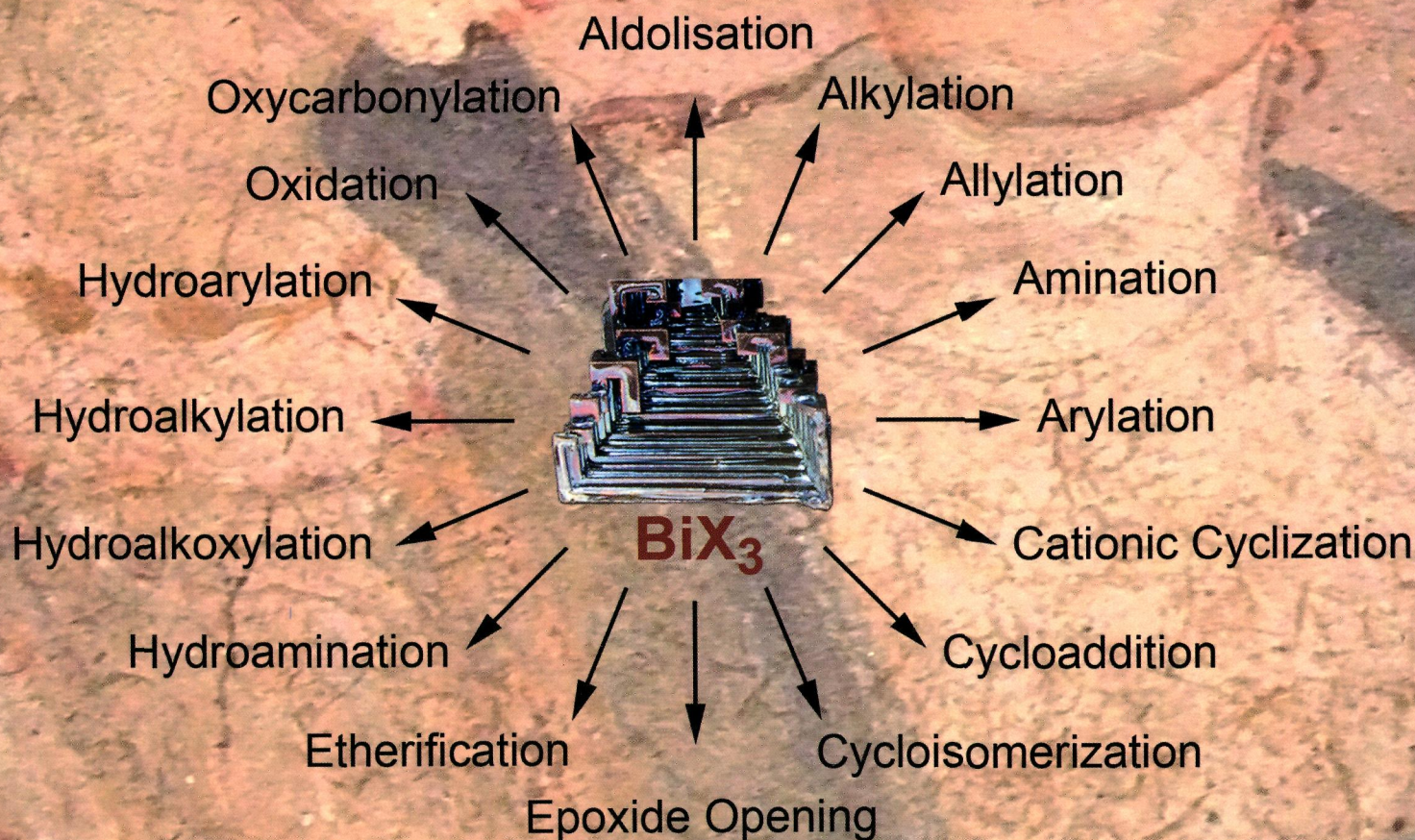


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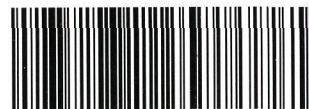
Volume 11 | Number 17 | 7 May 2013 | Pages 2731–2918



ISSN 1477-0520

RSC Publishing

EMERGING AREA
Thierry Ollevier
New trends in bismuth-catalyzed synthetic transformations



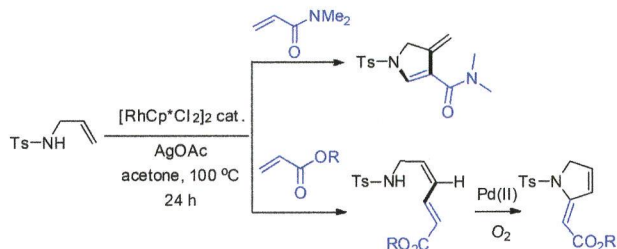
1477-0520(2013)11:17;1-9

2761

Rhodium(III)-catalyzed oxidative olefination of *N*-allyl sulfonamides

Shui Hu, Dongqi Wang, Jiexiang Liu and Xingwei Li*

Rh(III) catalyzed oxidative olefination of *N*-allyl sulfonamides was achieved. Different olefins gave different coupling products.



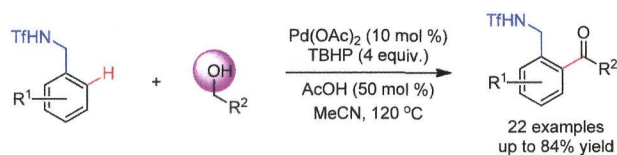
PAPERS

2766

Direct acylation of *N*-benzyltriflamides from the alcohol oxidation level via palladium-catalyzed C–H bond activation

Jihye Park, Aejin Kim, Satyasheel Sharma, Minyoung Kim, Eonjeong Park, Yukyoung Jeon, Youngil Lee, Jong Hwan Kwak, Young Hoon Jung and In Su Kim*

A palladium-catalyzed *ortho*-acylation of *N*-benzyltriflamides from the alcohol oxidation level via C–H bond activation is described.

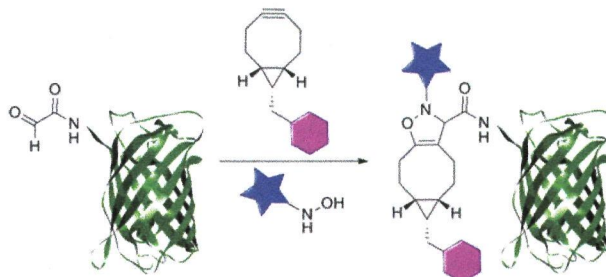


2772

N-terminal dual protein functionalization by strain-promoted alkyne–nitrone cycloaddition

Rinske P. Temming, Loek Eggermont, Mark B. van Eldijk, Jan C. M. van Hest and Floris L. van Delft*

Strain-promoted alkyne–nitrone cycloaddition (SPANC) is employed to simultaneously introduce two functional groups into the cell-penetrating peptide hLF or the enhanced green fluorescent protein, in a one-pot reaction.

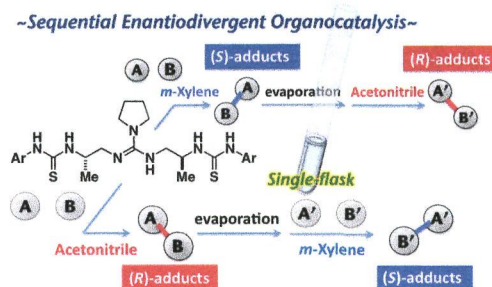


2780

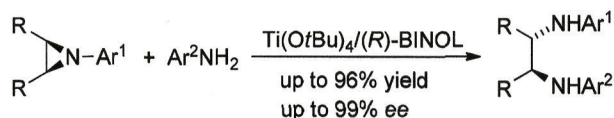
Sequential enantiodivergent organocatalysis: reversibility in enantioswitching controlled by a conformationally flexible guanidine/bisthiourea organocatalyst

Yoshihiro Sohtome,* Takahisa Yamaguchi, Shinji Tanaka and Kazuo Nagasawa*

Here we describe our studies on solvent-dependent enantiodivergent Mannich-type reactions utilizing conformationally flexible guanidine/bisthiourea organocatalyst (*S,S*)-**1**.



2787

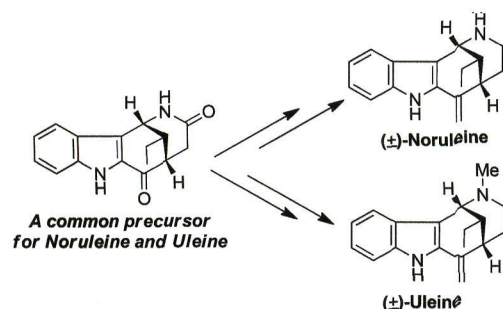


The Ti-BINOLate-catalyzed, enantioselective ring-opening of *meso*-aziridines with amines

Saravanan Peruncheralathan, Sandra Aurich, Henrik Teller and Christoph Schneider*

A chiral titanium catalyst prepared *in situ* from commercially available compounds effectively desymmetrizes *meso*-aziridines with anilines and furnishes synthetically valuable 1,2-diamines with exceptional enantioselectivity.

2804

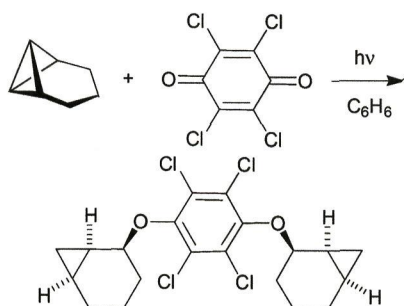


Concise total syntheses of (±)-noruleine and (±)-uleine

Süleyman Patir* and Erkan Ertürk*

The first total synthesis of (±)-noruleine and a concise synthesis of (±)-uleine have been accomplished.

2811

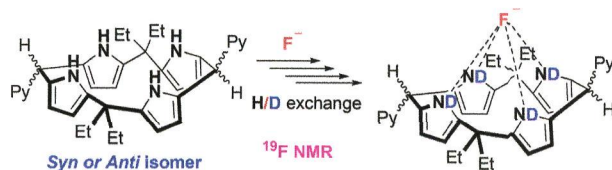


Photochemical reactions of tetrachloro-1,4-benzoquinone (chloranil) with tricyclo[4.1.0.0^{2,7}]-heptane (Moore's hydrocarbon) and bicyclo[4.1.0]-hept-2-ene (2-norcarene)

Manfred Christl,* Max Braun and Oliver Deeg

The irradiation of chloranil in the presence of Moore's hydrocarbon gave two bis(*endo*-2-norcaryl) ethers of 2,3,5,6-tetrachlorohydroquinone and three cycloadducts of 2-norcarene.

2818



The *syn* and *anti* isomers of the porphyrinogen-like precursor of calix[4]phyrin: isolation, X-ray structure, anion binding and fluoride-ion-mediated proton-deuterium exchange studies

Tapas Guchhait, Vikesh Kumar Jha and Ganesan Mani*

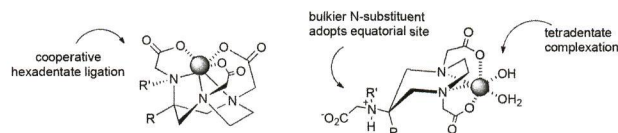
The X-ray structures of the *syn* and *anti* isomers of the porphyrinogen-like precursor of a calix[4]phyrin molecule, their anion binding and the characteristic solution state structures of their F⁻ ion complexes as identified by ¹⁹F NMR are reported.

2827

Conformational analysis and synthetic approaches to polydentate perhydro-diazepine ligands for the complexation of gallium(III)

David Parker* and Bradley P. Waldron

A conformationally biased seven-ring triamine as a versatile ligand scaffold for binding gallium and small tripositive metal ions.

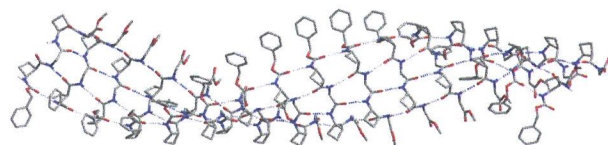


2839

Low-molecular-weight gelators consisting of hybrid cyclobutane-based peptides

Sergi Celis, Pau Nolis, Ona Illa, Vicenç Branchadell and Rosa M. Ortuño*

Nice gels have been formed whose morphology, structure and gelation dynamics were investigated using experimental techniques and computational calculations.

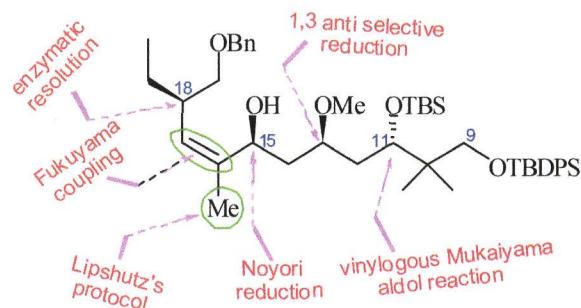


2847

A stereoselective synthesis of the C9–C19 subunit of (+)-peloruside A

Sadagopan Raghavan* and V. Vinoth Kumar

A stereoselective synthesis of the C9–C19 subunit of peloruside A is disclosed utilizing metal catalyzed catalytic asymmetric transformations, substrate controlled induction and enzymatic resolution.

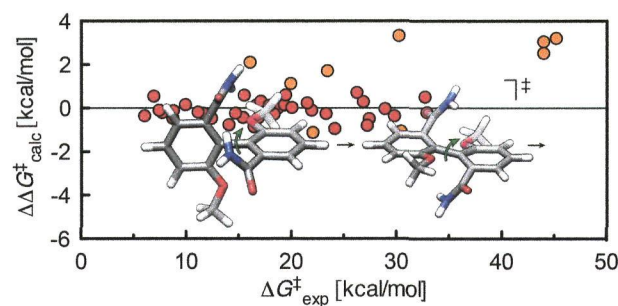


2859

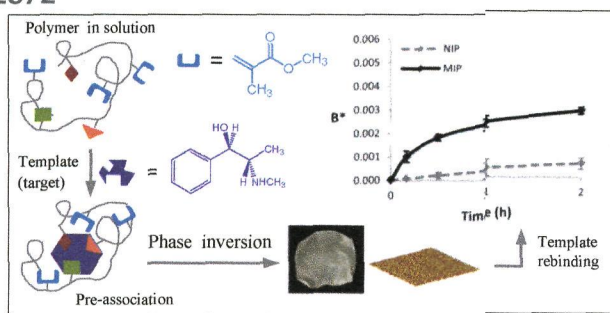
Torsional barriers of substituted biphenyls calculated using density functional theory: a benchmarking study

Eric Masson

This study proposes an efficient procedure to calculate the barriers of torsional isomerization of substituted biphenyls using dispersion-corrected functionals.



2872

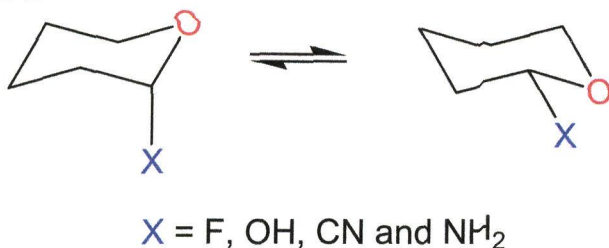


Molecularly imprinted films of acrylonitrile/methyl methacrylate/acrylic acid terpolymers: influence of methyl methacrylate in the binding performance of L-ephedrine imprinted films

Carrie Brisbane, Adam McCluskey, Michael Bowyer and Clovia I. Holdsworth*

Performance of phase-inversed molecularly imprinted polymeric films is enhanced by the inclusion of methyl methacrylate in the formulation.

2885

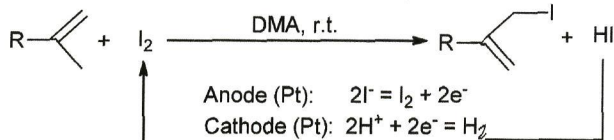


The anomeric effect on the basis of natural bond orbital analysis

Matheus P. Freitas*

The anomeric effect in some 2-substituted tetrahydropyrans has been investigated using natural bond orbital (NBO) analysis and its origin was found to be dependent on the substituent and the medium.

2891

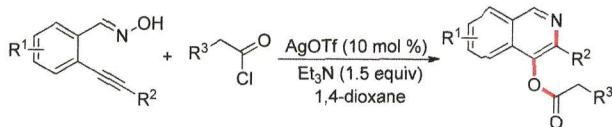


Electrophilic monoiodination of terminal alkenes

Sergiy V. Yemets, Tatyana E. Shubina and Pavel A. Krasutsky*

An excess of elemental iodine in DMA enables effective 3-iodanylium-de-hydration of terminal alkenes with 3-iodopropene derivatives and HI formation within minutes at room temperature. The molar ratio of iodine to substrate was decreased to 1 : 1 when HI formed was oxidized on a platinum anode. The reaction mechanism is studied.

2898



A silver(I)-catalyzed tandem reaction of 2-alkynylbenzaldoximes with ketenes

Hongliang Liu, Gang Liu,* Shouzhi Pu and Zhiyong Wang*

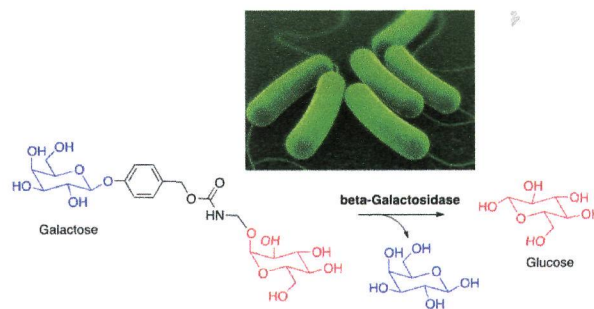
A silver triflate-catalyzed tandem reaction of 2-alkynylbenzaldoximes with ketenes proceeds through 6-endo-cyclization, [3 + 2] cycloaddition and rearrangement, leading to isoquinoline derivatives in moderate to good yields.

2903

Enzyme-mediated nutrient release: glucose-precursor activation by β -galactosidase to induce bacterial growth

Naama Karton-Lifshin, Uwe Vogel, Eran Sella, Peter H. Seeberger, Doron Shabat* and Bernd Lepenies*

A masked glucose precursor that is activated by β -galactosidase was used as a carbon source for bacterial growth in a glucose-deficient medium.



2911

Racemization of enantiopure secondary alcohols by *Thermoanaerobacter ethanolicus* secondary alcohol dehydrogenase

Musa M. Musa,* Robert S. Phillips, Maris Laivenieks, Claire Vieille, Masateru Takahashi and Samir M. Hamdan

Alcohol dehydrogenase-catalyzed racemization of enantiopure secondary alcohols is described.

