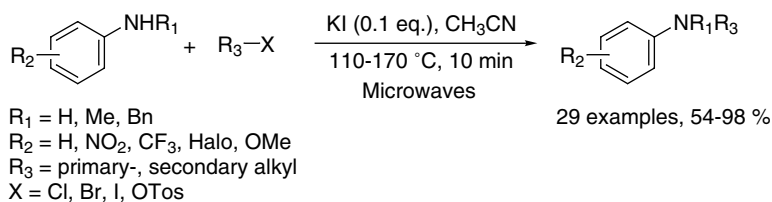
Su-Jin Park, Kwang-Nym Cho, Won-Gon Kim and Kee-In Lee*



Potassium iodide catalysed monoalkylation of anilines under microwave irradiation

pp 8797–8800

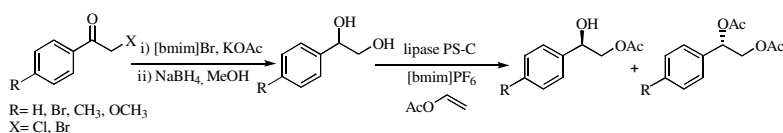
Juan L. Romera,* José M. Cid and Andrés A. Trabanco



Chemoenzymatic synthesis of enantiomerically pure 1,2-diols employing immobilized lipase in the ionic liquid [bmim]PF₆

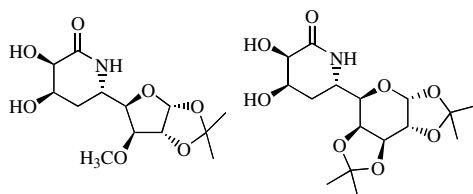
pp 8801–8805

Ahmed Kamal* and Gagan Chouhan



The stereoselective synthesis of C-linked 4'-deoxy aza-disaccharides from C-linked carbo-β-amino acids pp 8807–8810

G. V. M. Sharma,* Nagendar Pendem, K. Ravinder Reddy, Palakodety Radha Krishna, K. Narsimulu and A. C. Kunwar

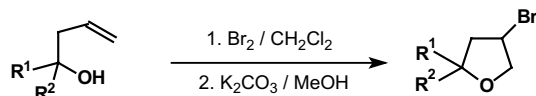


The stereoselective synthesis of C-linked 4'-deoxy aza-disaccharides **1** and **2** from the corresponding carbo-β-amino acids is described. The synthesis depends on intramolecular amide bond formation in the corresponding amino esters.

A convenient synthesis of substituted 3-bromotetrahydrofurans from homoallylic alcohols

pp 8811–8813

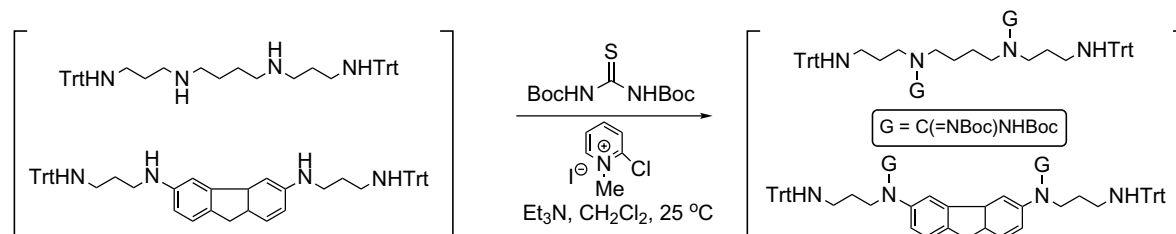
Marina V. Chirskaya, Andrei A. Vasil'ev,* Natalia L. Sergovskaya, Sergey V. Shorshnev and Sergey I. Sviridov



Efficient guanylation of N^α,N^ω-difunctionalized polyamines at the secondary amino functions

pp 8815–8818

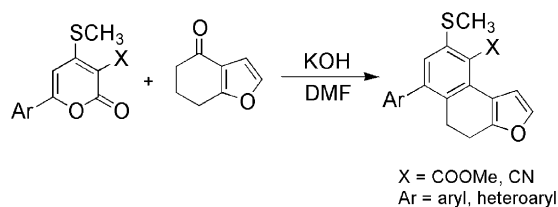
Constantinos M. Athanassopoulos,* Thomas Garnelis, Evangelia Pantazaka and Dionissios Papaioannou



An efficient synthesis of 4,5-dihydronaphtho[2,1-b]furan through a novel ring transformation of 2H-pyran-2-one

pp 8819–8821

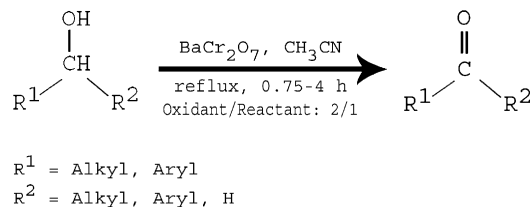
Atul Goel* and Manish Dixit



Barium dichromate [BaCr₂O₇], a mild reagent for oxidation of alcohols to their corresponding carbonyls in non-aqueous polar aprotic media

pp 8823–8824

Enayatollah Mottaghinejad,* E. Shaafi and Z. Ghasemzadeh

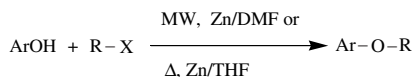


Barium dichromate is used as a mild oxidizing agent for the selective conversion of primary and secondary alcohols to their corresponding aldehydes and ketones, respectively. Over-oxidation does not occur and primary alcohols undergo oxidation to the aldehyde. Primary and secondary benzylic alcohols are oxidized faster and more efficiently.

Zinc-catalyzed Williamson ether synthesis in the absence of base

pp 8825–8829

Satya Paul* and Monika Gupta

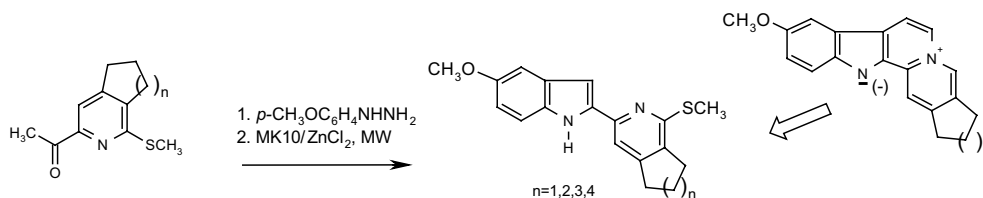


A zinc-catalyzed Williamson ether synthesis is described with microwave heating in the presence of DMF or stirring in an oil-bath using THF as solvent and in the absence of base.

Microwave-induced solid-supported Fischer indolization, a key step in the total synthesis of the sempervirine type methoxy analogues

pp 8831–8834

Teodozja Lipińska*

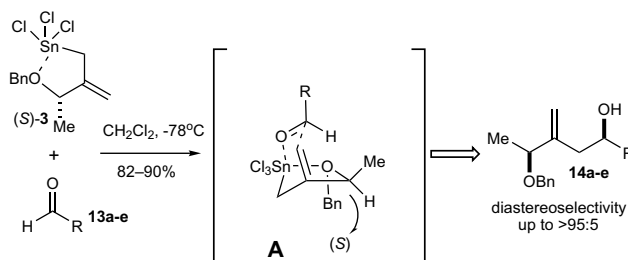


Fischer indole synthesis on solid-support under microwave irradiation towards 5-methoxy-2-(2-pyridyl)indoles has been developed, as the key step in the total synthesis of new 9-methoxyindolo[2,3-*a*]quinolizine alkaloids.

Addition of lactate-derived chiral allyltrichlorostannanes to chiral aldehydes

pp 8835–8841

Luiz C. Dias* and Leonardo J. Steil

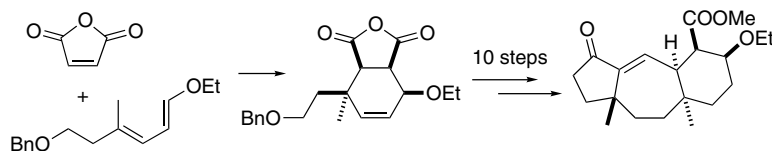


Chiral lactate-derived allyltrichlorostannanes reacted with chiral α -methyl, β -alkoxy and *syn* and *anti* α -methyl- β -alkoxy aldehydes to give the corresponding homoallylic alcohols with moderate to high 1,4-*syn*-diastereoselectivities.

A concise synthesis of the functionalized [5–7–6] tricyclic skeleton of guanacastepene A

pp 8843–8846

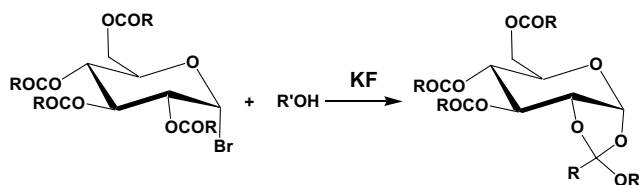
Xiaohui Du, Hiufung V. Chu and Ohyun Kwon*



An environmentally benign and practical synthesis of sugar orthoesters promoted by potassium fluoride

pp 8847–8848

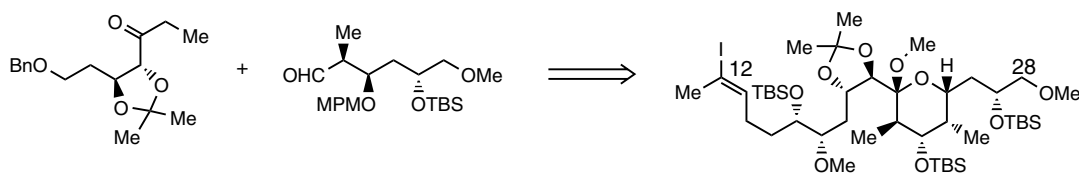
Shin-ichiro Shoda,* Masashi Moteki, Ryuko Izumi and Masato Noguchi



Synthetic studies on apoptolidin: synthesis of the C12–C28 fragment via a highly stereoselective aldol reaction

pp 8849–8853

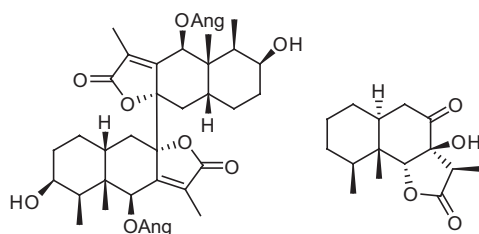
Kazuyuki Abe, Koji Kato, Tadamasa Arai, Mohammad Abdur Rahim, Israt Sultana, Shuichi Matsumura and Kazunobu Toshima*



Bieremoligularolide and eremoligularin, two novel sesquiterpenoids from *Ligularia muliensis*

pp 8855–8858

Qiu-Hong Wu, Chun-Ming Wang, Sheng-Gao Cheng and Kun Gao*

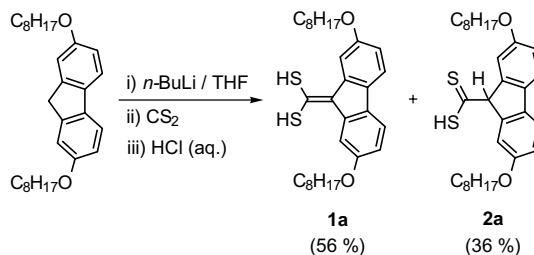


9H-Fluorene-9-carbodithioic acids and dithioates. First isolation and characterization of a *gem*-enedithiol

pp 8859–8861

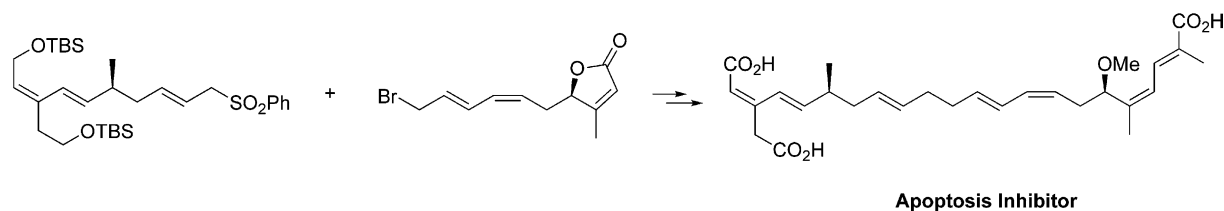
 José Vicente, Pablo González-Herrero,*
 Yolanda García-Sánchez and María Pérez-Cadenas

[2,7-Bis(octyloxy)fluoren-9-ylidene]methanedithiol (**1a**) and its tautomer 2,7-bis(octyloxy)-9H-fluorene-9-carbodithioic acid (**2a**) can be isolated in pure form from the reaction of monolithiated 2,7-bis(octyloxy)-9H-fluorene with CS₂ followed by protonolysis with aqueous HCl. Compound **1a** is the first isolated and unambiguously characterized *gem*-enedithiol.


Total synthesis of (+)-bongkreic acid

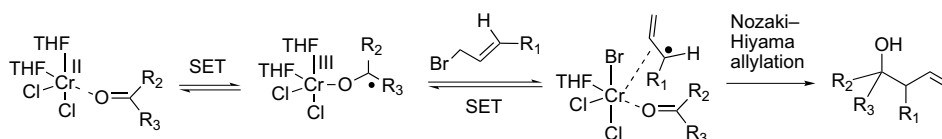
pp 8863–8866

Mitsuru Shindo,* Tomoyuki Sugioka, Yuko Umaba and Kozo Shishido*


A mechanistic study of the Hiyama–Nozaki allylation: evidence for radical intermediates

pp 8867–8870

Johann Mulzer,* Achim R. Strecker and Lars Kattner

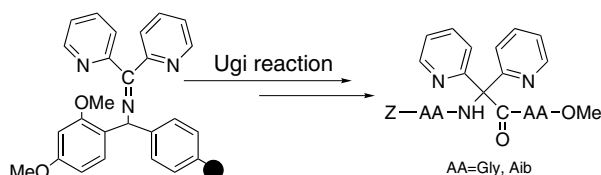


A novel mechanism is suggested for the Nozaki–Hiyama allylation of aldehydes. The key intermediate is a chromium complex containing an allylic radical and the carbonyl component, from which the allylic radical may escape and undergo separate reactions.


Synthesis of tripeptides containing a very crowded α,α -disubstituted glycine with pyridine rings by solid-phase Ugi reaction

pp 8871–8874

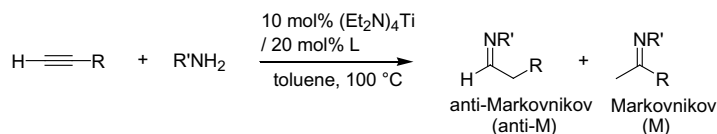
Masayuki Hanyu, Takashi Murashima, Toshifumi Miyazawa and Takashi Yamada*



Controlling selectivity: from Markovnikov to anti-Markovnikov hydroamination of alkynes

pp 8875–8878

Annegret Tillack, Vivek Khedkar and Matthias Beller*

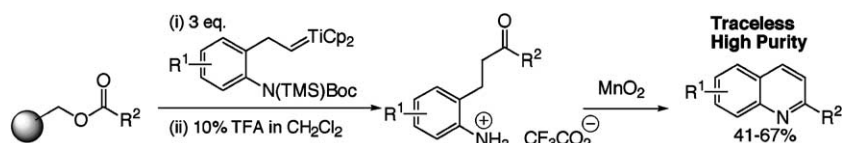


A remarkable control of regioselectivity is achieved for the titanium-catalyzed intermolecular hydroamination of various alkynes. Proper choice of the ligand enables a selectivity switch from the Markovnikov to the anti-Markovnikov products from M:anti-M = >90:10 to >10:90.

Preparation of quinolines from resin-bound esters using titanium reagents

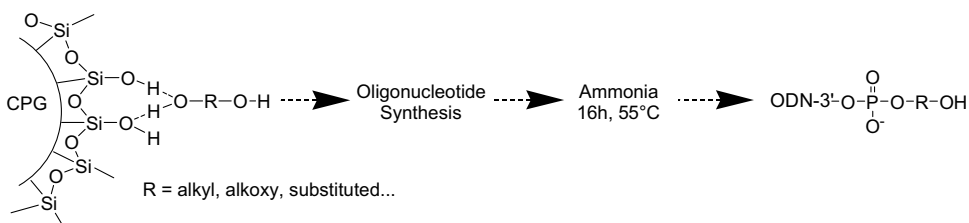
pp 8879–8882

Calum Macleod, Carolyn A. Austin, Dieter W. Hamprecht and Richard C. Hartley*

**A one step derivatization of controlled pore glass for oligonucleotide solid-phase synthesis**

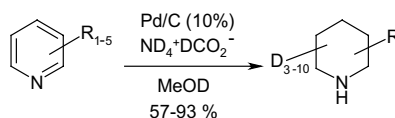
pp 8883–8887

Alain Laurent,* Bertrand de Lambert, Marie-Thérèse Charreyre, Bernard Mandrand and Carole Chaix*

**Deuterated ammonium formate as deuterium source in a mild catalytic deuterium transfer reaction of pyridines, pyrazines and isoquinolines**

pp 8889–8893

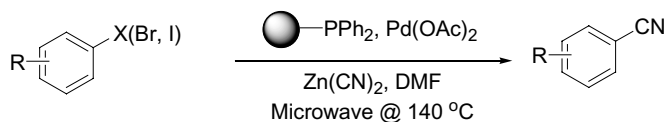
Volker Derdau*



Application of polymer-supported triphenyl phosphine in the palladium-catalyzed cyanation reaction under microwave conditions

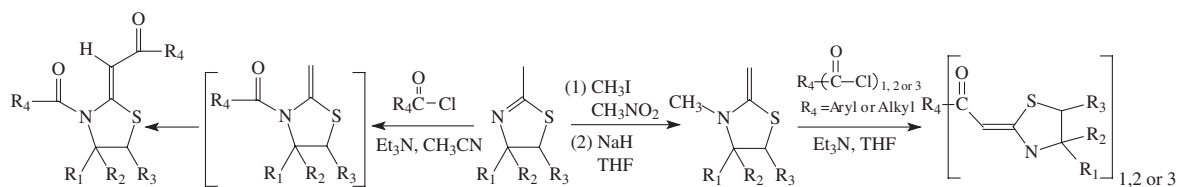
pp 8895–8897

Rajiv R. Srivastava* and Scott E. Collibee


Reactions of 2-methylthiazolines and N-methyl cyclic ketene-N,S-acetals with acid chlorides

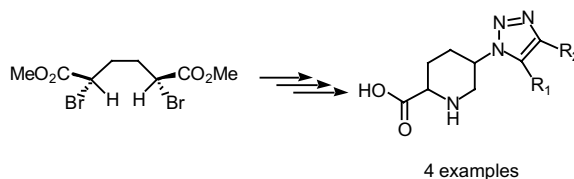
pp 8899–8903

Aihua Zhou and Charles U. Pittman, Jr.*


Synthesis of new triazole substituted pyroaminoadipic and pipercolic acid derivatives

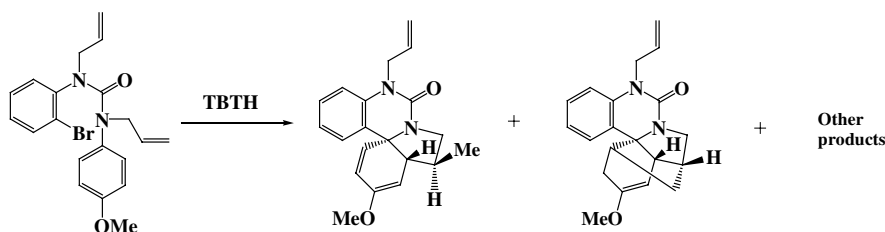
pp 8905–8907

Fatimazohra Lenda, Farhate Guenoun, Bouchra Tazi, Najib Ben larbi, Jean Martinez and Frédéric Lamaty*


Synthesis of highly condensed heterocycles using radical reactions

pp 8909–8912

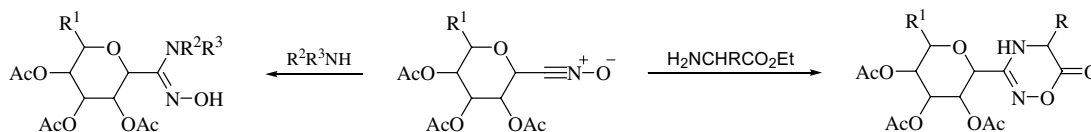
A. K. Ganguly,* C. H. Wang, J. Misiaszek, T. M. Chan, B. N. Pramanik and A. T. McPhail



Synthesis of pyranosyl amidoximes by addition of amines to pyranosyl nitrile oxides

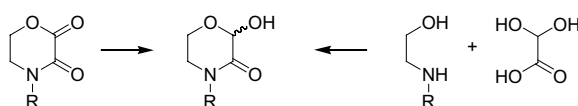
pp 8913–8916

Kenneth W. J. Baker, Katherine S. Horner, Stephen A. Moggach, R. Michael Paton* and Iain A. S. Smellie

**Syntheses of morpholine-2,3-diones and 2-hydroxymorpholin-3-ones: intermediates in the synthesis of apreptant**

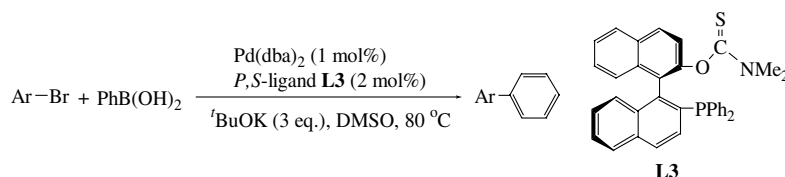
pp 8917–8920

Todd D. Nelson,* Jonathan D. Rosen, Karel M. J. Brands, Bridgette Craig, Mark A. Huffman and James M. McNamara

**A novel *P,S*-heterodonor ligand and palladium(0) complex catalyzed Suzuki cross-coupling reaction**

pp 8921–8924

Wen Zhang and Min Shi*

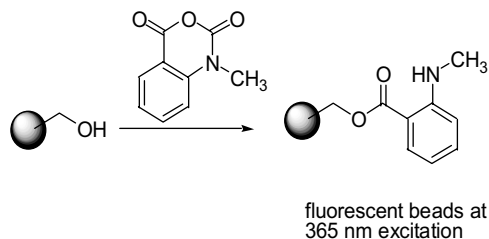


In the presence of a novel *P,S*-heterodonor ligand, palladium(0)-catalyzed Suzuki cross-coupling reaction proceeded smoothly at 80 °C in DMSO.

Rapid detection of hydroxyl groups on solid-phase

pp 8925–8926

Ruth E. Fake and Anne Routledge*

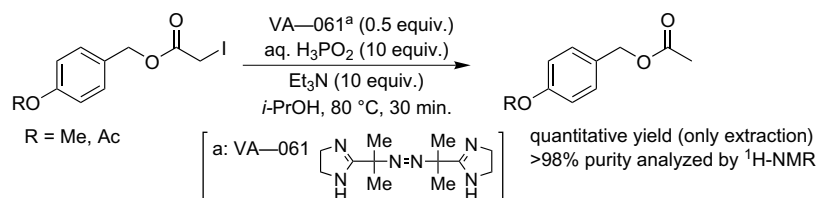


A method for the rapid qualitative detection of hydroxyl functionality has been developed for application in solid-phase organic synthesis.

A simple and efficient radical reduction using water-soluble radical initiator and hypophosphorous acid in aqueous alcohol

pp 8927–8929

Hisanori Nambu, Anahita Hessamian Alinejad, Kayoko Hata, Hiromichi Fujioka and Yasuyuki Kita*

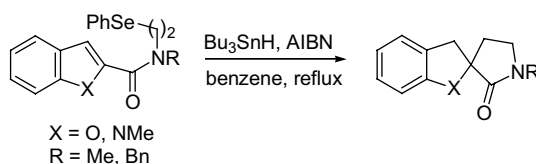


A simple, mild and high-yielding procedure for the reduction of various halogenated compounds using a combination of the water-soluble radical initiator (VA-061), hypophosphorous acid and triethylamine in aqueous alcohol is reported.

Radical dearomatising spirocyclisations onto the C-2 position of benzofuran and indole

pp 8931–8934

Afua S. Kyei, Kirill Tchabanenko, Jack E. Baldwin* and Robert M. Adlington

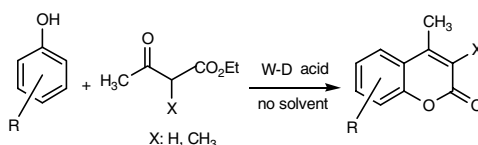


New spiro lactams were obtained in radical dearomatising spirocyclisations of alkyl, vinyl and aryl radicals tethered at the C-2 positions of benzofuran and indole.

A solvent-free synthesis of coumarins using a Wells–Dawson heteropolyacid as catalyst

pp 8935–8939

G. P. Romanelli, D. Bennardi, D. M. Ruiz, G. Baronetti, H. J. Thomas and J. C. Autino*

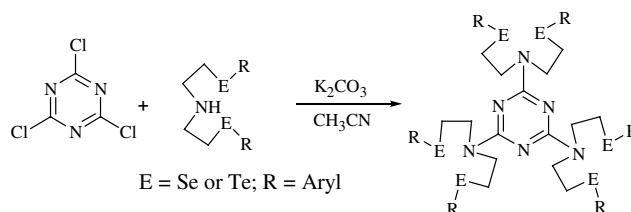


Seventeen examples are resolved, most of them in good to excellent yields, using the cheap WD catalyst.

Design and synthesis of organochalcogen (Se or Te) based multifunctional derivatives: structural determination and dynamic behavior of 2-chloro-4,6-bis(phenylselenoethylamino)-1,3,5-triazines

pp 8941–8944

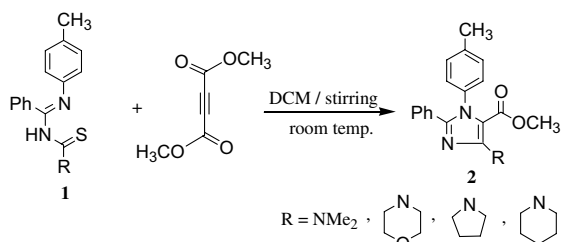
Marilyn Daisy Milton, Naveen Kumar, Sarbjot Singh Sokhi, Sarika Singh, Monika Maheshwari, Jai Deo Singh,* Minakshi Asnani and Raymond J. Butcher



An efficient unprecedented synthesis of novel functionalized imidazoles from secondary amino-*N*-carbothioic acid (phenyl-*p*-tolylimino-methyl)amides and dimethyl acetylenedicarboxylate

pp 8945–8947

Alka Marwaha, Parvesh Singh,
Mohinder P. Mahajan* and D. Velumurugan

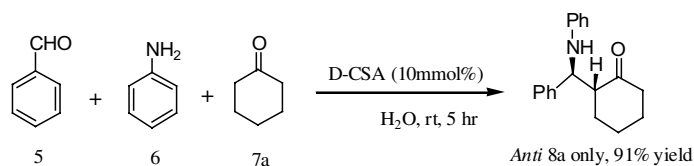


Novel, unprecedented and single-pot synthesis of functionalized imidazoles possessing secondary amine and carbomethoxy moieties, by the reaction of secondary amino-*N*-carbothioic acid (phenyl-*p*-tolylimino-methyl)amides with dimethyl acetylenedicarboxylate under mild conditions is described.

A new class of metal-free catalysts for direct diastereo- and regioselective Mannich reactions in aqueous media

pp 8949–8952

Yin-Su Wu, Jiwen Cai,* Zhi-Ya Hu and Guang-Xin Lin



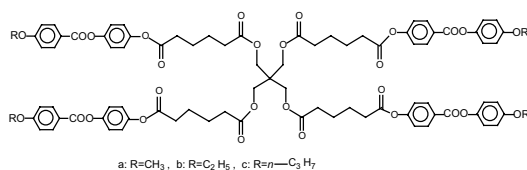
Camphor sulfonic acid and three sulfonated amino acids shows to efficiently catalyze direct Mannich reactions of benzaldehyde, aniline and various ketones in aqueous media, with high diastereo- or regioselectivities.



Synthesis and mesomorphism of novel star-shaped glassy liquid crystals containing pentaerythritol esters

pp 8953–8956

Dan-Shu Yao, Bao-Yan Zhang,* Yuan-Hao Li and Wen-Qiang Xiao




A new class of star-shaped glassy nematic liquid crystals based on pentaerythritol as a flexible core and ω-[4-(*p*-alkoxybenzoyloxy)phenoxy]valeric acid as side-chain mesogenic arms has been prepared. This is a new kind of glassy nematic liquid crystals.

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Instructions to contributors

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*Corresponding author

 Supplementary data available via ScienceDirect

COVER

The cover shows an asymmetric total synthesis of (+)-bongkreikic acid, an important apoptosis inhibitor, which has not been synthesized since the first synthesis by optical resolution was reported twenty years ago. *Tetrahedron Letters* **2004**, *45*, 8863–8866.
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