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PAPER

Eliana Gianolio, Francesco De Riccardis *et al.*
Gadolinium-binding cyclic hexapeptides: synthesis and relaxometric properties

Organic & Biomolecular Chemistry

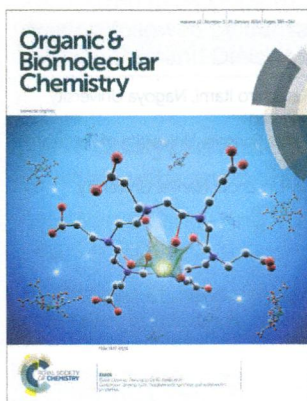
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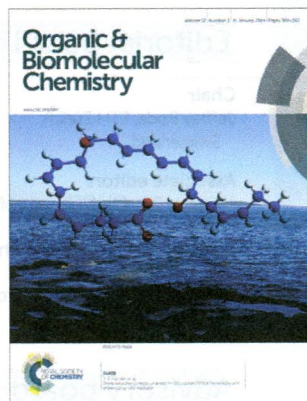
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Cover

See Eliana Gianolio, Francesco De Riccardis *et al.*, pp. 424–431.

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Inside cover

See T. V. Hansen *et al.*, pp. 432–437.

Protectin D1 is a DHA derived pro-resolving mediator that promotes the return from inflammation to homeostasis.

Image reproduced by permission of T. V. Hansen from *Org. Biomol. Chem.*, 2014, **12**, 432.

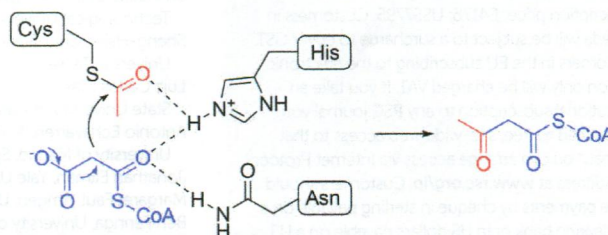
REVIEW

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Catalytic enantioselective decarboxylative reactions using organocatalysts

Shuichi Nakamura

Catalytic decarboxylative reactions are attractive as biomimetic reactions and environmentally friendly reaction processes.



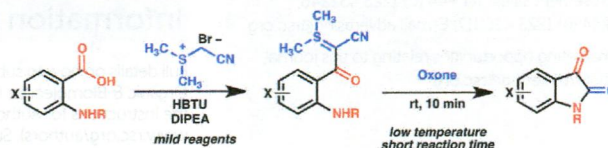
COMMUNICATIONS

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Ylide mediated carbonyl homologations for the preparation of isatin derivatives

Christina T. Lollar, Katherine M. Krenek, Kevin J. Bruemmer and Alexander R. Lippert*

An exceptionally mild method for the preparation of isatin derivatives has been developed using a sulfur ylide mediated carbonyl homologation sequence starting from anthranilic acid precursors.



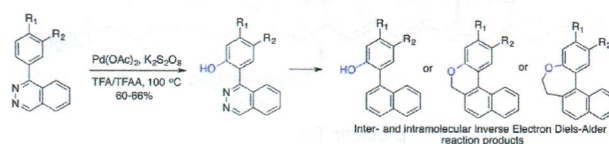
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Уральского отделения
Российской академии наук (ЦНБ Уро РАН)

410

C–H functionalization directed by transformable nitrogen heterocycles: synthesis of *ortho*-oxygenated arylphthalenes from arylphthalazines

Shiva K. Rastogi, Derek C. Medellin and Alexander Kornienko*

ortho-Oxygenated arylphthalenes were successfully synthesized from arylphthalazines by a new C–H oxidation reaction followed by transannulation using an Inverse Electron Demand Diels–Alder process.

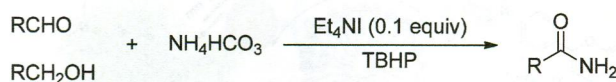


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Et₄Ni-catalyzed amidation of aldehydes and alcohols with ammonium salts

Gao Wang, Qing-Ying Yu, Shan-Yong Chen* and Xiao-Qi Yu*

An efficient Et₄Ni-catalyzed oxidative amidation of aldehydes or alcohols with ammonium salts.

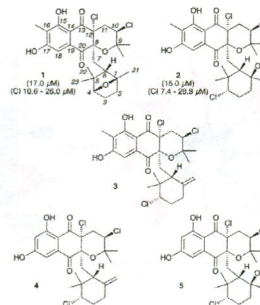


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Napyradiomycins CNQ525.510B and A80915C target the Hsp90 paralogue Grp94

Lauge Farnaes, James J. La Clair* and William Fenical*

The intracellular localization and target of the napyradiomycin congeners CNQ525.510B and A80815C were explored using an immunoaffinity fluorescence (IAF) approach.



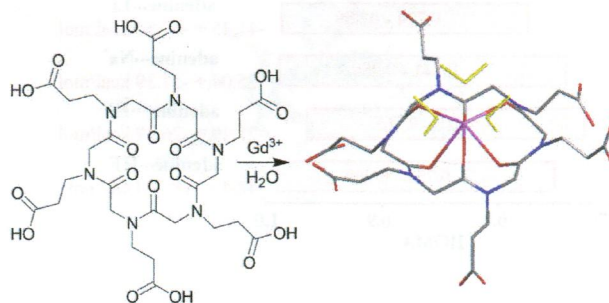
PAPERS

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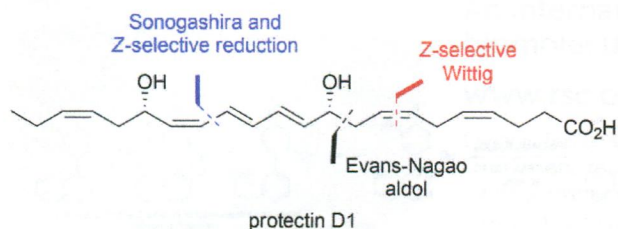
Gadolinium-binding cyclic hexapeptoids: synthesis and relaxometric properties

Chiara De Cola, Gaetano Fiorillo, Alessandra Meli, Silvio Aime, Eliana Gianolio,* Irene Izzo and Francesco De Riccardis*

Cyclic hexapeptoids are able to efficiently bind Gd³⁺ ions. Their thermodynamic stabilities have been assessed by ¹H-relaxometric investigations.



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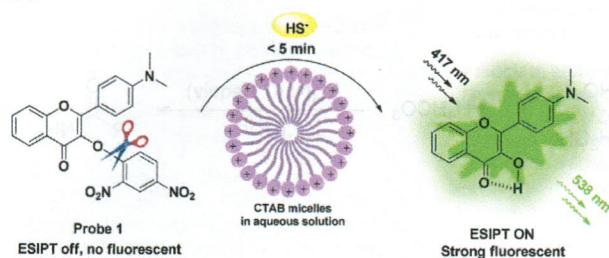


Stereoselective synthesis of protectin D1: a potent anti-inflammatory and proresolving lipid mediator

M. Aursnes, J. E. Tungen, A. Vik, J. Dalli and T. V. Hansen*

A convergent stereoselective synthesis of the potent anti-inflammatory, proresolving and neuroprotective lipid mediator protectin D1 (**2**) has been achieved in 15% yield over eight steps.

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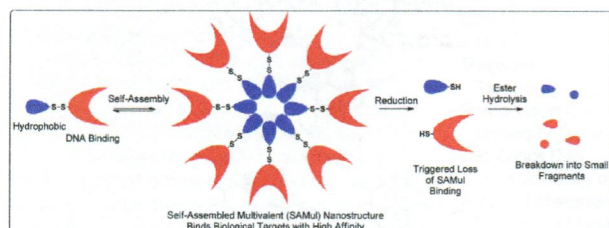


A visible light excitable colorimetric and fluorescent ES IPT probe for rapid and selective detection of hydrogen sulfide

Yao Liu and Guoqiang Feng*

A novel visible light excitable ES IPT probe was developed for rapid, selective, colorimetric and fluorescent detection of H_2S in aqueous solution.

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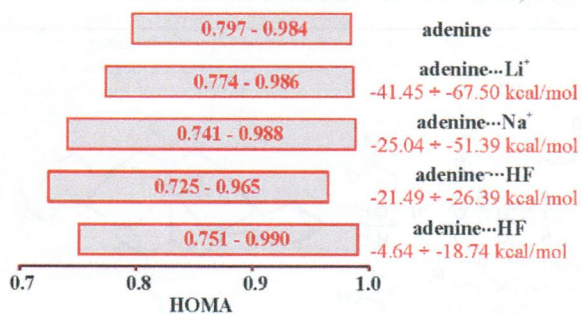


Double-degradable responsive self-assembled multivalent arrays – temporary nanoscale recognition between dendrons and DNA

Anna Barnard, Paola Posocco, Maurizio Fermeglia, Ariane Tschiche, Marcelo Calderon, Sabrina Pricl and David K. Smith*

A two-step degradation mechanism allows self-assembled multivalency to be switched off, enabling nanostructures with capacity for high-affinity bio-intervention to be converted into small inactive fragments.

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Effect of H-bonding and complexation with metal ions on the π -electron structure of adenine tautomers

Olga A. Stasyuk,* Halina Szatyłowicz* and Tadeusz M. Krygowski

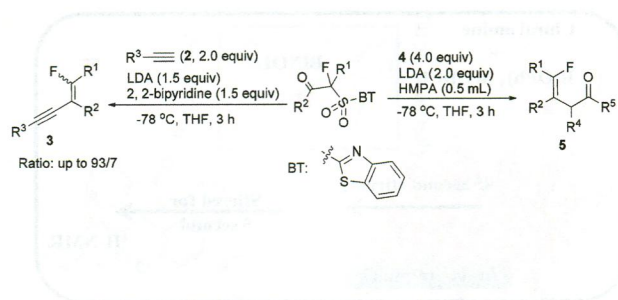
Influence of H-bonding and interactions with metals (*via* complexation (probed by HF, F⁻, Li⁺ and Na⁺) on structural and π -electronic changes in four of the most stable amino adenine tautomers has been studied in the gas phase using the B3LYP/6-311++G(2d,2p) computational level.

467

A practical route for the highly stereoselective synthesis of tetrasubstituted fluoroalkenes

Chun-Ru Cao, Song Ou, Min Jiang and Jin-Tao Liu*

The synthesis of tetrasubstituted fluoroolefin derivatives through the olefination of α -fluoro- β -carbonyl benzothiazol-2-yl sulfones with various nucleophiles is described.

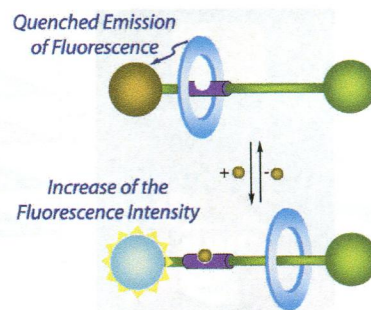


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Competitive binding for triggering a fluorescence response in a hydrazodicarboxamide-based [2]rotaxane

José Berná,* Carlos Franco-Pujante and Mateo Alajarín

Fluorescence switching in a hydrazo [2]rotaxane through a reversible and competitive molecular recognition process.

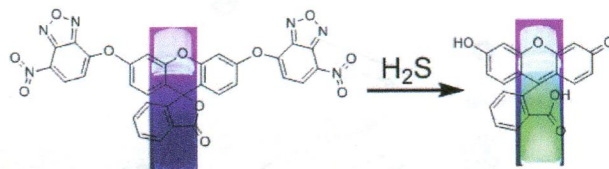


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NBD-based colorimetric and fluorescent turn-on probes for hydrogen sulfide

Chao Wei, Qing Zhu, Weiwei Liu, Wenbin Chen, Zhen Xi and Long Yi*

Colorimetric and fluorescent turn-on probes based on thiolyling of NBD ether were explored for selective detection of H_2S .

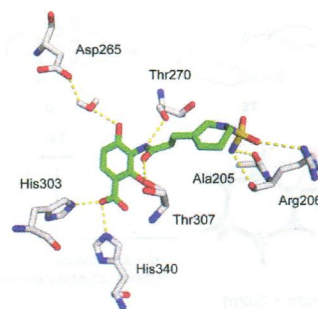


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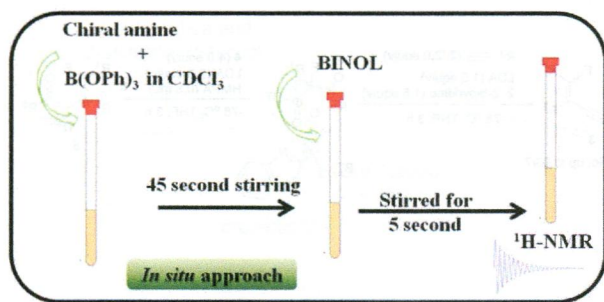
Discovery of novel FabF ligands inspired by platensimycin by integrating structure-based design with diversity-oriented synthetic accessibility

Martin Fisher, Ramkrishna Basak, Arnout P. Kalverda, Colin W. G. Fishwick, W. Bruce Turnbull and Adam Nelson*

A novel integrated approach for discovering bioactive small molecules is described.



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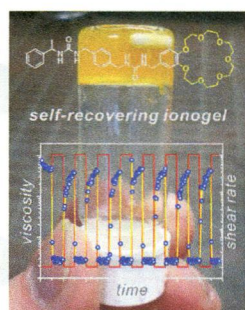


In situ approach for testing the enantiopurity of chiral amines and amino alcohols by ¹H NMR

Sandeep Kumar Mishra, Sachin R. Chaudhari and N. Suryaprakash*

An *in situ* approach involving a simple mix and shake method for testing the enantiopurity of primary, secondary and tertiary chiral amines and their derivatives, chiral amino alcohols, by ¹H-NMR spectroscopy is developed.

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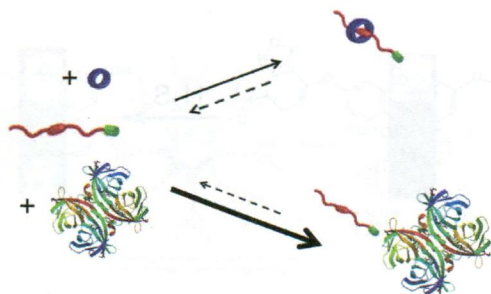


Self-recovering stimuli-responsive macrocycle-equipped supramolecular ionogels with unusual mechanical properties

Zhenhui Qi, Nora L. Traulsen, Paula Malo de Molina, Christoph Schlaich, Michael Gradzielski* and Christoph A. Schalley*

A chiral, crown-ether-functionalized bisurea gelator forms supramolecular gels in ionic liquids.

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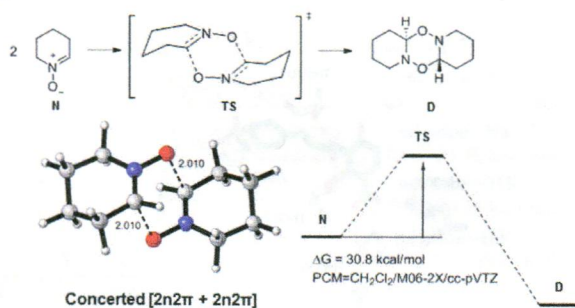


Protein-mediated dethreading of a biotin-functionalised pseudorotaxane

Stuart T. Caldwell, Catherine Maclean, Mathis Riehle, Alan Cooper, Margaret Nutley, Gouher Rabani, Brian Fitzpatrick, Vincent M. Rotello, Brian O. Smith, Belal Khaled, Patrice Woisel* and Graeme Cooke*

We report the ability of biotin-binding proteins to mediate pseudorotaxane formation between CBPQT⁴⁺ and biotin-functionalised guests.

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[2n2π + 2n2π] Cycloadditions: an alternative to forbidden [4π + 4π] processes. The case of nitron dimerization

David Roca-López, Tomás Tejero, Pierluigi Caramella and Pedro Merino*

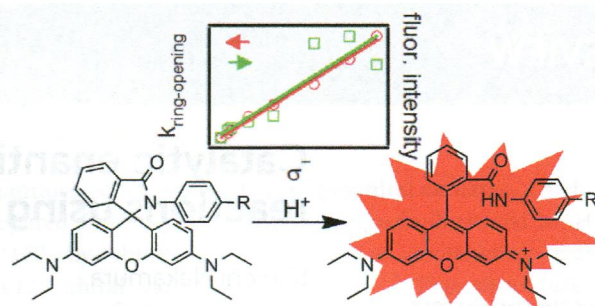
The dimerization of nitrones is a concerted pseudopericyclic process.

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Substituent effects on the turn-on kinetics of rhodamine-based fluorescent pH probes

William L. Czaplyski, Grace E. Purnell,
Courtney A. Roberts, Rebecca M. Allred and
Elizabeth J. Harbron*

The kinetics and intensity of the fluorescence turn-on response of rhodamine spirolactam pH probes are found to be controlled by the electronics of the spirolactam.



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More than one non-canonical phosphodiester bond in the G-tract: formation of unusual parallel G-quadruplex structures

Antonella Virgilio, Veronica Esposito, Luciano Mayol and
Aldo Galeone*

An investigation concerning the formation of unusual quadruplexes by 5'TGGGT3' analogues containing more than one non-canonical phosphodiester bond in the G-run, is reported.

