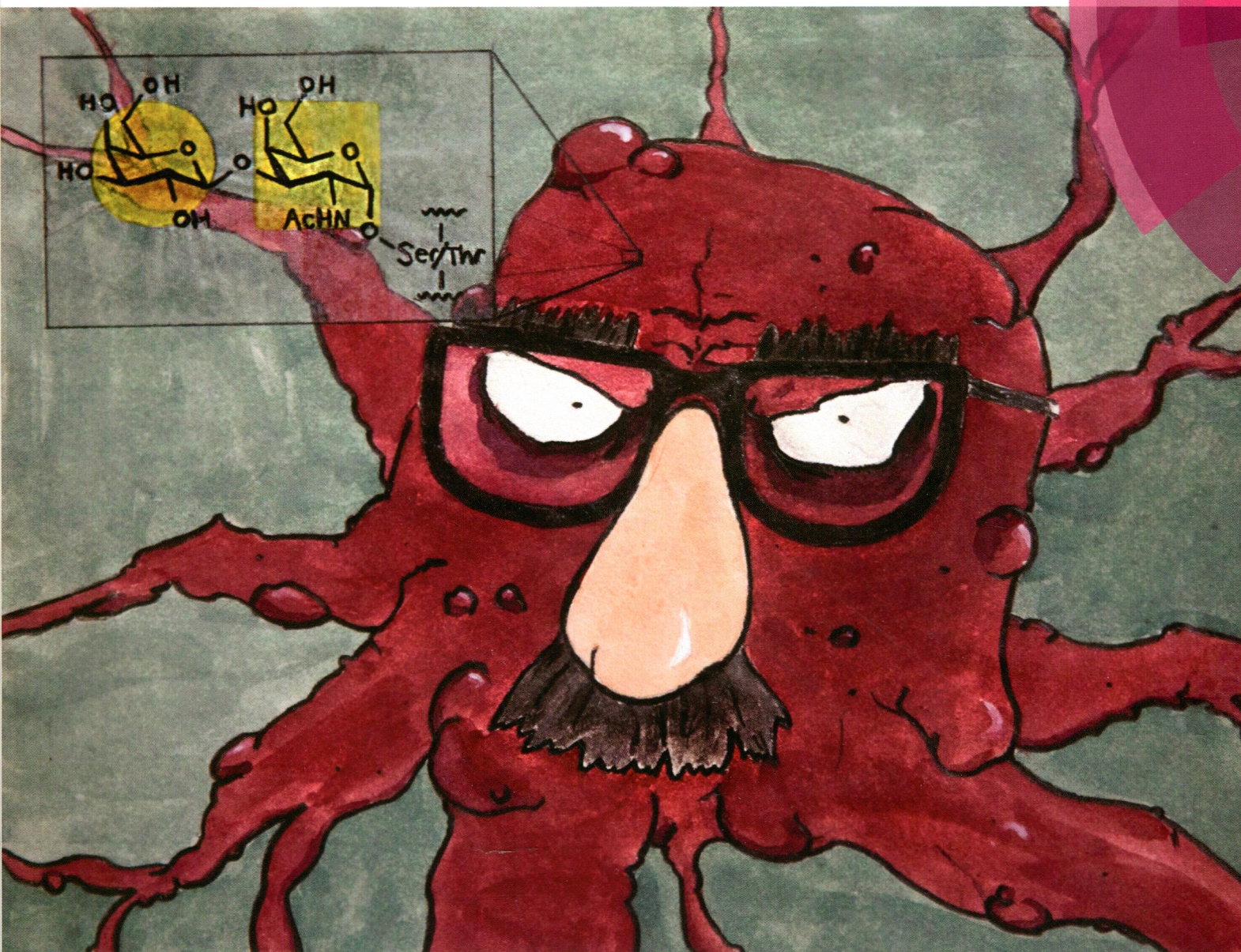


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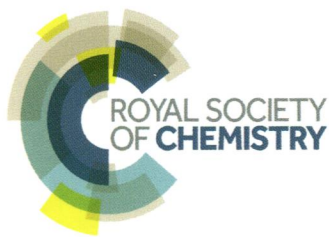
Volume 12 | Number 11 | 21 March 2014 | Pages 1673–1824

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COMMUNICATION

Peter R. Andreato *et al.*

Synthesis of the tumor associative α -aminoxy disaccharide of the TF antigen and its conjugation to a polysaccharide immune stimulant

Organic & Biomolecular Chemistry

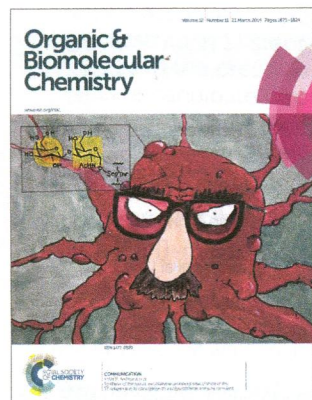
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ISSN 1477-0520 CODEN OBCRAK 12(11) 1673-1824 (2014)



Cover

See Peter R. Andreama *et al.*, pp. 1699–1702.

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Rachel Bourgault is gratefully acknowledged for the design of the cover artwork.

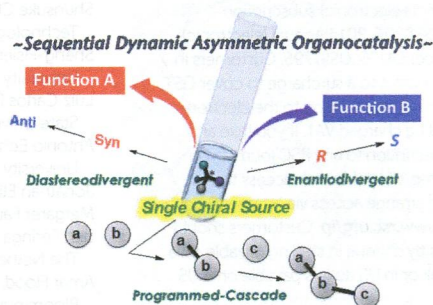
PERSPECTIVE

1681

Sequential stereodivergent organocatalysis and programmed organocascades

Yoshihiro Sohtome* and Kazuo Nagasawa*

We introduce sequential dynamic asymmetric organocatalysis, focusing on diastereodivergent and enantiodivergent organocatalysis and programmed organocascades.



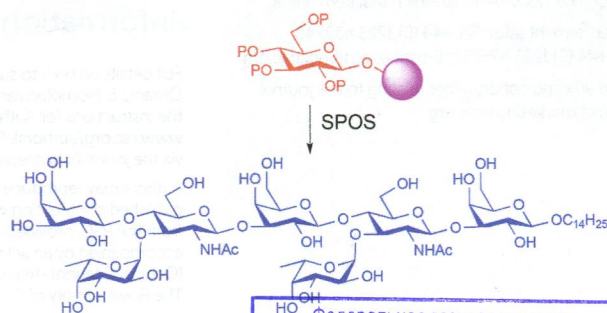
REVIEW

1686

Principles of modern solid-phase oligosaccharide synthesis

Clay S. Bennett

This perspective describes principles of modern solid-phase oligosaccharide synthesis, including technologies for automation and areas where further work is needed.



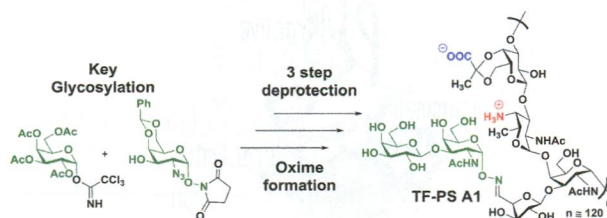
Федеральное государственное бюджетное учреждение науки
Центральная научная библиотека
Уральского отделения
Российской академии наук (ЦНБ УрО РАН)

1699

Synthesis of the tumor associative α -aminoxy disaccharide of the TF antigen and its conjugation to a polysaccharide immune stimulant

Jean Paul Bourgault, Kevin R. Trabbic, Mengchao Shi and Peter R. Andreana*

The α -aminoxy derivative of the Thomsen–Friedenriech tumor-associated carbohydrate antigen has been synthesized in 11 steps. This nucleophilic sugar was then utilized in the preparation of the TF-PS A1 conjugate vaccine candidate through oxime bond formation.

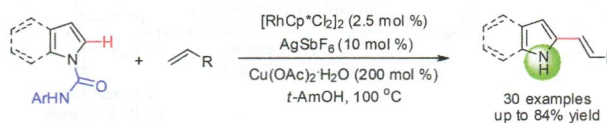


1703

Rh-catalyzed oxidative C–C bond formation and C–N bond cleavage: direct access to C2-olefinated free (NH)-indoles and pyrroles

Satyasheel Sharma, Sangil Han, Mirim Kim, Neeraj Kumar Mishra, Jihye Park, Youngmi Shin, Jimin Ha, Jong Hwan Kwak, Young Hoon Jung and In Su Kim*

The rhodium-catalyzed oxidative C2-olefination of indoles and pyrroles containing *N*-arylcarboxamide directing groups with a range of alkenes and subsequent cleavage of directing groups is described.

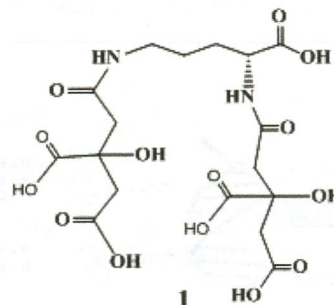


1707

Chemical synthesis of staphyloferrin A and its application for *Staphylococcus aureus* detection

Rajesh K. Pandey,* Gregory G. Jarvis and Philip S. Low*

The chemical synthesis of staphyloferrin A, a siderophore used by *Staphylococcus* bacteria for ferric iron retrieval, has been achieved with 79% yield via solid phase peptide synthesis (SPPS).

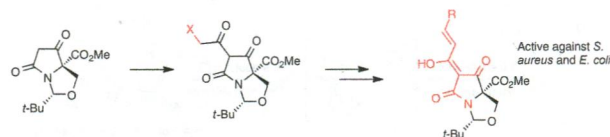


1711

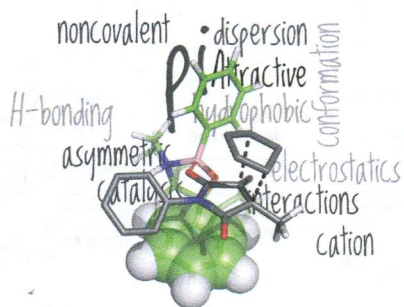
Synthesis of 3-acyltetramates by side chain manipulation and their antibacterial activity

Song Wei Benjamin Tan, Christina L. L. Chai* and Mark G. Moloney*

An efficient approach for the introduction of 3-acyl side chain groups onto a core tetramate system, which are suitable for further manipulation by nucleophilic displacement or Horner–Wadsworth–Emmons coupling, provides access to a diverse library of substituted tetramates related to two distinct classes of natural products, equisetin and pramanicin.



1717

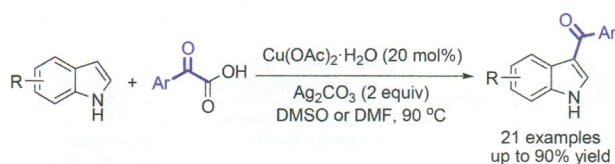


Dissecting non-covalent interactions in oxazaborolidinium catalyzed cycloadditions of maleimides

Robert S. Paton

Asymmetric induction in oxazaborolidinium-catalyzed cycloadditions of maleimides results from favourable dispersive interactions, and not non-classical hydrogen bonding.

1721



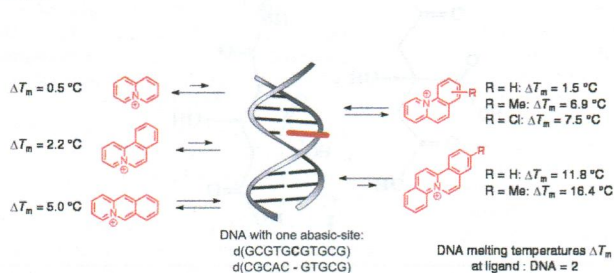
Copper-catalyzed decarboxylative C3-acylation of free (N-H) indoles with α -oxocarboxylic acids

Cuiping Wang, Shaoyan Wang, Hua Li, Jingbo Yan, Haijun Chi, Xichao Chen and Zhiqiang Zhang*

A series of 3-acylindoles were synthesized by an efficient Cu-catalyzed decarboxylative C3-acylation of free (N-H) indoles with α -oxocarboxylic acids in moderate to high yields.

PAPERS

1725

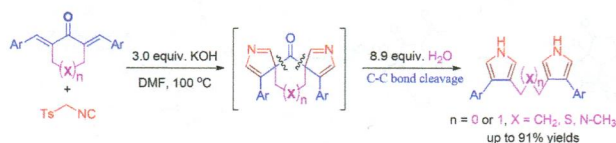


Targeting abasic site-containing DNA with annelated quinolinium derivatives: the influence of size, shape and substituents

Katja Benner, Heiko Ihmels,* Sarah Kölsch and Phil M. Pithan

A comparative analysis showed that the type and degree of annelation as well as methyl or chloro-substitution are relevant structural features that determine the interactions of quinolinium derivatives with abasic site-containing DNA.

1735



Water promoted C–C bond cleavage: facile synthesis of 3,3-bipyrrole derivatives from dienones and tosylmethyl isocyanide (TosMIC)

Rong Wang, Shun-Yi Wang* and Shun-Jun Ji*

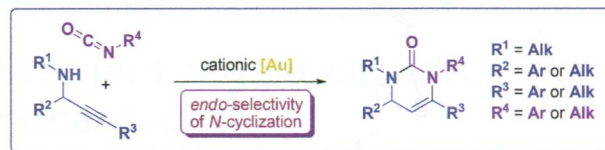
Synthesis of 3,3-bipyrrole derivatives from dienones and tosylmethyl isocyanide has been reported.

1741

Unexpected regio- and chemoselectivity of cationic gold-catalyzed cycloisomerizations of propargylureas: access to tetrasubstituted 3,4-dihydropyrimidin-2(1H)-ones

Olga P. Pereshivko, Vsevolod A. Peshkov,*
Anatoly A. Peshkov, Jeroen Jacobs, Luc Van Meervelt
and Erik V. Van der Eycken*

Cationic gold-catalyzed cycloisomerizations of propargylureas for the 3,4-dihydropyrimidin-2(1H)-one core construction.

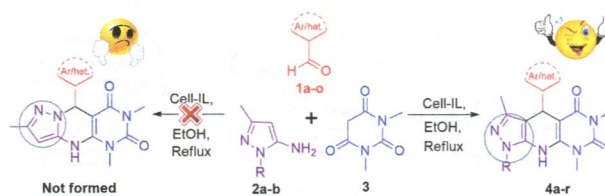


1751

Catalytic regioselective synthesis of pyrazole based pyrido[2,3-d]pyrimidine-diones and their biological evaluation

Shailesh P. Satasia, Piyush N. Kalaria and Dipak K. Raval*

Regioselective synthesis of pyrazole based pyrido[2,3-d]-pyrimidine-diones using cellulose supported acidic ionic liquid (Cell-IL) as the heterogeneous catalyst.

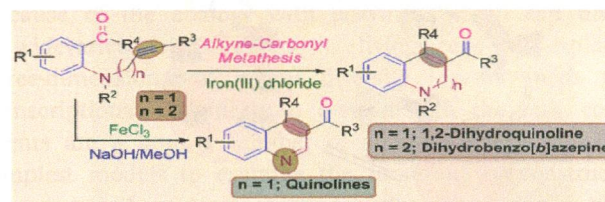


1759

Efficient synthesis of functionalized dihydroquinolines, quinolines and dihydrobenzo[b]azepine via an iron(III) chloride-catalyzed intramolecular alkyne-carbonyl metathesis of alkyne tethered 2-amino benzaldehyde/acetophenone derivatives

Swapnadeep Jalal, Krishnendu Bera, Soumen Sarkar,
Kartick Paul and Umasish Jana*

Iron-catalyzed synthesis of dihydroquinolines, quinolines and dihydrobenzo[b]azepine.

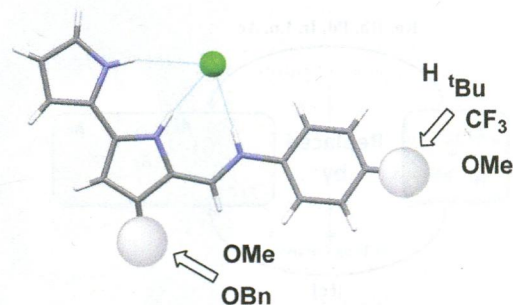


1771

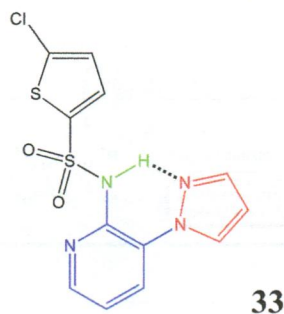
Transmembrane anion transport and cytotoxicity of synthetic tambjamine analogs

Elsa Hernando, Vanessa Soto-Cerrato,
Susana Cortés-Arroyo, Ricardo Pérez-Tomás and
Roberto Quesada*

Synthetic tambjamine analogs bearing aromatic enamine moieties are highly efficient transmembrane anion carriers, triggering apoptosis in several cancer cell lines.



1779

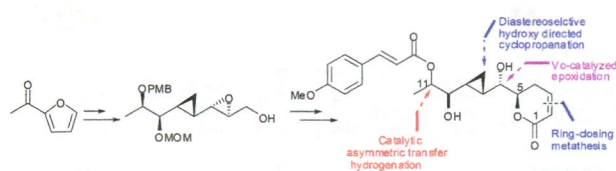


Lead identification and structure–activity relationships of heteroarylpyrazole arylsulfonamides as allosteric CCR4 chemokine receptor 4 (CCR4) antagonists

Afjal H. Miah, Royston C. B. Copley, Daniel O'Flynn, Jonathan M. Percy and Panayiotis A. Procopiou*

A combination of X-ray diffraction studies and SAR provided pyrazole **33** as a potent CCR4 antagonist with good physicochemical properties.

1793

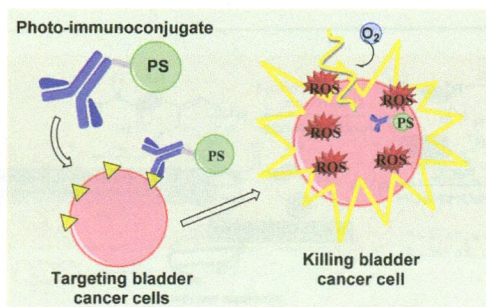


Towards the diastereoselective synthesis of derivative of 11'-*epi*-brevipolide H

Gullapalli Kumaraswamy,* Neerasa Jayaprakash, Dasa Rambabu, Aniban Ganguly and Rajkumar Banerjee

An efficient diastereoselective synthesis is accomplished employing a catalytic ATH, hydroxyl-directed cyclopropanation, catalytic epoxidation and ring closing metathesis.

1804

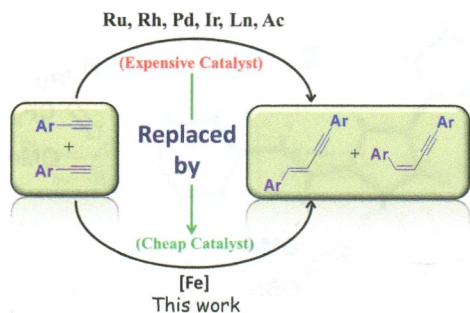


Porphyrin conjugated with serum albumins and monoclonal antibodies boosts efficiency in targeted destruction of human bladder cancer cells

Patrícia M. R. Pereira, José J. Carvalho, Sandrina Silva, José A. S. Cavaleiro, Rudolf J. Schneider,* Rosa Fernandes* and João P. C. Tomé*

The synthesis of a novel PS conjugated with bovine and human serum albumin (BSA and HSA) and a monoclonal antibody anti-CD104 is reported, as well as their biological potential against the human bladder cancer cell line UM-UC-3.

1812



Ligand mediated iron catalyzed dimerization of terminal aryl alkynes: scope and limitations

Ganesh Chandra Midya, Bibudha Parasar, Kalyan Dhara and Jyotirmayee Dash*

Highly regioselective head to head dimerization of terminal aryl alkynes has been achieved using catalytic FeCl_3 in the presence of DMEDA or dppe and KO^tBu to afford a variety of *E*-stereoselective conjugated enynes in good to high yields.