

Organic & Biomolecular Chemistry

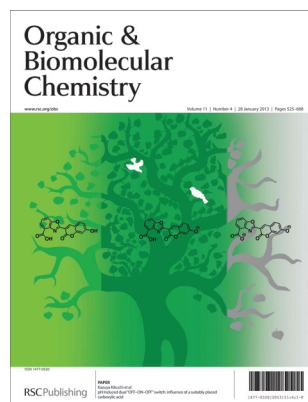
An international journal of synthetic, physical and biomolecular organic chemistry

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ISSN 1477-0520 CODEN OBCRAK 11(4) 525–688 (2013)

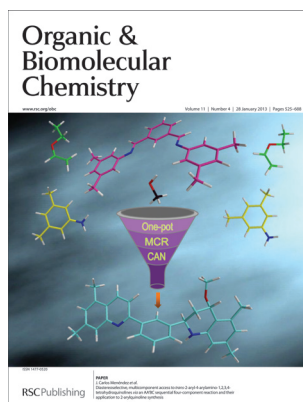


Cover

See Kazuya Kikuchi *et al.*, pp. 563–568.

Ms. Sujata Kar Saha helped with cover design.

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Inside cover

See J. Carlos Menéndez *et al.*, pp. 569–579.

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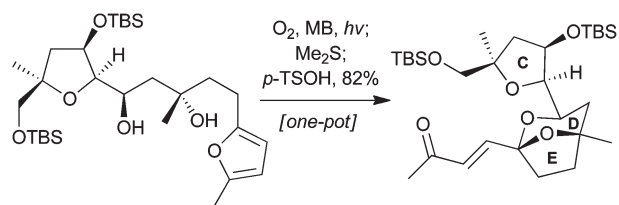
COMMUNICATIONS

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Using singlet oxygen to synthesise the CDE-ring system of the pectenotoxins

Antonia Kouridaki, Tamsyn Montagnon, Dimitris Kalaitzakis and Georgios Vassilikogiannakis*

A non-classical route to the key CDE-ring fragment of the pectenotoxins has been developed which showcases a remarkable singlet oxygen-mediated cascade reaction sequence to install the intact DE ring system.

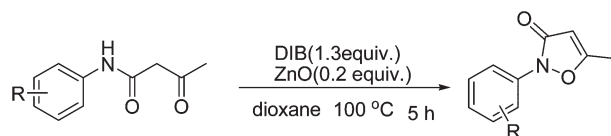


542

Direct construction of 5-methyl-2-phenylisoxazol-3(2H)-ones via hypervalent iodine mediated sequential tandem oxidative cyclization of 3-oxo-N-phenylbutanamides catalyzed by zinc oxide (ZnO)

Weibing Liu,* Peng Zhou, Cui Chen, Qing Zhang and Zhibo Zhu*

A sequential oxidative tandem cyclization of 3-oxo-N-phenylbutanamides to construct 5-methyl-2-phenylisoxazol-3(2H)-ones mediated by a combination of DIB with ZnO.



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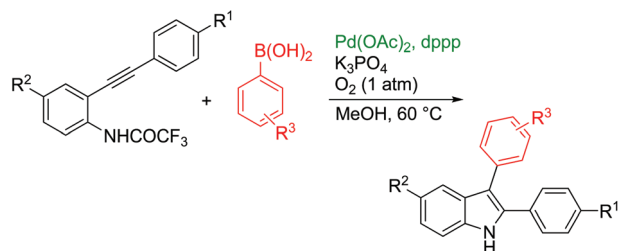


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2-Substituted 3-arylindoles through palladium-catalyzed arylyative cyclization of 2-alkynyltrifluoroacetanilides with arylboronic acids under oxidative conditions

Antonio Arcadi,* Sandro Cacchi, Giancarlo Fabrizi, Antonella Goggiamani,* Antonia Iazzetti and Fabio Marinelli

Free NH 2-substituted 3-arylindoles have been prepared through the palladium-catalyzed reaction of 2-alkynyltrifluoroacetanilides with arylboronic acids under oxidative conditions.

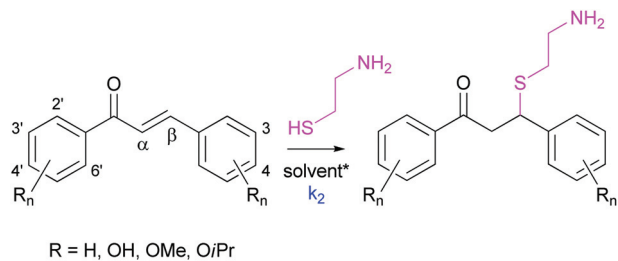


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Reactivity assessment of chalcones by a kinetic thiol assay

Sabine Amslinger,* Nafisah Al-Rifai, Katrin Winter, Kilian Wörmann, Rebekka Scholz, Paul Baumeister and Martin Wild

A new kinetic thiol assay allows a comparison of the reactivity of different natural and natural product-like chalcones (1,3-diphenylprop-2-en-1-ones) in Michael additions.

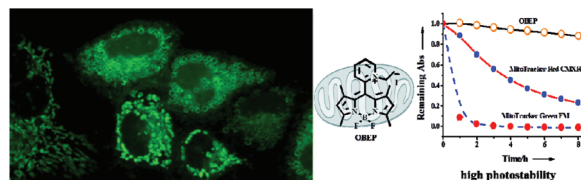


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A BODIPY-based fluorescent dye for mitochondria in living cells, with low cytotoxicity and high photostability

Si Zhang, Tong Wu, Jiangli Fan, Zhiyong Li, Na Jiang, Jingyun Wang,* Bairui Dou, Shiguo Sun, Fengling Song and Xiaojun Peng*

A novel BODIPY-based fluorescent probe for mitochondria in living cells with high photostability and low toxicity.

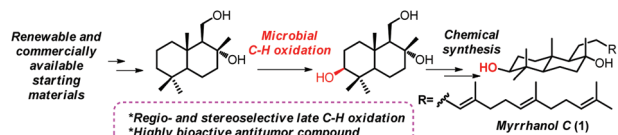


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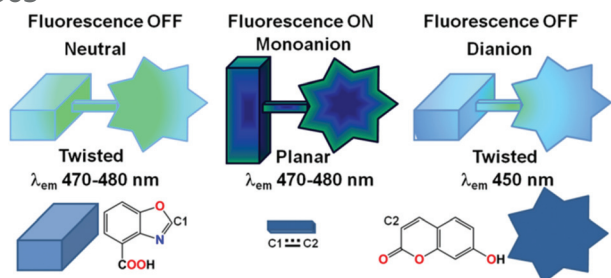
First synthesis of (+)-myrrhanol C, an anti-prostate cancer lead

Victoriano Domingo,* Lidia Lorenzo, José F. Quilez del Moral and Alejandro F. Barrero*

The first synthesis of (+)-myrrhanol C (**1**), an antitumor polypodane-type triterpene with inhibitory activity against androgen insensitive prostate cancers, is reported.



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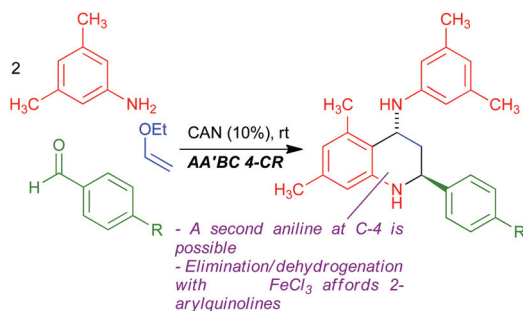


pH Induced dual "OFF-ON-OFF" switch: influence of a suitably placed carboxylic acid

Kalyan K. Sadhu, Shin Mizukami, Akimasa Yoshimura and Kazuya Kikuchi*

A new absorption and fluorescence "OFF-ON-OFF" mechanism has been developed on the basis of pH dependent geometries around a "C...C" bond.

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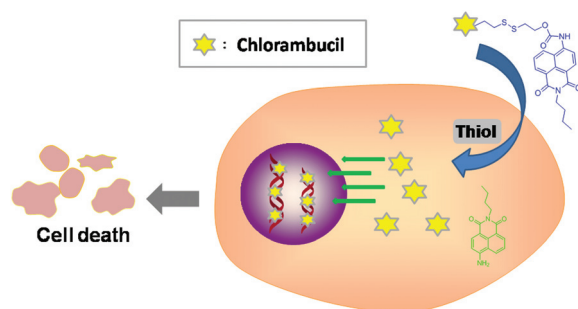


Diastereoselective, multicomponent access to *trans*-2-aryl-4-arylamino-1,2,3,4-tetrahydroquinolines via an AA'BC sequential four-component reaction and their application to 2-arylquinoline synthesis

Pascual Ribelles, Vellaisamy Sridharan, Mercedes Villacampa, M^a Teresa Ramos and J. Carlos Menéndez*

The CAN-catalyzed reaction between 3,5-disubstituted anilines, vinyl ethers and aromatic aldehydes leads to *trans*-2-aryl-4-arylamino-tetrahydroquinolines.

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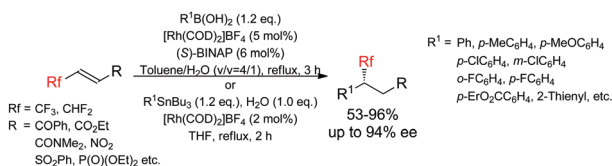


Thiol-inducible direct fluorescence monitoring of drug release

Jun Wu, Rong Huang, Changcheng Wang, Wenting Liu, Jiaqi Wang, Xiaocheng Weng, Tian Tian and Xiang Zhou*

A new bifunctional compound NCC, which undergoes thiol-mediated disulfide cleavage after cell entry, produces a red-shifted fluorescent emission in the cytosol and releases free active DNA alkylating agent CLB into the nucleus, and finally leads to DNA damage and cell death.

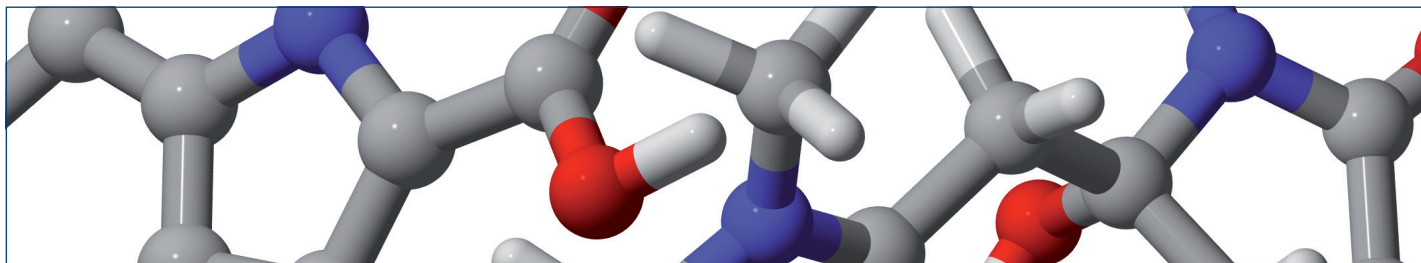
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Rhodium(I)-catalyzed 1,4-conjugate arylation toward β -fluoroalkylated electron-deficient alkenes: a new entry to a construction of a tertiary carbon center possessing a fluoroalkyl group

Atsunori Morigaki, Tomoo Tanaka, Tomotsugu Miyabe, Takashi Ishihara and Tsutomu Konno*

Treatment of β -fluoroalkylated- α,β -unsaturated ketones with various arylboronic acids or arylstannanes in the presence of a rhodium catalyst gave the corresponding Michael adducts in high yields.



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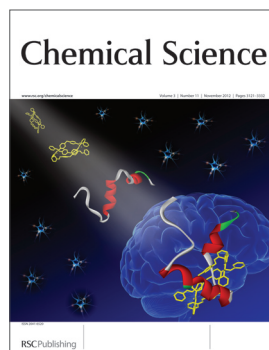
Poster abstract submission – 11 March 2013

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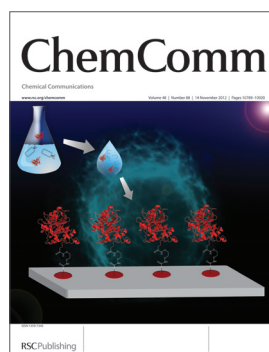


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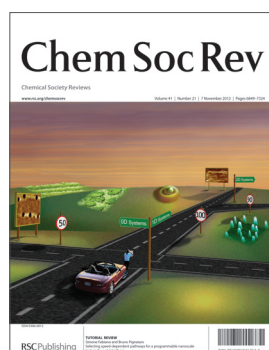


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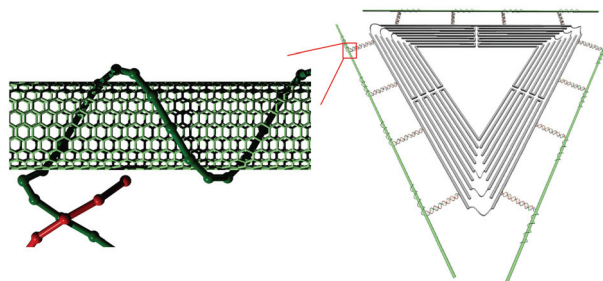
*2011 Journal Citation Reports (Thomson Reuters, 2012)

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DNA origami templated self-assembly of discrete length single wall carbon nanotubes

Zhao Zhao, Yan Liu and Hao Yan*

A convenient, versatile method to organize discrete length single-walled carbon nanotubes (SWNT) into complex geometries using 2D DNA origami structures is developed here.

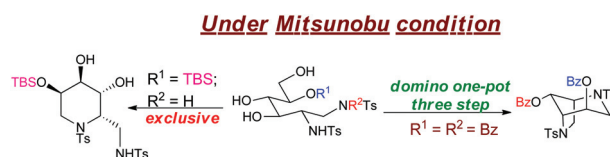


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Protecting group directed diversity during Mitsunobu cyclization of a carbohydrate derived diamino triol. Synthesis of novel bridged bicyclic and six-membered iminocyclitols

Muthupandian Ganesan, Rahul Vilas Salunke, Nem Singh and Namakkal G. Ramesh*

A novel and an unprecedented protecting group directed diversity leading to the synthesis of bridged bicyclic and six-membered iminocyclitols from a common carbohydrate derived diamino triol under Mitsunobu conditions is reported.

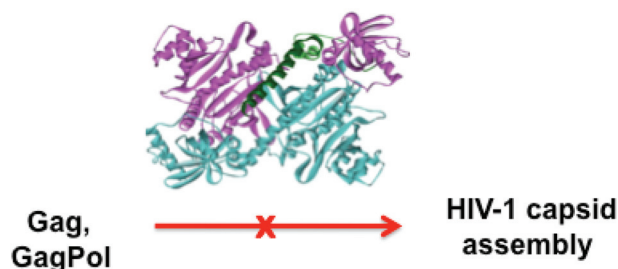


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Escherichia coli LysU is a potential surrogate for human lysyl tRNA synthetase in interactions with the C-terminal domain of HIV-1 capsid protein

Nonlawat Boonyalai, James R. Pullen, Mohd Firdaus Abdul Wahab, Michael Wright and Andrew D. Miller*

Escherichia coli enzyme LysU has potential as an inhibitor of HIV-1 capsid assembly.

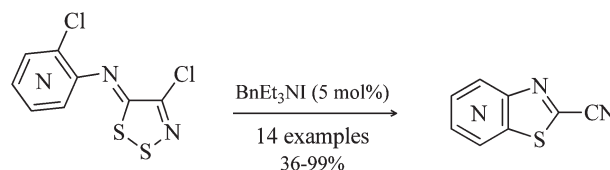


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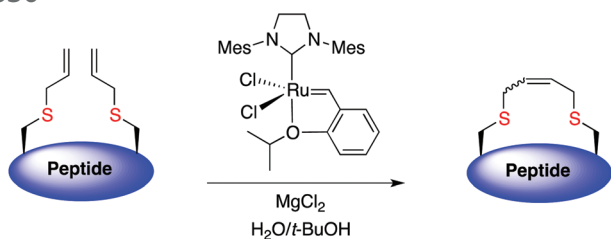
The conversion of [(4-chloro-5H-1,2,3-dithiazol-5-ylidene)amino]azines into azine fused thiazole-2-carbonitriles

Panayiotis A. Koutentis,* Maria Koyioni and Sophia S. Michaelidou

Requiring only catalytic iodide, the ANRORC transformation of *N*-azinyldithiazolimines gives azine fused thiazole-2-carbonitriles in near quantitative yields, succeeding where the traditional thermolysis fails.



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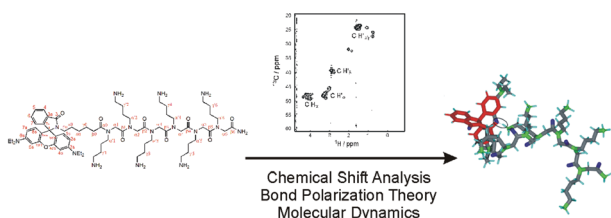


Investigation of the ring-closing metathesis of peptides in water

Stephen A. Cochrane, Zedu Huang and John C. Vederas*

Replacement of cysteine with *S*-allyl cysteine enables the ring-closing metathesis of unprotected peptides in water.

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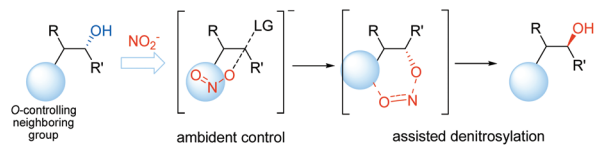


Structural characterization of a peptoid with lysine-like side chains and biological activity using NMR and computational methods

Ulrich Sternberg, Esther Birtalan, Igor Jakovkin, Burkhard Luy, Ute Schepers, Stefan Bräse* and Claudia Muhle-Goll*

A three-dimensional model of a peptoid is calculated using bond polarization theory ¹³C chemical shift calculations as the major source of structural information.

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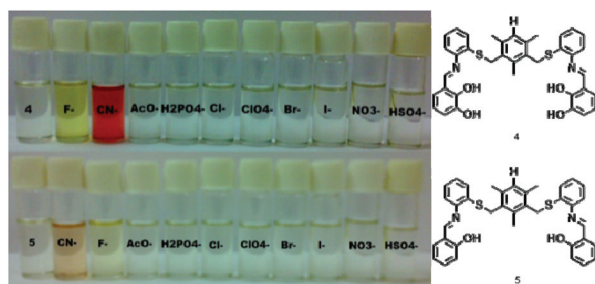


Control of the ambident reactivity of the nitrite ion

Hai Dong,* Martin Rahm, Niranjan Thota, Lingquan Deng, Tore Brinck and Olof Ramström*

The ambident reactivity of the nitrite anion can be efficiently controlled by neighboring group assistance. A supramolecular mechanism is proposed, in addition to steric effects, based on secondary interactions.

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Dual channel chromo/fluorogenic chemosensors for cyanide and fluoride ions – an example of *in situ* acid catalysis of the Strecker reaction for cyanide ion chemodosimetry

Sanyog Sharma, Maninder Singh Hundal* and Geeta Hundal*

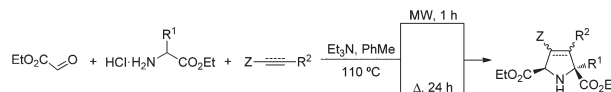
Two mesitylene based probes, having catechol/phenol units in conjunction to the Schiff base have been synthesized.

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Microwave-assisted multicomponent diastereoselective 1,3-dipolar cycloaddition of ethyl glyoxylate derived azomethine ylides

Juan Mancebo-Aracil, Carmen Nájera* and José M. Sansano*

Multicomponent diastereoselective 1,3-dipolar cycloaddition of ethyl glyoxylate derived azomethine ylides allows the synthesis of prolines with attractive functionalization at the 5-position.

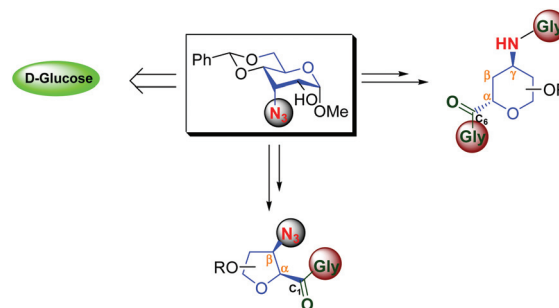


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Synthesis of cyclically constrained sugar derived α/β - and α/γ -peptides

Antonio Franconetti, Sorel Jatunov, Pastora Borrachero, Manuel Gómez-Guillén and Francisca Cabrera-Escribano*

An economical, diversity-oriented strategy to access novel enantiopure, both five- and six-membered ring α/β - and α/γ -hybrid peptides containing sugar amino acid residues has been developed.



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