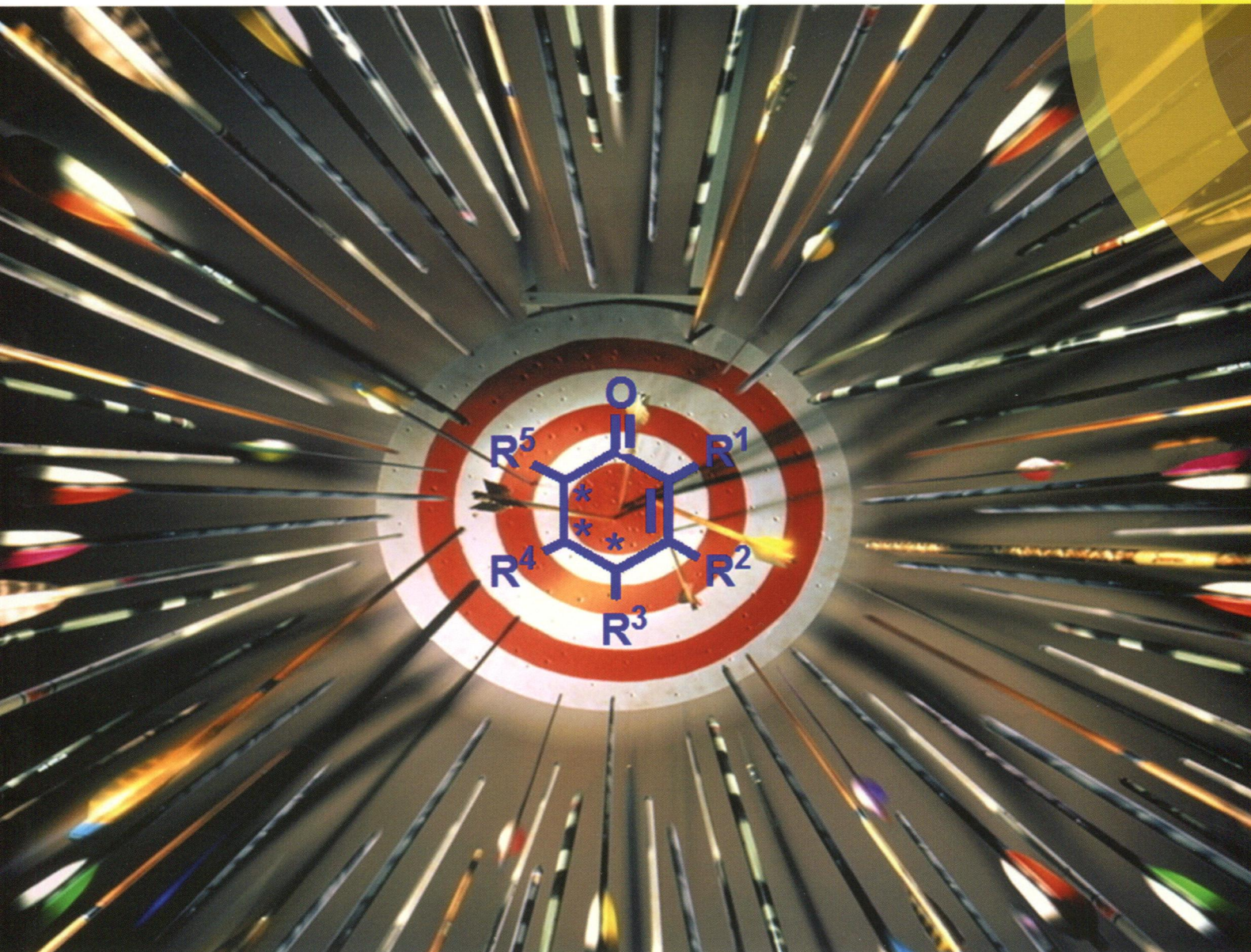


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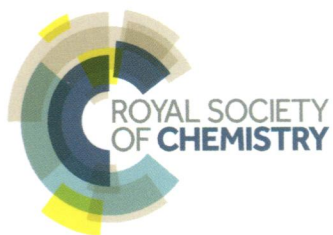
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Organic & Biomolecular Chemistry

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REVIEW ARTICLE

Jun Wang, Pengfei Li *et al.*

Recent progress on asymmetric organocatalytic construction of chiral cyclohexenone skeletons

Organic & Biomolecular Chemistry

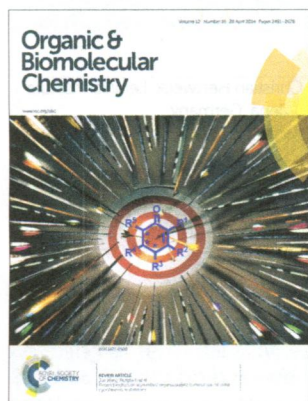
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IN THIS ISSUE

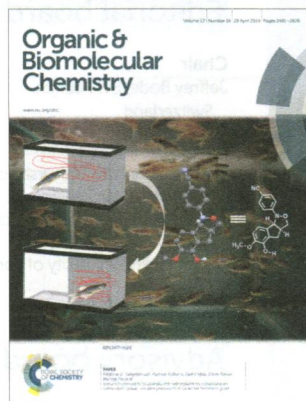
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Cover

See Jun Wang,
Pengfei Li *et al.*,
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Inside cover

See Neelima D. Tangellamudi,
Pushkar Kulkarni, Javed Iqbal,
Oliver Reiser, Manojit Pal *et al.*,
pp. 2552–2558.

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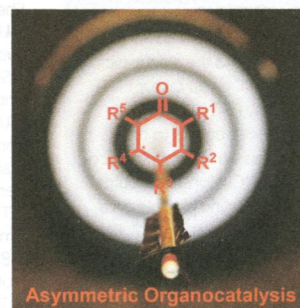
REVIEW

2499

Recent progress on asymmetric organocatalytic construction of chiral cyclohexenone skeletons

Xin Yang, Jun Wang* and Pengfei Li*

Chiral cyclohex-2-enones are important intermediates in synthetic chemistry as well as in the life science industries. In this focus review, recent advances in the organocatalytic asymmetric synthesis of chiral cyclohex-2-enone skeletons are summarized. The reaction mechanisms are also briefly discussed.



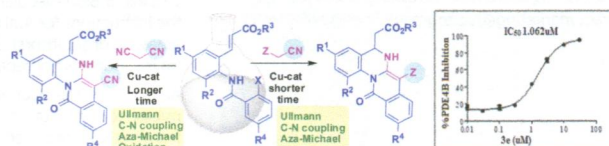
COMMUNICATIONS

2514

A direct access to bioactive fused N-heterocyclic acetic acid derivatives

Raju Adepu, A. Rajitha, Dipali Ahuja, Atul Kumar Sharma, B. Ramudu, Ravikumar Kapavarapu, Kishore V. L. Parsa and Manojit Pal*

A Cu-catalyzed domino reaction afforded novel fused N-heterocycles as potential PDE4 inhibitors.

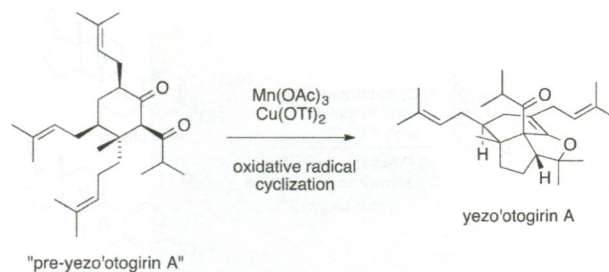


2519

Biomimetic total synthesis of (\pm)-yezo'otogirin A

Hiu C. Lam, Kevin K. W. Kuan and Jonathan H. George*

A concise total synthesis of (\pm)-yezo'otogirin A has been achieved via its presumed biosynthetic precursor using a late-stage biomimetic oxidative radical cyclization.

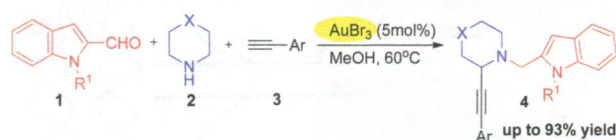


2523

Mild gold-catalyzed three-component dehydrogenative coupling of terminal alkynes to amines and indole-2-carboxaldehyde

Jian Li, Hongni Wang, Jiangtao Sun, Yang Yang and Li Liu*

A mild gold-catalyzed three-component dehydrogenative coupling of terminal alkynes to amines and indole-2-carboxaldehyde has been developed, which provides a practical synthetic strategy for the synthesis of indole derivatives.

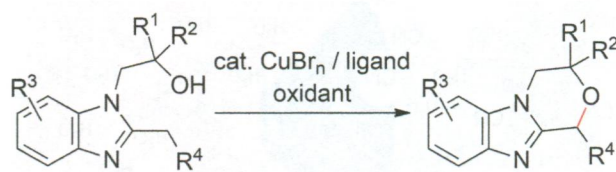


2528

Copper-catalyzed benzylic C(sp³)-H alkoxylation of heterocyclic compounds

Noriaki Takemura, Yoichiro Kuninobu* and Motomu Kanai*

Intra- and intermolecular C(sp³)-H alkoxylation on a gram scale.

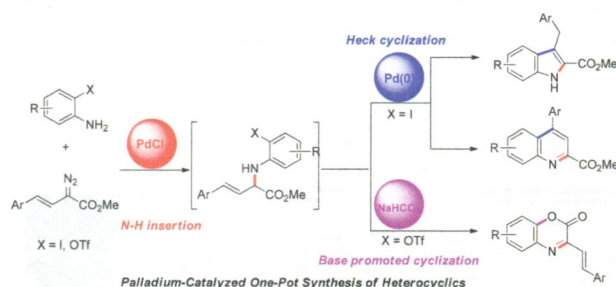


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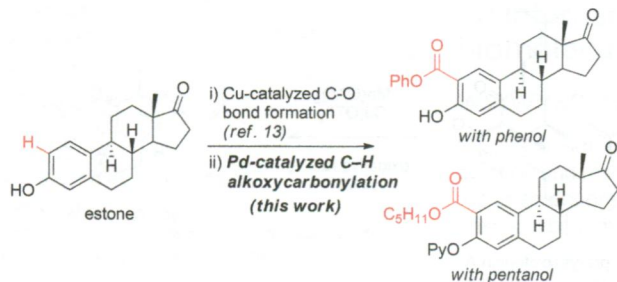
Palladium catalyzed N-H bond insertion and intramolecular cyclization cascade: the divergent synthesis of heterocyclics

Dong Ding, Gang Liu, Guangyang Xu, Jian Li, Guoping Wang and Jiangtao Sun*

A palladium-catalyzed one-pot procedure of N-H insertion and Heck cyclization/base promoted cyclization has been developed.



2538

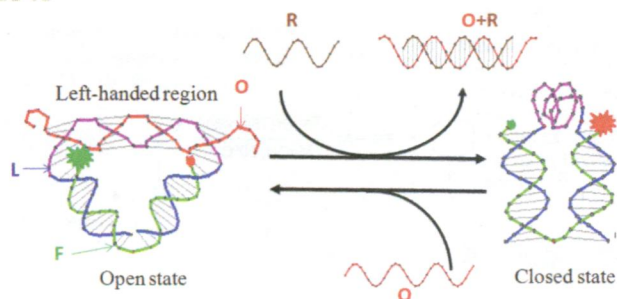


Pd(II)-catalyzed oxidative alkoxy carbonylation of 2-phenoxy pyridine derivatives with CO and alcohols

Bin Liu, Huai-Zhi Jiang and Bing-Feng Shi*

A Pd(II)-catalyzed oxidative alkoxy carbonylation of phenol derivatives with atmospheric pressure of CO-O₂ and alcohols has been achieved.

2543

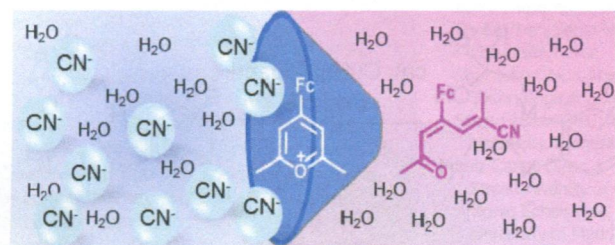


A nanomotor involves a metastable, left-handed DNA duplex

Yingmei Li, Chuan Zhang, Cheng Tian and Chengde Mao*

A metastable left-handed DNA is used to power a DNA nanomotor by non-toehold-mediated strand displacement.

2547



The ferrocene-pyrylium dyad as a selective colorimetric chemodosimeter for the toxic cyanide and hydrogen sulfide anions in water

Antonia Sola, Alberto Tárraga* and Pedro Molina*

A pyrylium derivative showing a remarkable ability to recognize cyanide and hydrogen sulfide anions in aqueous media through two different channels, electrochemical and chromogenic, is described.

PAPERS

2552



Isovanillin derived *N*-(un)substituted hydroxylamines possessing an *ortho*-allylic group: valuable precursors to bioactive *N*-heterocycles

Balakrishna Dulla, Neelima D. Tangellamudi,* Sridhar Balasubramanian, Swapna Yellanki, Raghavender Medishetti, Rakesh Kumar Banote, Girish Hari Chaudhari, Pushkar Kulkarni,* Javed Iqbal,* Oliver Reiser* and Manoj Pal*

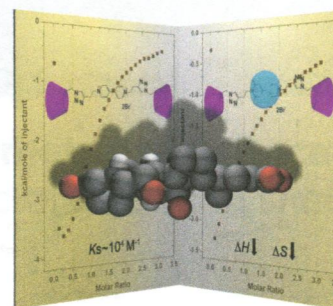
Isovanillin based *N*-heterocycles are synthesized and evaluated for their potential anxiogenic properties.

2559

Molecular binding behavior of a bispyridinium-containing bis(β -cyclodextrin) and its corresponding [2]rotaxane towards bile salts

Ying-Ming Zhang, Ze Wang, Yong Chen, Hong-Zhong Chen, Fei Ding and Yu Liu*

The molecular binding behavior of a bispyridinium-bridged bis(β -cyclodextrin) and its corresponding [2]rotaxane with a series of bile salts was systematically studied, revealing a significant conformational change upon host-guest complexation.

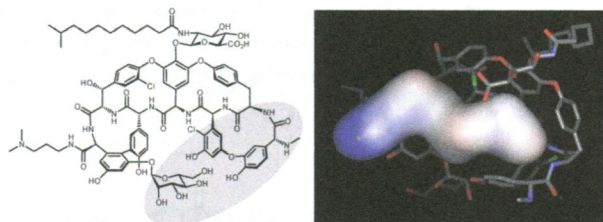


2568

Anti-cooperative ligand binding and dimerisation in the glycopeptide antibiotic dalbavancin

Mu Cheng, Zyta M. Ziara, Karl A. Hansford, Mark A. Blaskovich, Mark S. Butler and Matthew A. Cooper*

Dalbavancin, a semi-synthetic glycopeptide with enhanced antibiotic activity compared to vancomycin and teicoplanin, dimerises strongly in an anti-cooperative manner with ligand binding.



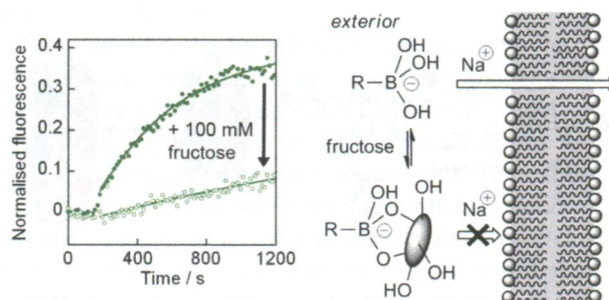
Ligand-bound 'closed' conformation in dalbavancin monomer

2576

Fructose controlled ionophoric activity of a cholate-boronic acid

James R. D. Brown, Inmaculada C. Pintre and Simon J. Webb*

The transport of Na^+ through phospholipid bilayers by Wulff-type boronic acids at pH 8.2 is reported. Concentrations of fructose greater than 5 mM strongly inhibited ionophoric activity.

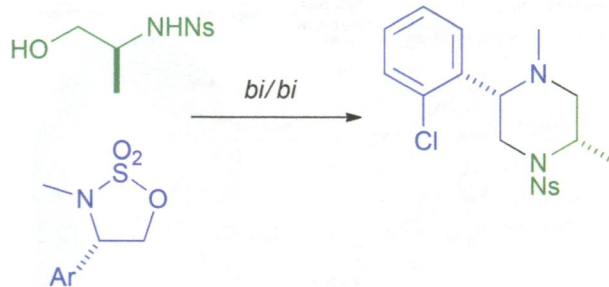


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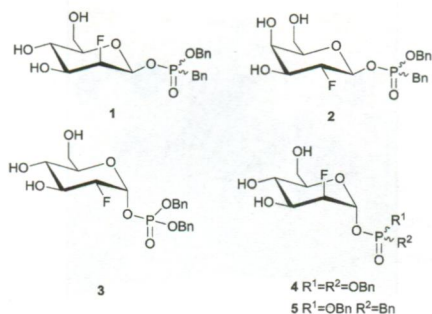
A modular lead-oriented synthesis of diverse piperazine, 1,4-diazepane and 1,5-diazocane scaffolds

Thomas James, Paul MacLellan, George M. Burslem, Iain Simpson, J. Andrew Grant, Stuart Warriner, Visuvanathar Sridharan and Adam Nelson*

A modular synthetic approach is described in which combinations of cyclic sulfamidate and hydroxy sulfonamide building blocks may be converted into piperazine, 1,4-diazepine and 1,5-diazocane scaffolds.



2592

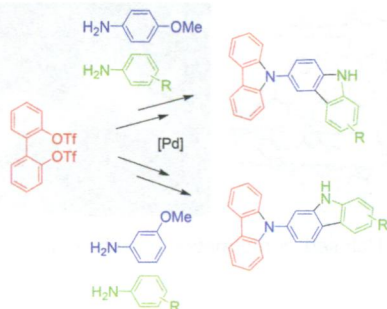


Phosphodiesters serve as potentially tunable aglycones for fluoro sugar inactivators of retaining β -glycosidases

B. P. Rempel and S. G. Withers*

2-Deoxy-2-fluoroglycosides were synthesised and tested as covalent glycosidase inactivators. β -D-Gluco-, -manno- and -galacto-configured benzyl-benzylphosphonate derivatives efficiently inactivate β -gluco-, β -manno- and β -galactosidases, while α -gluco- and α -manno-configured phosphate and phosphonate derivatives instead served as slow substrates for their cognate α -glycosidases.

2596

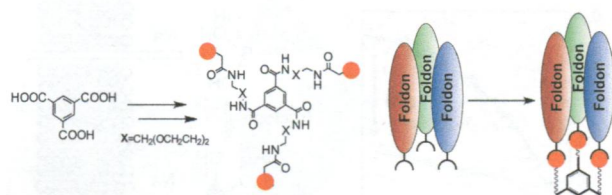


Efficient synthesis of biscarbazoles by palladium-catalyzed twofold C–N coupling and C–H activation reactions

Tran Quang Hung, Ngo Ngoc Thang, Do Huy Hoang, Tuan Thanh Dang,* Alexander Villinger and Peter Langer*

Biscarbazoles were efficiently prepared by palladium catalyzed C–N coupling and C–H activation reactions.

2606

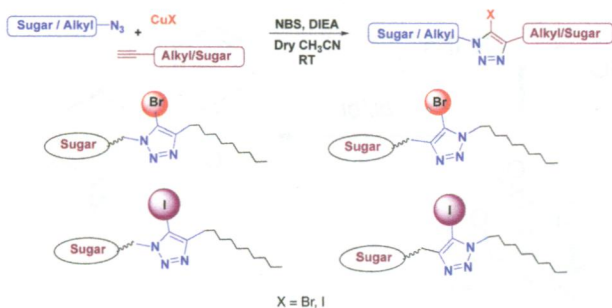


Versatile C₃-symmetric scaffolds and their use for covalent stabilization of the foldon trimer

Arne Berthelmann, Johannes Lach, Melissa A. Gräwert, Michael Groll and Jutta Eichler*

Attachment of foldon monomers to a trimesic acid scaffold enhances thermal stability of the trimer, while maintaining the correct fold.

2615



Diversity oriented synthesis of novel haloglycolipids potentially useful for crystallization of integral membrane proteins

Laxminarayan Sahoo,* Anadi Singhamahapatra and Duraikkannu Loganathan

5-Halo triazole linked glycolipids, potentially useful for extraction and crystallization of integral membrane proteins synthesized by Cu(I) catalyzed *click* reaction.