

Tetrahedron Letters Vol. 50, No. 46, 2009

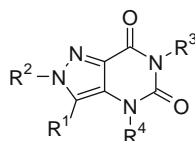
Contents

COMMUNICATIONS

Synthesis of novel 2,3-substituted-2,4-dihydro-pyrazolo[4,3-d]pyrimidine-5,7-diones

pp 6223–6227

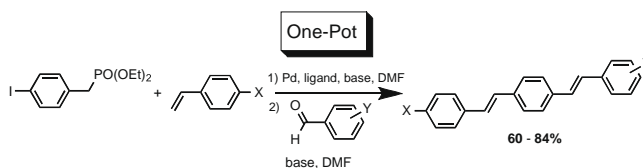
Thomas Brady, Khang Vu, Jack R. Barber, Shi Chung Ng, Yuefen Zhou *



A one-pot synthesis of unsymmetrical bis-styrylbenzenes

pp 6228–6230

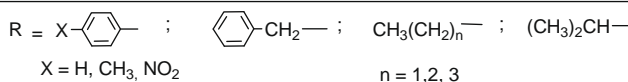
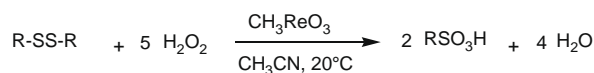
Daniel P. Flaherty, Yuxiang Dong, Jonathan L. Vennerstrom *



Selective oxidation reactions of diaryl- and dialkyldisulfides to sulfonic acids by CH₃ReO₃/hydrogen peroxide

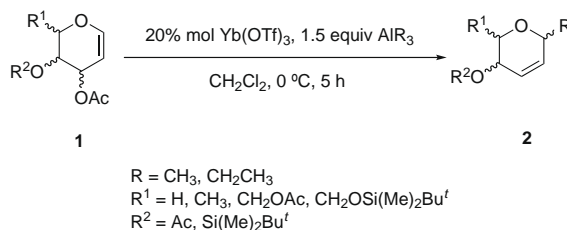
pp 6231–6232

Francesco P. Ballistreri, Gaetano A. Tomaselli, Rosa M. Toscano *

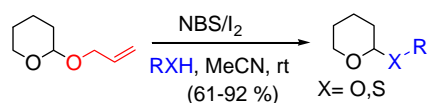


Efficient synthesis of alkyl 2,3-unsaturated glucofuranosides from glycals mediated by ytterbium(III) triflate–trialkyl aluminum

pp 6233–6235

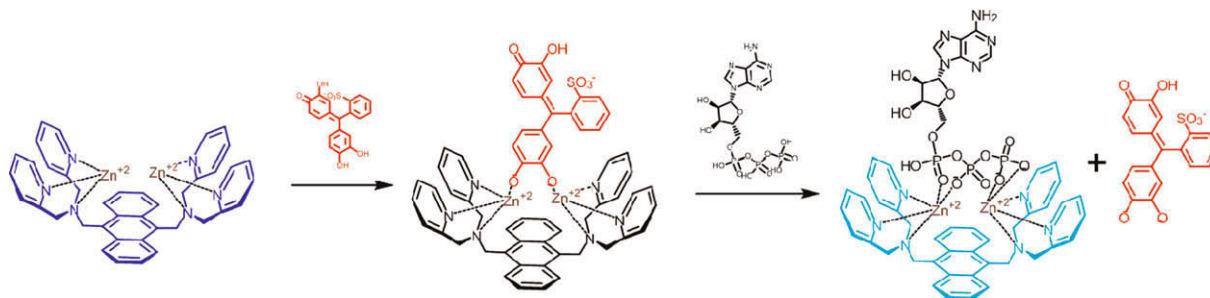
 Pramchai Deelertpaiboon, Vichai Reutrakul^{*}, Suwatchai Jarussophon, Patoomratana Tuchinda, Chutima Kuhakarn, Manat Pohmakotr

Allyl tetrahydropyranyl ether: a versatile alcohol/thiol protecting reagent

pp 6236–6240

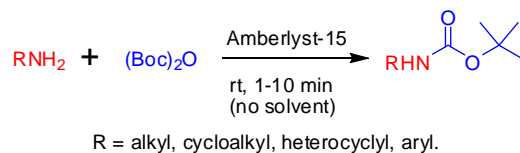
 Brijesh Kumar, Mushtaq A. Aga, Debaraj Mukherjee, Swapandeep S. Chimni, Subhash C. Taneja^{*}

 Allyl tetrahydropyranyl ether (ATHPE) can be used as a versatile protecting reagent. In combination with NBS/I₂, O-allyl group can easily be replaced by hydroxyls (including tertiary-OH) or thiols, in the molecules comprising other reactive functional groups such as halogen, nitro, acetonide and alkene under mild reaction conditions (near neutral pH and ambient temperature).

A simple method for improving the optical properties of a dimetallic coordination fluorescent chemosensor for adenosine triphosphate

pp 6241–6243

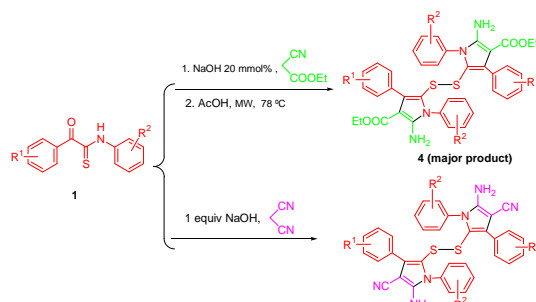
 Hyun Hye Jang, Sujung Yi, Mi Hee Kim, Sudeok Kim, Na Hee Lee, Min Su Han^{*}

Amberlyst-15: a mild, efficient and reusable heterogeneous catalyst for *N*-*tert*-butoxycarbonylation of amines

pp 6244–6246

 K. Shiva Kumar, Javed Iqbal^{*}, Manojit Pal^{*}


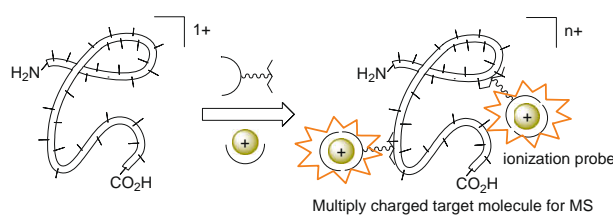
Unexpected behavior of the reaction between acyl thioformanilides and acetonitrile derivatives—a useful entry to new penta-substituted dipyrrole disulfides

pp 6247–6251

Ming Li, Guo-Rui Cao, Jing-Wei Zhao, Li-Rong Wen^{*}, Yong-Jun Liu, Ya-Mu Xia, Shi-Zheng Zhu^{*}

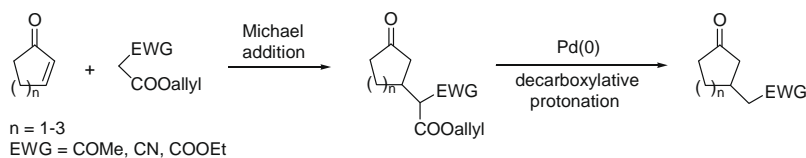
Ionic probe attachment ionization mass spectrometry

pp 6252–6255

Fumihiro Ito^{*}, Tomoko Nakamura, Satoko Yorita, Hiroshi Danjo, Kentaro Yamaguchi^{*}

Expedient synthesis of 3-substituted cycloalkanones via a Pd-catalyzed decarboxylative protonation protocol

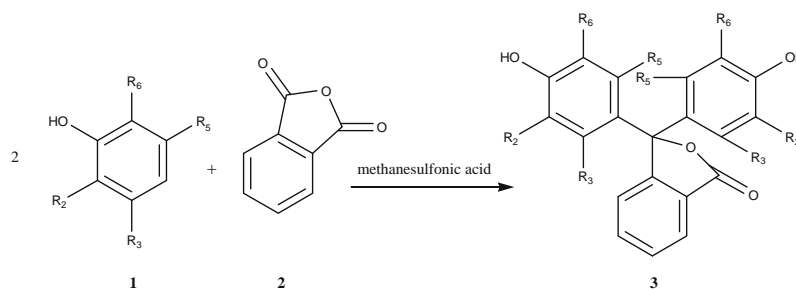
pp 6256–6260

Se Hee Kim, Eun Sun Kim, Taek Hyeon Kim, Jae Nyoung Kim^{*}

A facile synthesis of phthalein indicator dyes

pp 6261–6263

Ram W. Sabnis



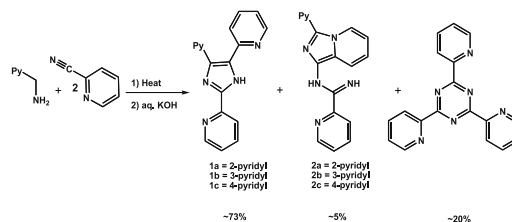
The use of methanesulfonic acid offers a novel and highly efficient method for the synthesis of phthalein indicator dyes in excellent yields on an industrial scale.

Novel synthesis of 2,4-bis(2-pyridyl)-5-(pyridyl)imidazoles and formation of *N*-(3-(pyridyl)imidazo[1,5-*a*]pyridine)picolinamidines: nitrogen-rich ligands

pp 6264–6267

Vijendra Kumar Fulwa, Rojalin Sahu, Himanshu Sekhar Jena, Vadivelu Manivannan *

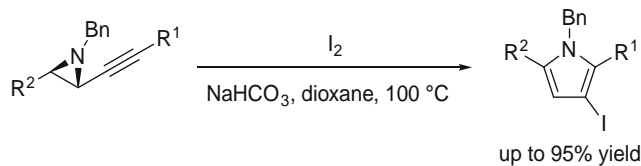
Heating a neat 1:2 mixture of 2-picolyamine and 2-cyanopyridine, followed by treatment of the resultant red gummy substance with aqueous KOH resulted in the isolation of 2,4,5-tris(2-pyridyl)imidazole (**1a**) as the major product and *N*-(3-(2-pyridyl)imidazo[1,5-*a*]pyridine)picolinamidines (**2a**) in small amounts. Similarly, by using 3-picolyamine, 2,4-bis(2-pyridyl)-5-(3-pyridyl)imidazole (**1b**) and *N*-(3-(3-pyridyl)imidazo[1,5-*a*]pyridine)picolinamidines (**2b**) were isolated, and by using 4-picolyamine, 2,4-bis(2-pyridyl)-5-(4-pyridyl)imidazole (**1c**) and *N*-(3-(4-pyridyl)imidazo[1,5-*a*]pyridine)picolinamidines (**2c**) were isolated. The plausible mechanism of the formation of **1a–c** and **2a–c** is delineated.



Synthesis of substituted 3-iodopyrroles by electrophilic cyclization of propargylic aziridines

pp 6268–6270

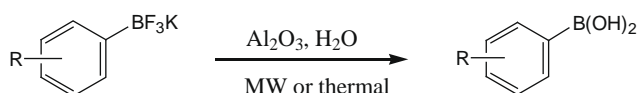
Masahiro Yoshida *, Mohammad Al-Amin, Kozo Shishido



Thermal and microwave hydrolysis of organotrifluoroborates mediated by alumina

pp 6271–6272

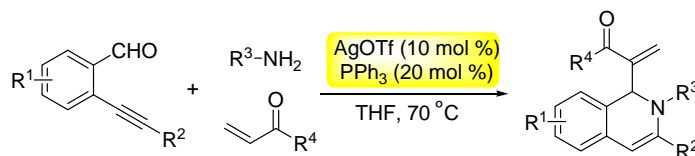
George W. Kabalka *, Vitali Coltuclu



Silver triflate and triphenylphosphine co-catalyzed reactions of 2-alkynylbenzaldehyde, amine, and α,β -unsaturated ketone

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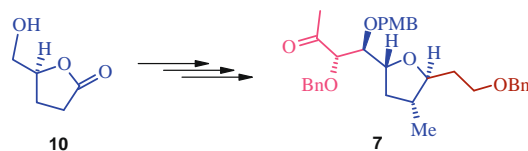
Shengqing Ye, Jie Wu *



Stereoselective synthesis of the densely functionalized C1–C9 fragment of amphidinolides C and F

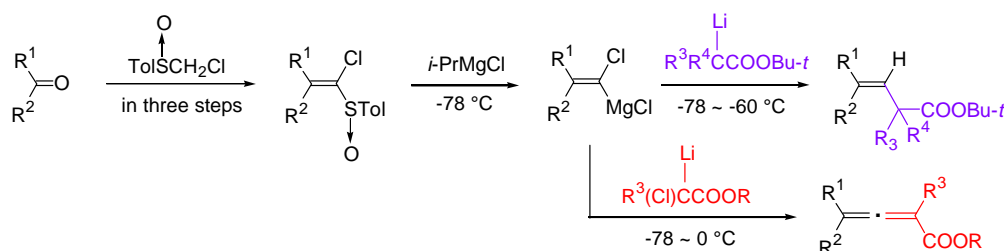
pp 6276–6279

Debendra K. Mohapatra*, Pavankumar Dasari, Hasibur Rahaman, Rita Pal

**A new synthesis of β,γ -unsaturated esters and allenic esters with construction of a carbon–carbon bond between α - and β -positions by the reaction of magnesium alkylidene carbenoids with lithium ester enolates**

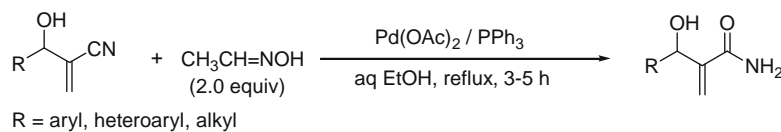
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Tsuyoshi Satoh*, Hiroaki Kaneta, Ayako Matsushima, Masanobu Yajima

**An efficient synthesis of Baylis–Hillman adducts of acrylamide: Pd-catalyzed hydration of Baylis–Hillman adducts of acrylonitrile**

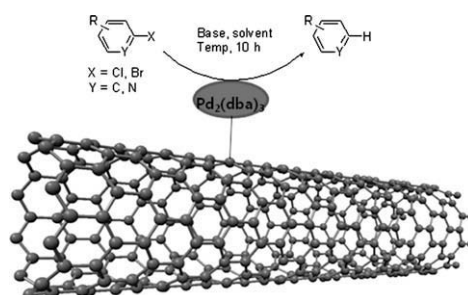
pp 6286–6289

Eun Sun Kim, Hyun Seung Lee, Jae Nyoung Kim*

**Synthesis of Pd–CNT nanocomposites and investigation of their catalytic behavior in the hydrodehalogenation of aryl halides**

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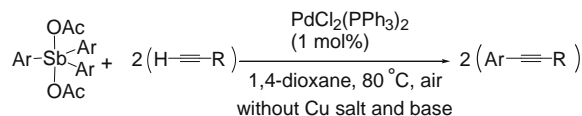
Ja Young Kim, Youngshin Jo, Sunwoo Lee*, Hyun Chul Choi*



Copper- and base-free Sonogashira-type cross-coupling reaction of triarylantimony dicarboxylates with terminal alkynes under an aerobic condition

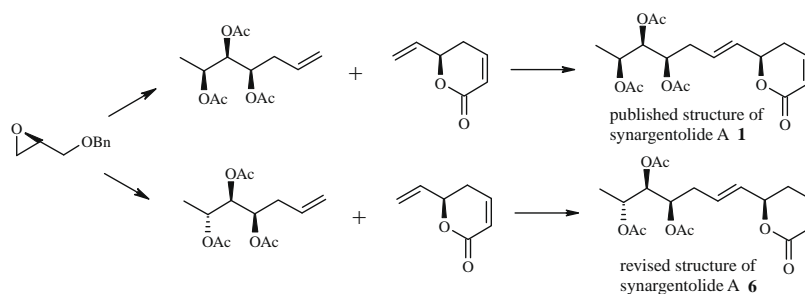
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Xuan Wang, Weiwei Qin, Naoki Kakusawa, Shuji Yasuike, Jyoji Kurita *


First stereoselective synthesis of synargentolide A and revision of absolute stereochemistry

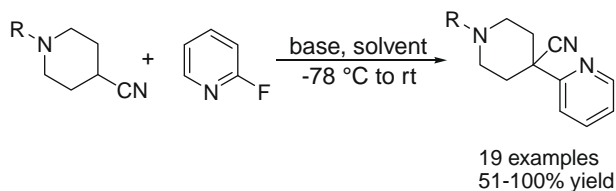
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Gowravaram Sabitha *, Peddabuddi Gopal, C. Nagendra Reddy, J. S. Yadav


Preparation of 4-heteroaryl-4-cyanopiperidines via S_NAr substitution reactions

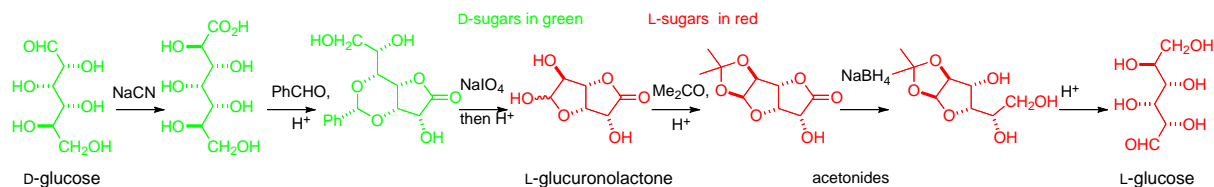
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Ronald K. Chang, Christina N. Di Marco, Daniel R. Pitts, Thomas J. Greshock *, Scott D. Kuduk


Large scale synthesis of the acetonides of L-glucuronolactone and of L-glucose: easy access to L-sugar chiroins

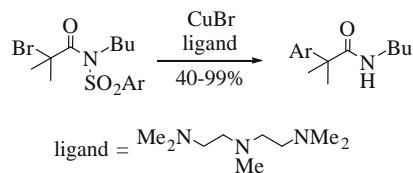
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Alexander C. Weymouth-Wilson *, Robert A. Clarkson, Nigel A. Jones, Daniel Best, Francis X. Wilson, Maria-Soledad Pino-González, George W. J. Fleet *

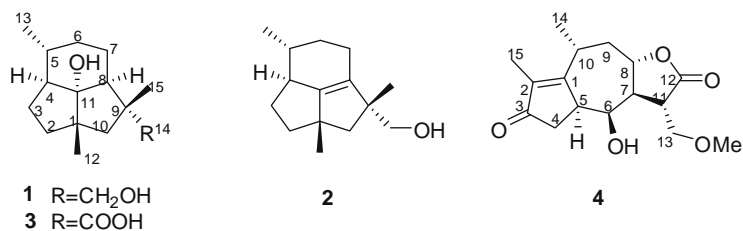


2-Aryl propionamides via 1,4-aryl radical migration from *N*-arylsulfonyl-2-bromopropionamides

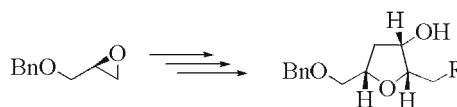
pp 6311–6314

Andrew J. Clark^{*}, Stuart R. Coles, Alana Collis, David R. Fullaway, Nicholas P. Murphy, Paul WilsonReaction of *N*-alkyl-*N*-arylsulfonyl-2-halo-propionamides with pentamethyldiethylenetriamine and either CuBr or CuCl leads to 2-aryl propionamides in 40–99% yields.**Britanlins A–D, four novel sesquiterpenoids from *Inula britannica***

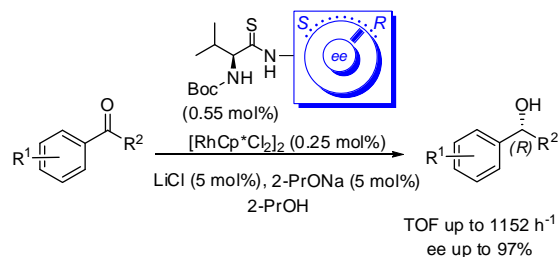
pp 6315–6317

Jun-Li Yang, Lie-Lie Liu, Yan-Ping Shi^{*}**An expedient synthesis of 2,5-disubstituted-3-oxygenated tetrahydrofurans**

pp 6318–6320

Caroline L. Nesbitt, Christopher S. P. McErlean^{*}**Fine-tuning catalytic activity and selectivity—[Rh(amino acid thioamide)] complexes for efficient ketone reduction**

pp 6321–6324

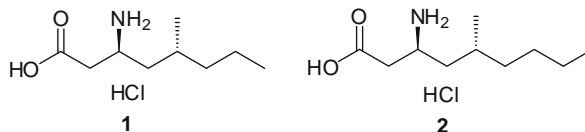
Katrin Ahlford, Madeleine Livendahl, Hans Adolfsson^{*}

Fine-tuning of ligand structure results in higher catalytic activity and enantioselectivity in the rhodium-catalyzed asymmetric transfer hydrogenation of aryl alkyl ketones.



Diastereoselective, large-scale synthesis of β -amino acids via asymmetric *aza*-Michael addition as $\alpha\delta$ ligands for the treatment of generalized anxiety disorder and insomnia pp 6325–6328

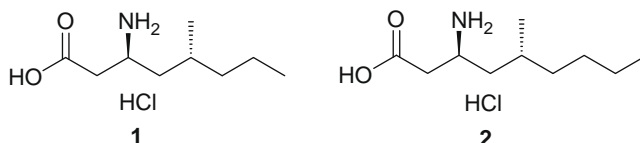
Javier Magano^{*}, Daniel Bowles, Brian Conway, Thomas N. Nanninga, Derick D. Winkle



Scalable synthetic routes to β -amino acids **1** and **2** are reported. The two chiral centers are introduced through asymmetric Michael and *aza*-Michael reactions with excellent diastereoselectivity.

Diastereoselective, large scale synthesis of β -amino acids via asymmetric enamide hydrogenation as $\alpha\delta$ ligands for the treatment of generalized anxiety disorder and insomnia pp 6329–6331

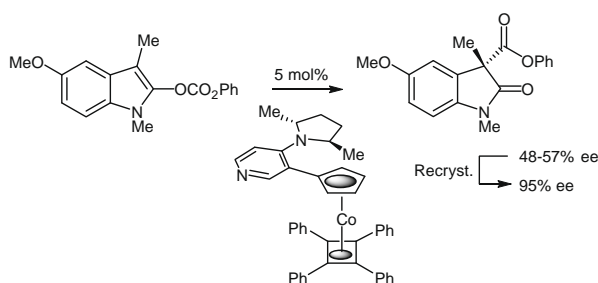
Javier Magano^{*}, Brian Conway, Daniel Bowles, Jade Nelson, Thomas N. Nanninga, Derick D. Winkle, Haifeng Wu, Michael H. Chen



Scalable synthetic routes to β -amino acids **1** and **2** are reported via asymmetric hydrogenation of an enamide precursor to introduce the chirality at the β -carbon.

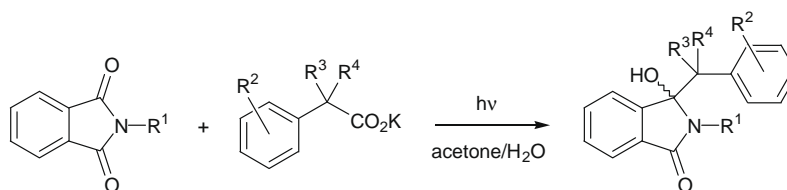
Asymmetric synthesis of oxindoles containing a quaternary stereogenic centre by catalytic *O/C*-carboxyl rearrangement pp 6332–6334

Muhammad Ismail, Huy V. Nguyen, Gennadiy Ilyashenko, Majid Motevalli, Christopher J. Richards^{*}



Photodecarboxylative benzylations of phthalimides pp 6335–6338

Fadi Hatoum, Sonia Gallagher, Louise Baragwanath, Johann Lex, Michael Oelgemöller^{*}

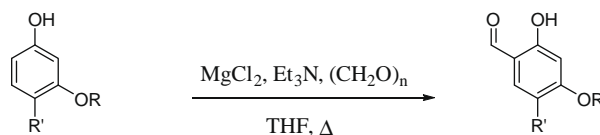


Photoadditions of phenylacetates to phthalimides give the corresponding benzylated hydroxyphthalimidines in moderate to high yields of 29–90%. With 2-phenylpropanoate, photoaddition affords a diastereoisomeric mixture in a de of 24% in favour of the *like*-diastereoisomer. L-3-Phenyllactate and 2-oxo-3-phenylpropanoate both furnish the benzylated product through subsequent loss of formaldehyde and decarbonylation, respectively.

ortho-Formylation of oxygenated phenols

pp 6339–6341

Øyvind W. Akselsen, Lars Skattebøl, Trond Vidar Hansen *

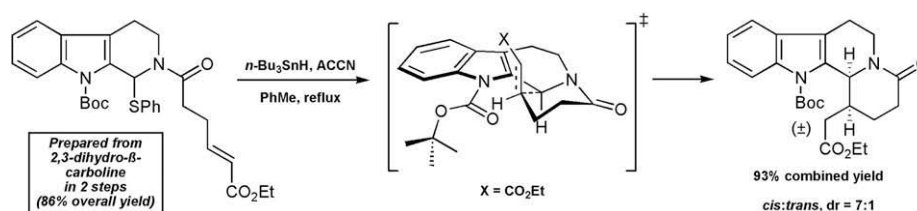


R = H, Me, Bn, TBS, TDS
R' = H, Cl, Br

A new approach to indolo[2,3-a]quinolizidines through radical cyclization of 2-acyl-1-phenylthiotetrahydro-β-carbolines bearing pendent α,β-unsaturated esters

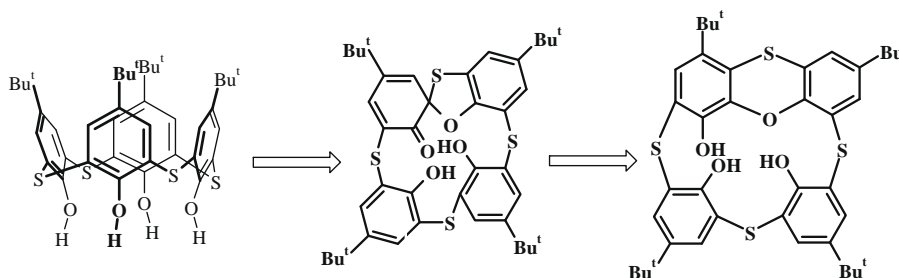
pp 6342–6346

Myles W. Smith, Roger Hunter *, Devendren J. Patten, Wolfgang Hinz


Unexpected behaviour of monospirothiacalix[4]arene under acidic conditions

pp 6347–6350

Kateřina Polívková, Markéta Šimánová, Jan Budka, Petra Cuřínová, Ivana Císařová, Pavel Lhoták *

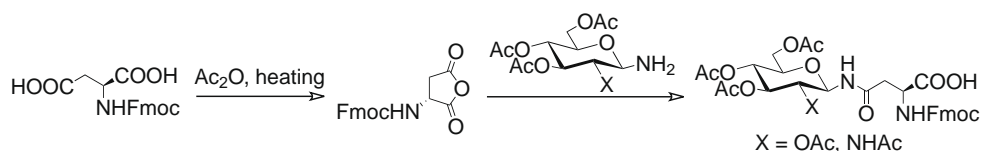


In contrast to classical calix[4]arenes, a spirodienone derivative of thiacalix[4]arene rearranges under acidic conditions to give a phenoxanthiin derivative in 80% yield.


Reaction of N-Fmoc aspartic anhydride with glycosylamines: a simple entry to N-glycosyl asparagines

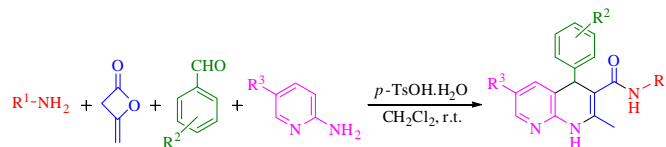
pp 6351–6354

Farid M. Ibatullin *, Stanislav I. Selivanov

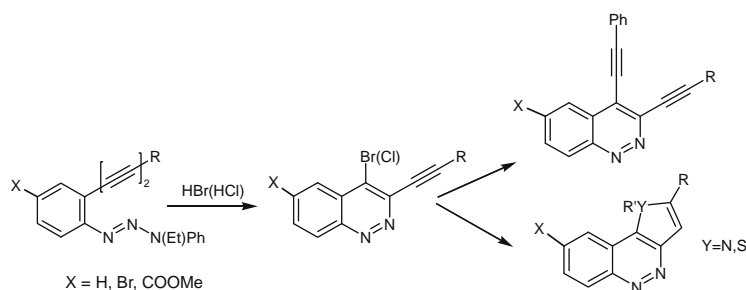


A four-component, one-pot synthesis of highly substituted 1,4-dihydro-1,8-naphthyridine-3-carboxamides

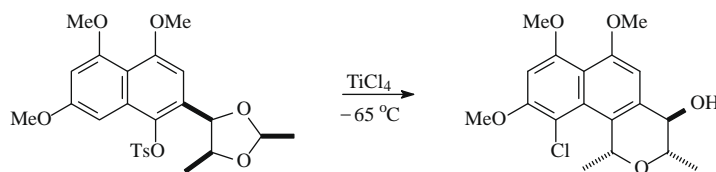
pp 6355–6357

Ahmad Shaabani^{*}, Mozhddeh Seyyedhamzeh, Ali Maleki, Maryam Behnam**A short route to 3-alkynyl-4-bromo(chloro)cinnolines by Richter-type cyclization of *ortho*-(dodeca-1,3-diynyl)aryltriaz-1-enes**

pp 6358–6360

Olga V. Vinogradova, Viktor N. Sorokoumov, Irina A. Balova^{*}**A novel titanium tetrachloride-induced rearrangement of an enantiopure 4-naphthyldioxolane. The possible role of titanium in the umpolung of tosyloxy and chlorine**

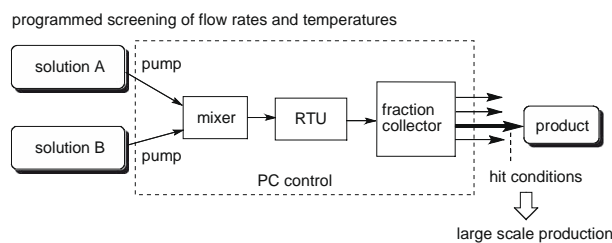
pp 6361–6363

Robin G. F. Giles^{*}, Joshua D. McManus

Low temperature rearrangement of a naphthyldioxolane with titanium(IV) chloride affords an angular naphthopyran in which a tosyloxy group is lost from one of the naphthalenic aromatic rings and chlorine is gained with complete regioselectivity by the other. The mechanism of this transformation is of interest.

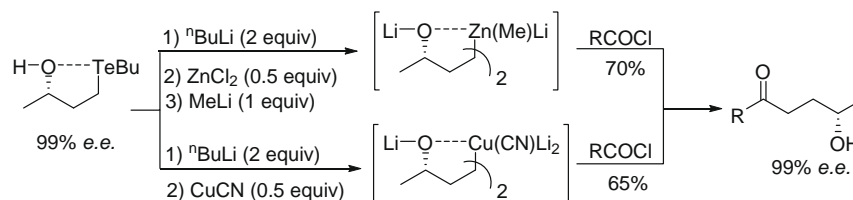
**An automated-flow microreactor system for quick optimization and production: application of 10- and 100-gram order productions of a matrix metalloproteinase inhibitor using a Sonogashira coupling reaction**

pp 6364–6367

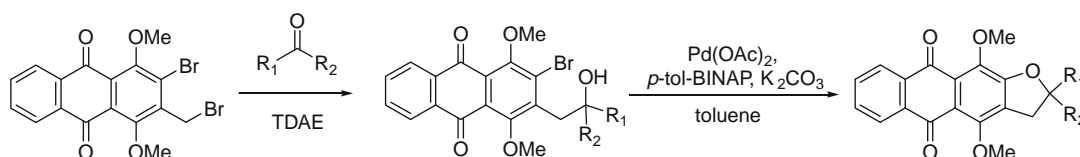
Atsushi Sugimoto, Takahide Fukuyama^{*}, Md. Taifur Rahman, Ilhyong Ryu

Functionalized organozincates and organocuprates derived from γ -hydroxytellurides in the preparation of 1,4-hydroxyketones

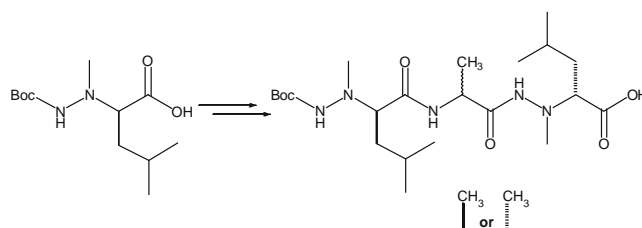
pp 6368–6371

Jefferson L. Princival, Alcindo A. Dos Santos^{*}, João V. Comasseto
Original TDAE application: synthesis of 2-substituted-4,11-dimethoxy-anthra[2,3-*b*]furan-5,10-diones via intramolecular Buchwald reaction

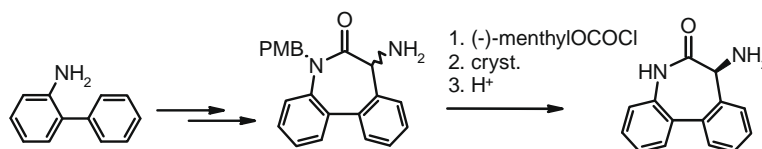
pp 6372–6376

Omar Khoumeri, Maxime D. Crozet, Thierry Terme, Patrice Vanelle^{*}
Efficient synthesis of N^{α} -Me, N^{β} -Boc protected α -hydrazinoacids: access to 1:1:1 [N^{α} -Me α -hydrazino/ α -hydrazino]trimers

pp 6377–6379

Samir Acherar, Brigitte Jamart-Grégoire^{*}
Improved synthesis of (*S*)-7-amino-5*H*,7*H*-dibenzo[*b,d*]azepin-6-one, a building block for γ -secretase inhibitors

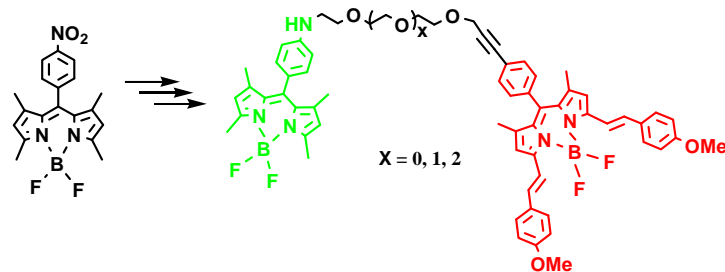
pp 6380–6382

Fabienne Hoffmann-Emery^{*}, Roland Jakob-Roetne, Alexander Flohr, Fritz Bliss, Reinhard ReentsAn improved synthesis of (*S*)-7-amino-5*H*,7*H*-dibenzo[*b,d*]azepin-6-one involving a selective crystallization for the resolution step is described.

Dual Bodipy fluorophores linked by polyethyleneglycol spacers

pp 6383–6388

Soumyaditya Mula, Gilles Ulrich, Raymond Ziessel *

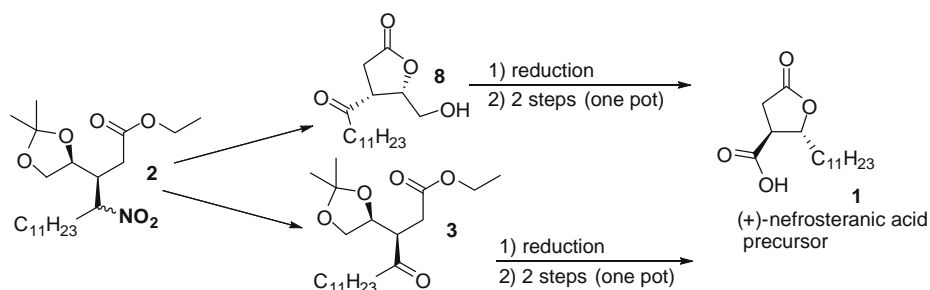


Donor–acceptor dyes linked by flexible chains of different size have been engineered and their fluorescence properties were investigated.

A formal synthesis to (+)-nephrosteranic acid from chiral nitroalkyl derivatives

pp 6389–6392

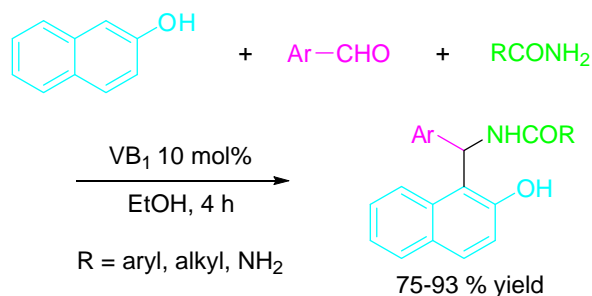
Cleber B. Barreto Jr., Vera L. Patrocínio Pereira *



Thiamine hydrochloride as a efficient catalyst for the synthesis of amidoalkyl naphthols

pp 6393–6397

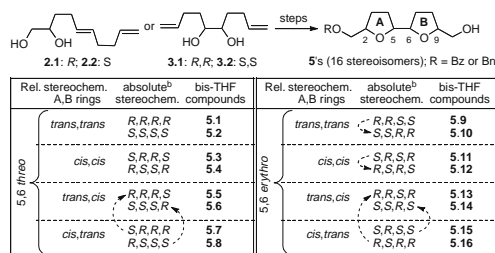
Min Lei, Lei Ma *, Lihong Hu *



Synthesis of 10 stereochemically distinct bis-tetrahydrofuran intermediates for creating a library of 64 asimicin stereoisomers

pp 6398–6401

Zhiyong Chen, Subhash C. Sinha *



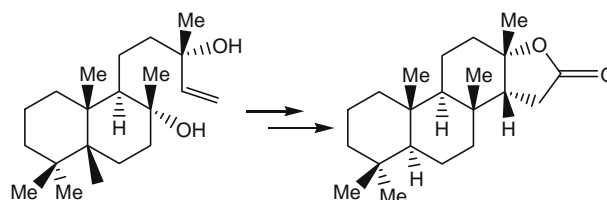
Stereoselective synthesis of 10 unique bifunctional stereoisomeric adjacent bis-THF intermediates (R = Bz), including 5.1–5.4, 5.7–5.9, 5.11, and 5.15–5.16, which can afford a library of all 64 asimicin-type acetogenins, is described.



Facile asymmetric synthesis of spongianone analogue through biomimetic cyclization

pp 6402–6403

Sanjay J. Mishra, Kiran B. Upar, Sujata V. Bhat *

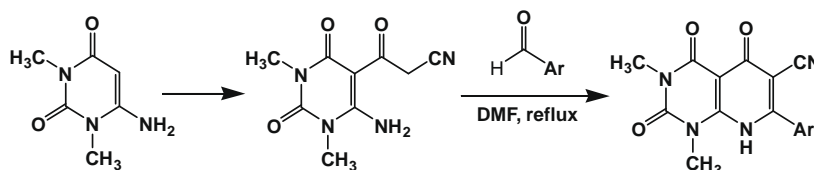


Facile asymmetric synthesis of tetracyclic homoterpene lactone has been achieved through chiral LBA-catalyzed biomimetic cyclization.

**5-Cyanoacetylpyrimidines as intermediates for 7-aryl-6-cyanopyrido[2,3-d]pyrimidin-5-ones**

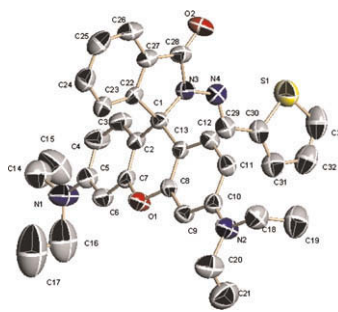
pp 6404–6406

Jairo Quiroga *, Jorge Trilleras, Jaime Gálvez, Braulio Insuasty, Rodrigo Abonía, Manuel Noguera *, Justo Cobo

The reactions of N^4 - and 5-cyanoacetyl derivatives of 4-aminopyrimidines with aromatic aldehydes have yielded the *N*-(pyrimidin-4-yl)-3-arylacrylamides and the dihydropyrido[2,3-*d*]pyrimidines, respectively.**Highly sensitive and selective reversible sensor for the detection of Cr^{3+}**

pp 6407–6410

Aruna J. Weerasinghe, Carla Schmiesing, Ekkehard Sinn *

A new fluorescent sensor based on thiophene-activated rhodamine B reversibly binds Cr^{3+} to form a highly fluorescent pink ring-open form.**A novel synthesis of 2-arylhydrazono-6-amino-4-arylbenzene-1,3-dicarbonitriles and their conversion into phthalazines**

pp 6411–6413

Saleh M. Al-Mousawi *, Moustafa Sherief Moustafa, Mohamed Hilmy Elnagdi

