

Organic & Biomolecular Chemistry

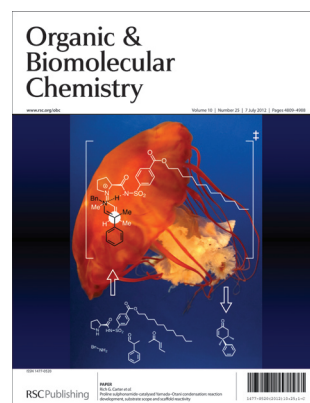
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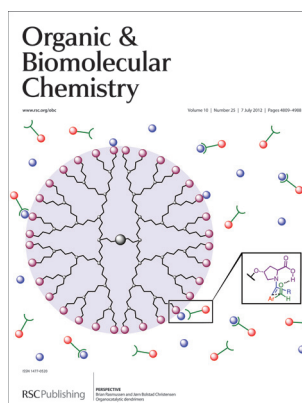
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Cover

See Rich G. Carter *et al.*, pp. 4851–4863.

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Inside cover

See Brian Rasmussen and Jørn Bolstad Christensen, pp. 4821–4835.

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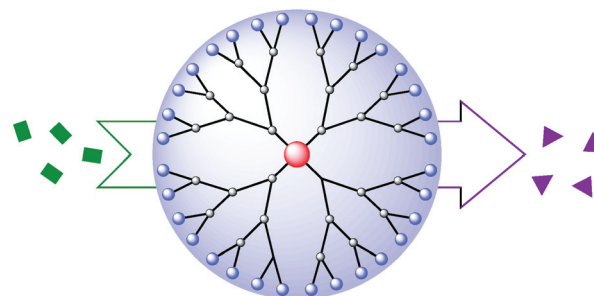
PERSPECTIVE

4821

Organocatalytic dendrimers

Brian Rasmussen* and Jørn Bolstad Christensen

The combination of dendritic catalysis and organocatalysis.



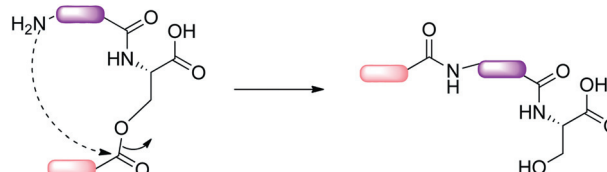
COMMUNICATIONS

4836

Traceless chemical ligations from *O*-acyl serine sites

Mirna El Khatib, Mohamed Elagawany, Farukh Jabeen, Ekaterina Todadze, Oleg Bol'shakov, Alexander Oliferenko, Levan Khelashvili, Said A. El-Feky, Abdullah Asiri and Alan R. Katritzky*

The feasibility of these traceless chemical ligations is demonstrated experimentally and as supported by computation.



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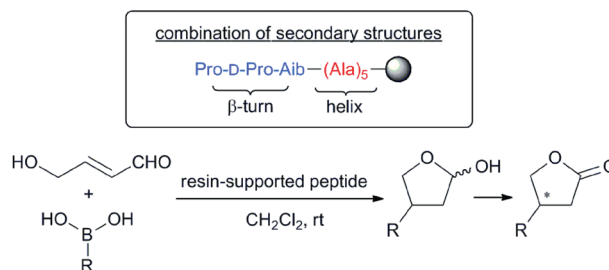
COMMUNICATIONS

4839

Asymmetric Michael addition of boronic acids to a γ -hydroxy- α,β -unsaturated aldehyde catalyzed by resin-supported peptide

Kengo Akagawa, Masahide Sugiyama and Kazuaki Kudo*

Resin-supported N-terminal prolyl peptide having suitable secondary structure effectively catalyzed asymmetric Michael addition of substituted β -styryl- and heteroarylboronates to 4-hydroxybut-2-enal.

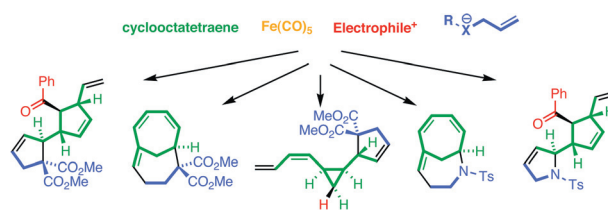


4844

Generation of molecular complexity from cyclooctatetraene using dienyliiron and olefin metathesis methodology

Mohamed F. El-Mansy, Anobick Sar, Subhabrata Chaudhury, Nathaniel J. Wallock and William A. Donaldson*

Complex molecular architectures are created in 5–6 steps from the simple hydrocarbon cyclooctatetraene.



4847

Precipitation-driven self-sorting of imines

Rio Carlo Lirag, Karolina Osowska and Ognjen Š. Miljanić*

Judicious choice of precipitation conditions can lead to self-sorting of equilibrating mixtures of aromatic aldehydes and substituted anilines into a handful of imine products.



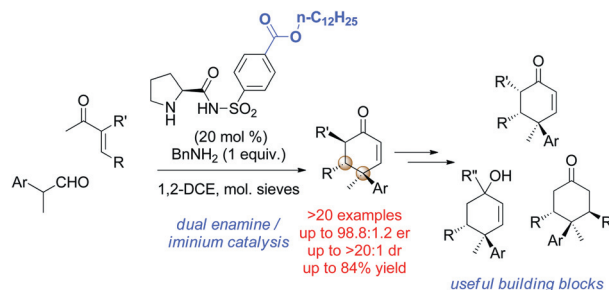
PAPERS

4851

Proline sulphonamide-catalysed Yamada–Otani condensation: reaction development, substrate scope and scaffold reactivity

Hua Yang, Somdev Banerjee and Rich G. Carter*

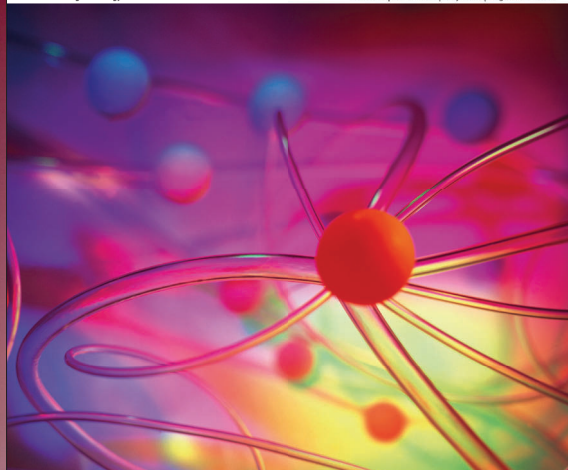
The development of a proline sulphonamide-catalysed method for enantioselective and diastereoselective construction of functionalized cyclohexenones is described.



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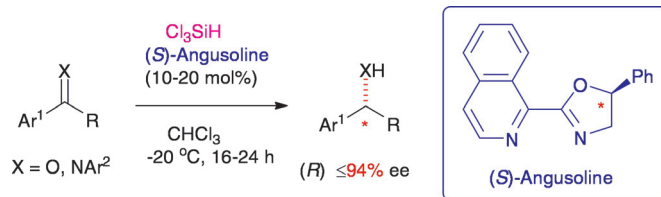
PAPERS

4864

Catalyst development for organocatalytic hydrosilylation of aromatic ketones and ketimines

Andrei V. Malkov,* Angus J. P. Stewart-Liddon,
Grant D. McGeoch, Pedro Ramírez-López and
Pavel Kočovský*

A series of pyridyl-oxazoline catalysts for the enantioselective reduction of both ketones and ketimines has been developed.

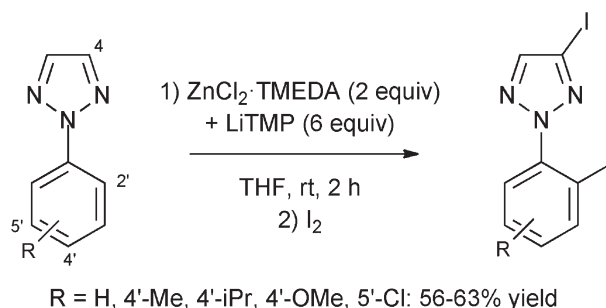


4878

Deproto-metallation and computed CH acidity of 2-aryl-1,2,3-triazoles

Floris Chevallier,* Thomas Blin, Elisabeth Nagaradja,
Frédéric Lassagne, Thierry Roisnel, Yury S. Halauko,*
Vadim E. Matulis, Oleg A. Ivashkevich and Florence Mongin*

2-Aryl-1,2,3-triazoles have been synthesized and deproto-metallated using a 2,2,6,6-tetramethylpiperidino-based lithium–zinc combination. The outcome of the reactions has been discussed in the light of DFT calculated CH acidities (THF solution).

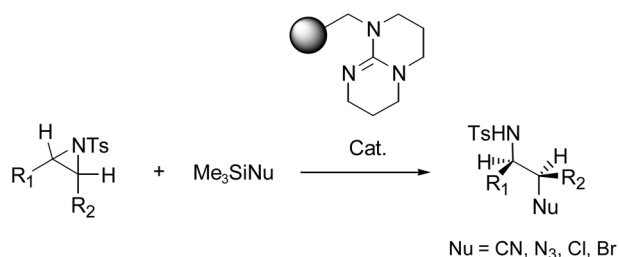


4886

Polystyrene-supported TBD catalyzed ring-opening of *N*-tosylaziridines with silylated nucleophiles

Satoru Matsukawa,* Takeru Harada and Shiori Yasuda

Polystyrene-supported TBD (PS-TBD) catalyzes the ring-opening of *N*-tosylaziridines with silylated nucleophiles to give the corresponding products in high yields. PS-TBD was easily recovered and reused without significant loss of catalytic activity.

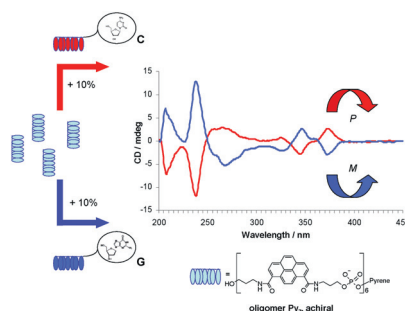


4891

Supramolecular polymerization of oligopyrenotides – stereochemical control by single, natural nucleotides

Alina L. Nussbaumer, Florent Samain,
Vladimir L. Malinovskii and Robert Häner*

The formation of supramolecular polymers from oligopyrenotides can be controlled by chiral auxiliaries, such as natural nucleotides. The supramolecular polymerization process exhibits a high degree of amplification of chirality. Depending on the nature of the nucleotide, the helical sense of the polymers is shifted to either an *M*-helix or a *P*-helix.



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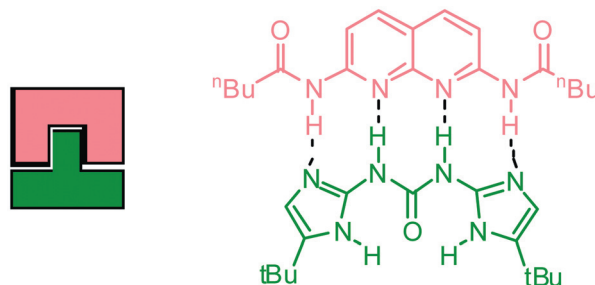
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4899

Design, synthesis and binding studies of a novel quadruple ADDA hydrogen-bond array

Maria L. Pellizzaro, Simon A. Barrett, Julie Fisher and Andrew J. Wilson*

This paper describes the synthesis and molecular recognition properties of a new quadruple hydrogen-bonding array: ureidodiimidazole (UDIM).

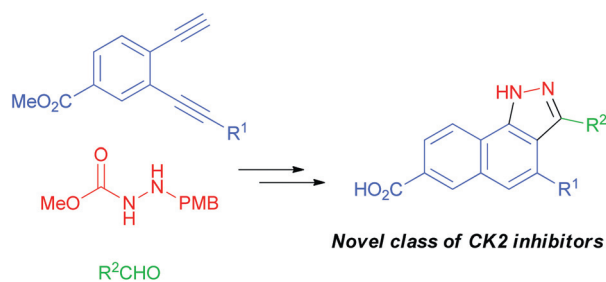


4907

Design and synthesis of a novel class of CK2 inhibitors: application of copper- and gold-catalysed cascade reactions for fused nitrogen heterocycles

Yamato Suzuki, Shinya Oishi,* Yoshinori Takei, Misato Yasue, Ryosuke Misu, Saori Naoe, Zengye Hou, Tatsuhide Kure, Isao Nakanishi, Hiroaki Ohno, Akira Hirasawa, Gozoh Tsujimoto and Nobutaka Fujii*

A series of fused nitrogen heterocycles for novel CK2 inhibitors were designed and synthesized *via* copper- and gold-catalysed cascade/multicomponent reactions as key steps.

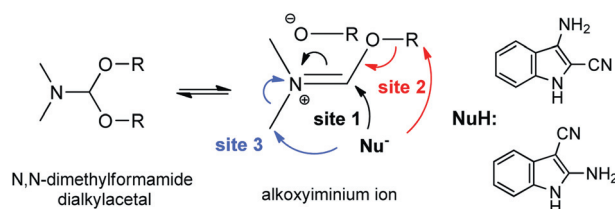


4916

Study of N^1 -alkylation of indoles from the reaction of 2(or 3)-aminoindole-3-(or 2)carbonitriles with DMF-dialkylacetals

Yvonnick Loidreau, Sigismund Melissen, Vincent Levacher, Cédric Logé, Jérôme Graton, Jean-Yves Le Questel* and Thierry Besson*

DMF-dialkoxycetals allowed the appearance of reactive alkoxyiminium species for convenient access to indole precursors of various building blocks.

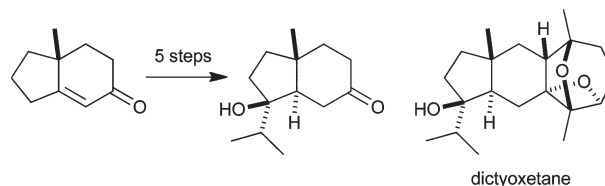


4926

Synthesis of the *trans*-hydrindane core of dictyoxetane

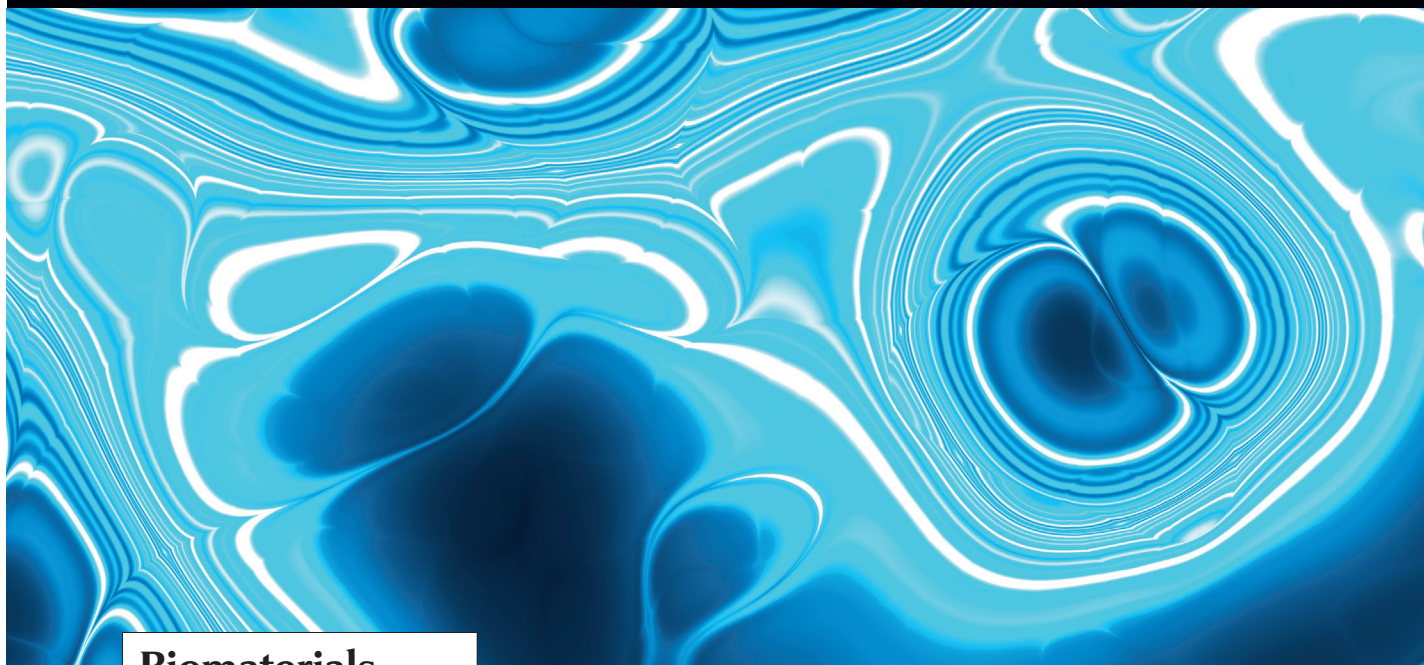
Benedicte Defaut, Thomas B. Parsons, Neil Spencer, Louise Male, Benson M. Kariuki and Richard S. Grainger*

Preparation of the *trans*-hydrindane core of the marine natural product dictyoxetane is reported for the first time. A phosphorane-mediated, pinacol-like rearrangement is used to establish the requisite *trans* ring junction.

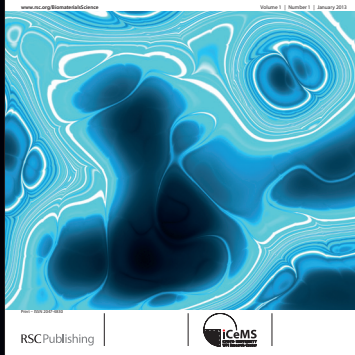


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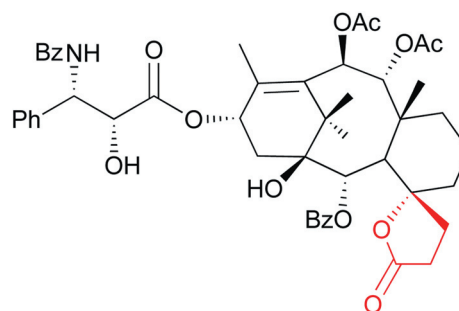
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4933

A novel C,D-spirolactone analogue of paclitaxel: autophagy instead of apoptosis as a previously unknown mechanism of cytotoxic action for taxoids

Milena V. Trmcic, Radomir V. Matovic, Gordana I. Tovilovic, Biljana Z. Ristic, Vladimir S. Trajkovic,* Zorana B. Ferjancic* and Radomir N. Saicic*

The C,D-spirolactone is the first paclitaxel analogue without an oxetane ring that shows significant cytotoxicity, and acts by autophagy, not apoptosis.

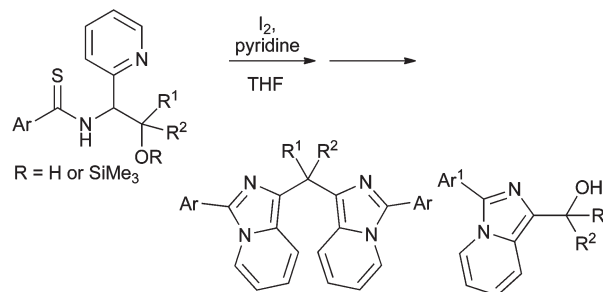


4943

Imidazo[1,5-a]pyridine-1-ylalkylalcohols: synthesis via intramolecular cyclization of *N*-thioacyl 1,2-aminoalcohols and their silyl ethers and molecular structures

Toshiaki Murai,* Eri Nagaya, Fumitoshi Shibahara and Toshifumi Maruyama

Iodine-mediated cyclization of *N*-thioacyl 1,2-aminoalcohols and their silyl ethers was complete within 30 min to give imidazo[1,5-*a*]pyridine derivatives.

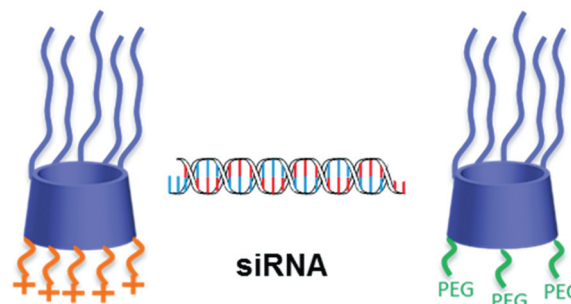


4954

A click chemistry route to 2-functionalised PEGylated and cationic β -cyclodextrins: co-formulation opportunities for siRNA delivery

Aoife M. O'Mahony, Julien Ogier, Stephane Desgranges, John F. Cryan, Raphael Darcy and Caitriona M. O'Driscoll*

Cuprous-catalysed 'click' chemistry was employed to synthesise cationic and PEGylated amphiphilic cyclodextrins. These cyclodextrins were co-formulated and investigated for siRNA delivery.

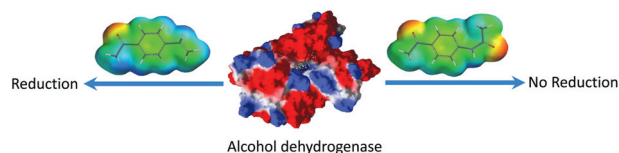


4961

Investigation of asymmetric alcohol dehydrogenase (ADH) reduction of acetophenone derivatives: effect of charge density

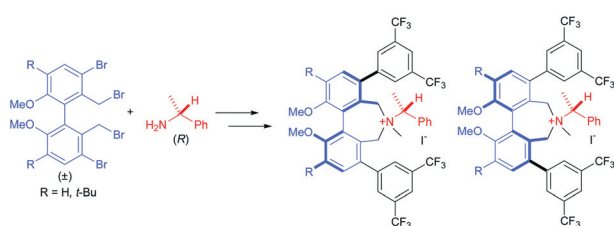
Hemantkumar G. Naik,* Bahar Yeniad, Cor E. Koning and Andreas Heise

In an effort to study the effect of substituent groups of the substrate on the alcohol dehydrogenase (ADH) reductions of aryl-alkyl ketones, several derivatives of acetophenone have been evaluated against ADHs from *Lactobacillus brevis* and *Thermoanaerobacter sp.*



PAPERS

4968

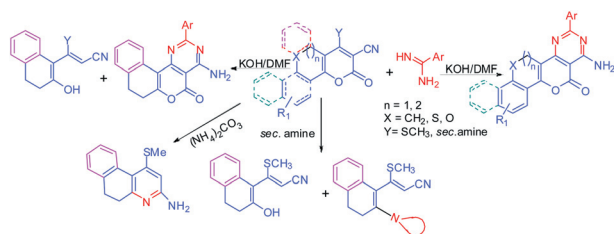


Synthesis and evaluation of *atropos* dihydro-5H-dibenzazepinium halide PTCs derived from α -methylbenzylamine

Barry Lygo,* Umar Butt and Maria Cormack

A short synthetic route to diastereoisomeric *atropos* dihydro-5H-dibenz[*c,e*]azepinium salts *via* reaction of a single enantiomer of (*R*)- α -methylbenzylamine with a racemic *atropos* biphenol derivative is described.

4977



Sequential approach to the synthesis of 'U and Z' shaped polycyclic heteroarenes

Hardesh K. Maurya, Sanjay K. Gautam, Ramendra Pratap, Vishnu K. Tandon,* Abhinav Kumar, Vikas Bajpai, Brijesh Kumar and Vishnu Ji Ram*

The synthesis of three new classes of heteroarenes, built through the sequential fusion of naphthalene, benzo/naphtho[*b*]oxepine and thiochromene rings with pyran and pyrimidine rings, and giving 'U and Z' shaped structural frameworks is reported.

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