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Organic & Biomolecular Chemistry

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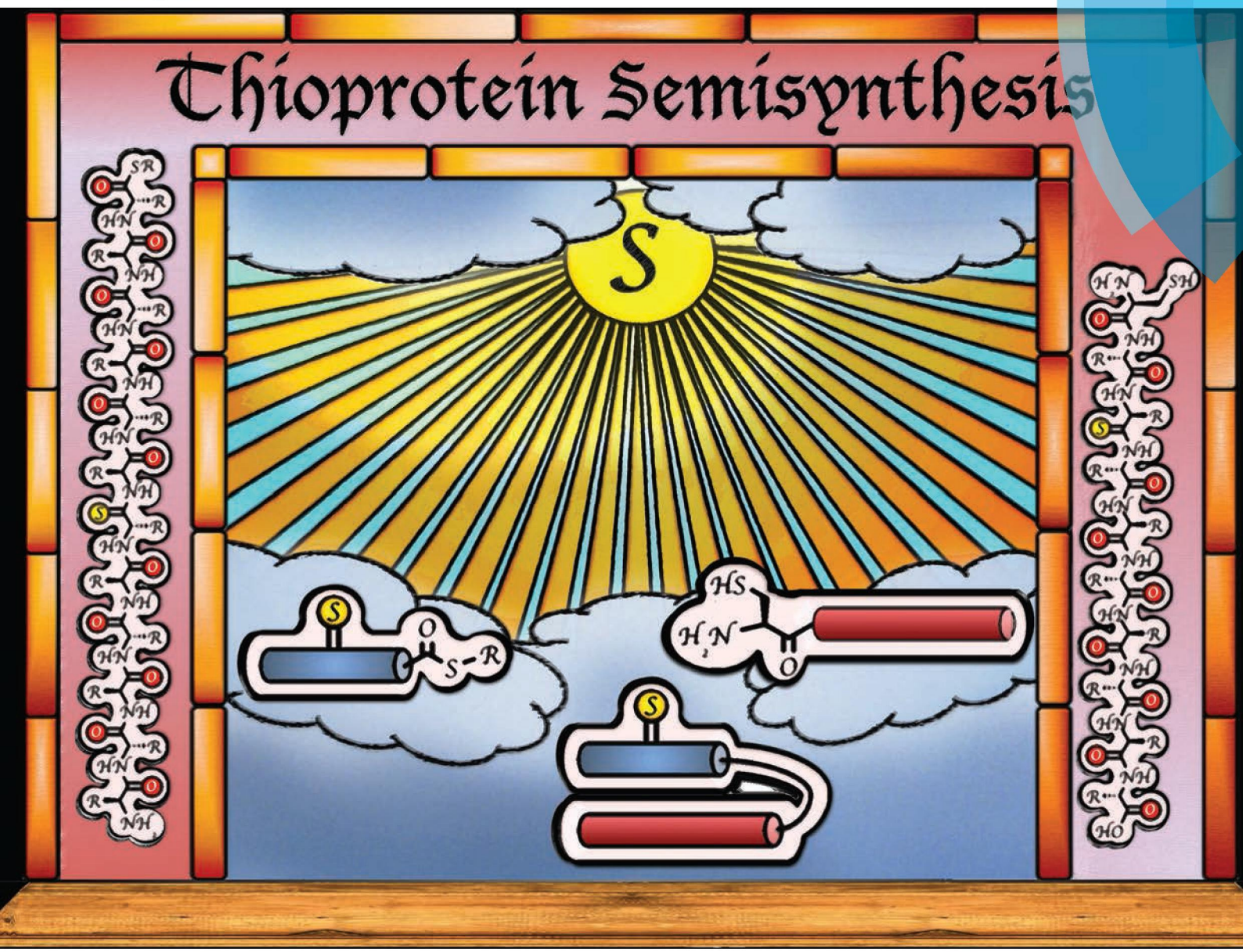

ISSN 1477-0520

ROYAL SOCIETY OF CHEMISTRY

PERSPECTIVE
E. James Petersson *et al.*
Semi-synthesis of thioamide containing proteins

Organic & Biomolecular Chemistry

An international journal of synthetic, physical and biomolecular organic chemistry

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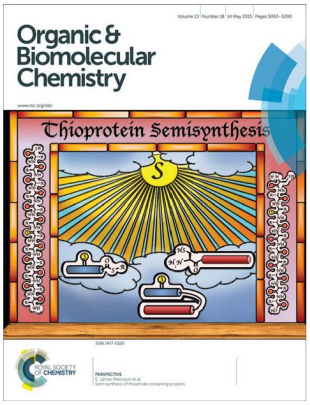

Cover
See E. James Petersson *et al.*, pp. 5074–5081.

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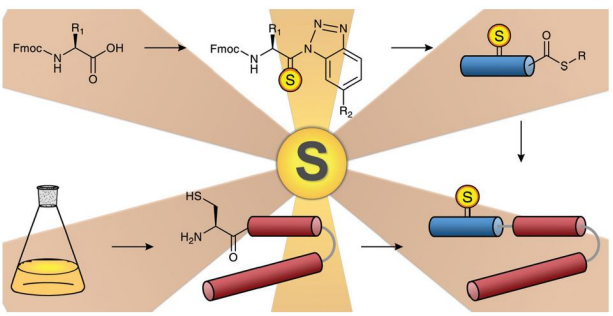
PERSPECTIVE



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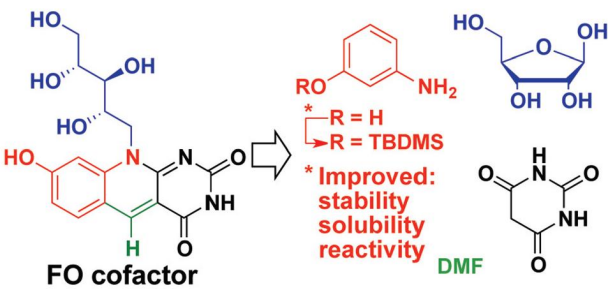

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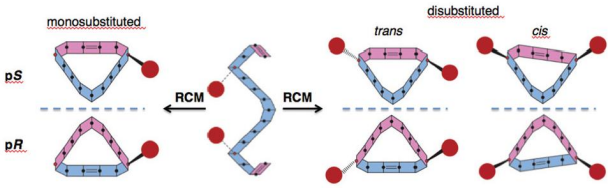

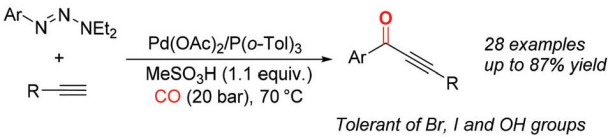

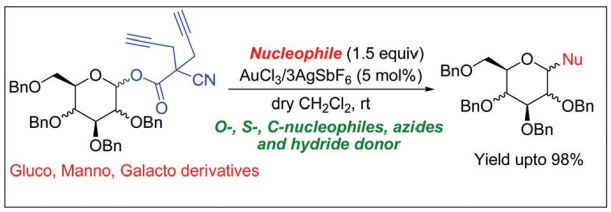

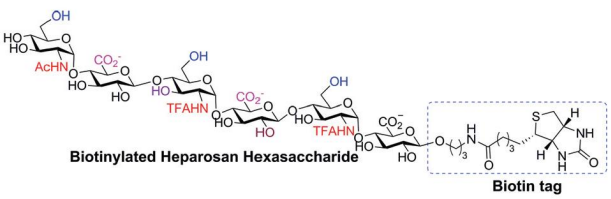

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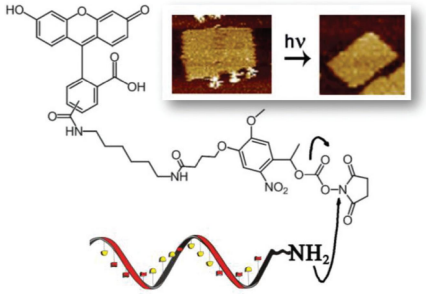
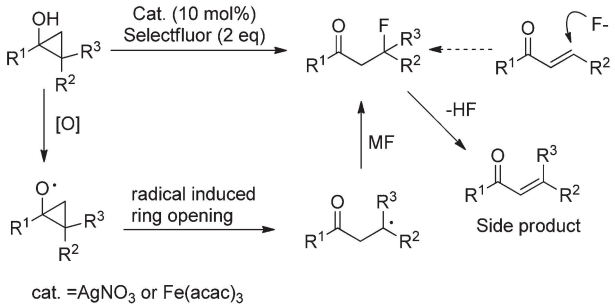


Photocleavable ligands for protein decoration of DNA nanostructures

Josipa Brglez, Ishtiaq Ahmed and Christof M. Niemeyer*

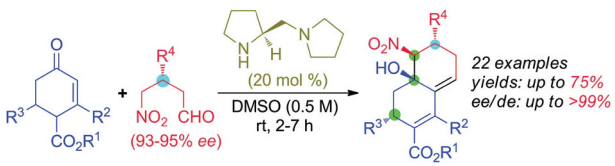
Amino-reactive, photocleavable modifiers bearing small-molecule hapten groups were incorporated into DNA origami to control binding of cognate proteins.



Iron- or silver-catalyzed oxidative fluorination of cyclopropanols for the synthesis of β-fluoroketones

Shichao Ren, Chao Feng* and Teck-Peng Loh*

The Fe^{III}- or Ag^{I}-catalyzed oxidative fluorination of cyclopropanols *via* radical rearrangement is disclosed.



Organocatalytic diastereoselective synthesis of chiral decalines through the domino Claisen–Schmidt/Henry reaction

Adluri B. Shashank and Dhevalapally B. Ramachary*

General and operative domino Claisen–Schmidt/Henry (CS/H) reaction has been revealed to obtain highly substituted chiral decalines in good yields with excellent ees and des by using push–pull enamine catalysis.

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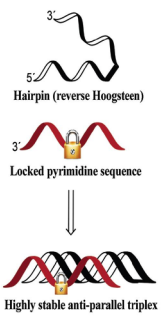

Thermal stability of G-rich anti-parallel DNA triplexes upon insertion of LNA and α-L-LNA

Tamer R. Kosbar, Mamdouh A. Sofan, Laila Abou-Zeid and Erik B. Pedersen*

G-rich anti-parallel DNA triplexes were modified with LNA or α-L-LNA in their Watson–Crick and TFO strands.

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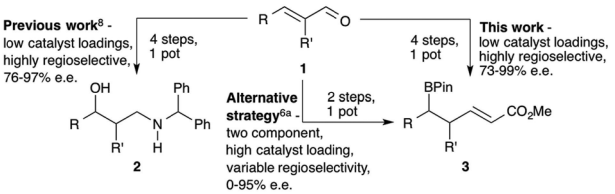

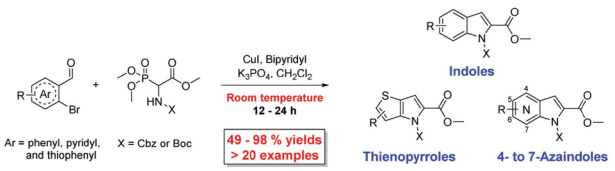

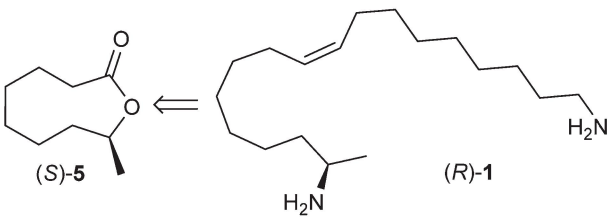

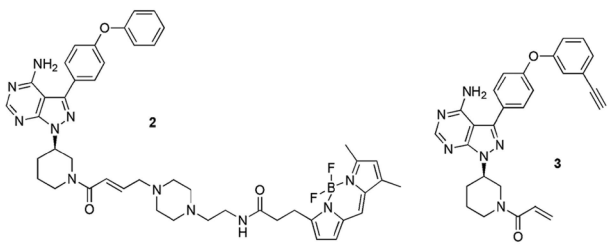

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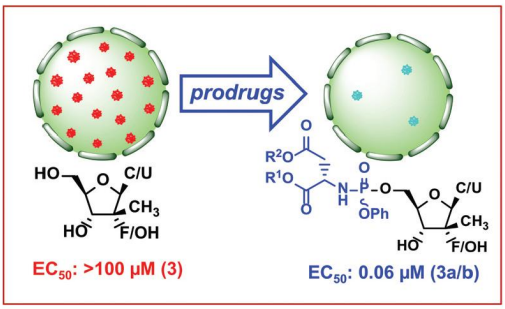
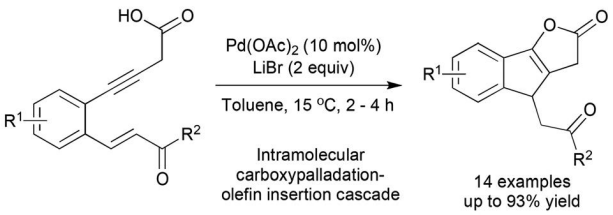


Aspartic acid based nucleoside phosphoramidate prodrugs as potent inhibitors of hepatitis C virus replication

Munmun Maiti, Mohitosh Maiti, Jef Rozenski, Steven De Jonghe and Piet Herdewijn*

A series of novel nucleoside phosphoramidate protides has been synthesized and shown as potent inhibitors of hepatitis C virus replication. The conjugates are having a diverse structural variation in the promoiety part and can be catalytically processed to deliver active nucleotides.

5175

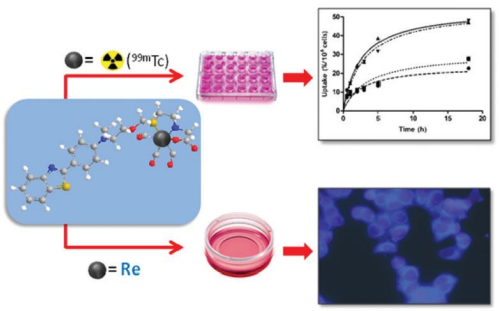


Palladium(II)-catalyzed intramolecular carboxypalladation–olefin insertion cascade: direct access to indeno[1,2-*b*]furan-2-ones

Perumal Vinoth, Thavaraj Vivekanand, Padmakar A. Suryavanshi, J. Carlos Menéndez, Hiroaki Sasai and Vellaisamy Sridharan*

An efficient intramolecular carboxypalladation–olefin insertion cascade was developed for the synthesis of indeno[1,2-*b*]furan-2-ones.

5182



Isostructural Re(I)/^{99m}Tc(I) tricarbonyl complexes for cancer theranostics

Patrique Nunes, Goreti Ribeiro Morais, Elisa Palma, Francisco Silva, Maria Cristina Oliveira, Vera F. C. Ferreira, Filipa Mendes, Lurdes Gano, Hugo Vicente Miranda, Tiago F. Outeiro, Isabel Santos and António Paulo*

Novel cysteamine-based (N,S,O)-chelators were successfully applied in the synthesis of isostructural M(I) (M = Re, ^{99m}Tc) tricarbonyl complexes for cancer theranostics.

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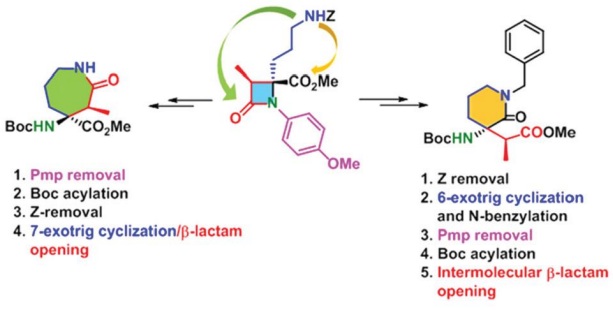

Divergent, stereoselective access to heterocyclic α,α-quaternary- and β^{2,3,3}-amino acid derivatives from a *N*-Pmp-protected Orn-derived β-lactam

Diego Núñez-Villanueva, M. Teresa García-López, Mercedes Martín-Martínez and Rosario González-Muñiz*

A unique *N*-*p*-methoxybenzyl Orn-derived (3*S*,4*S*)-β-lactam was divergently transformed into (3*S*,4*S*)-2-oxoazepane-α,α- and (2*S*,3*S*)-2-oxopiperidine-β^{2,3,3}-amino acid derivatives.

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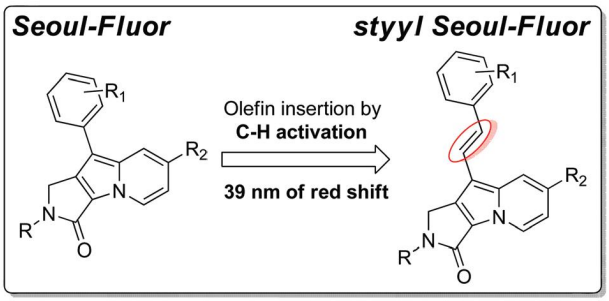

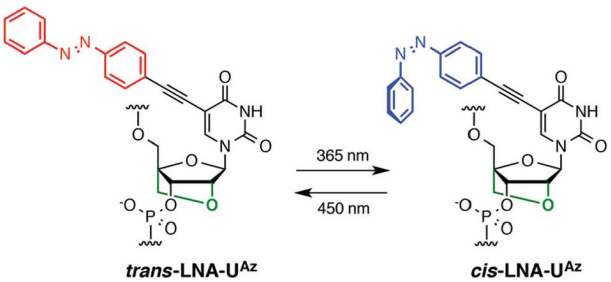

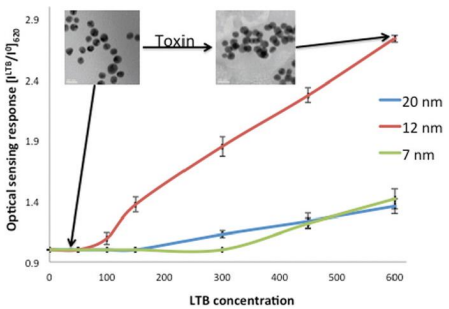

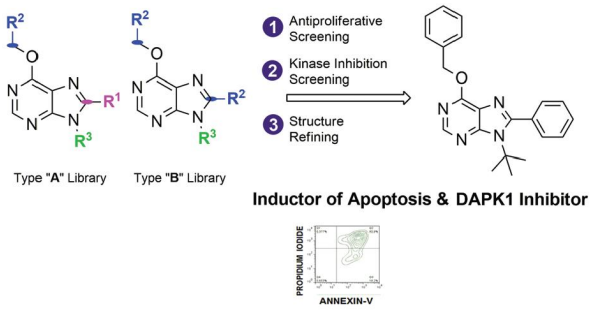

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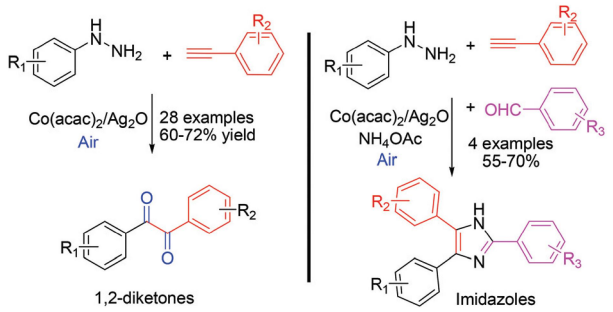
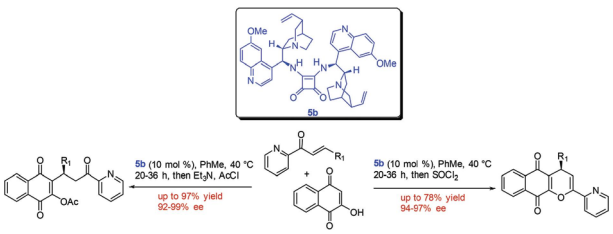


Cobalt(II) catalyzed C(sp)–H bond functionalization of alkynes with phenyl hydrazines: facile access to diaryl 1,2-diketones

Jaideep B. Bharate, Sheenu Abbat, Rohit Sharma, Prasad V. Bharatam,* Ram A. Vishwakarma* and Sandip B. Bharate*

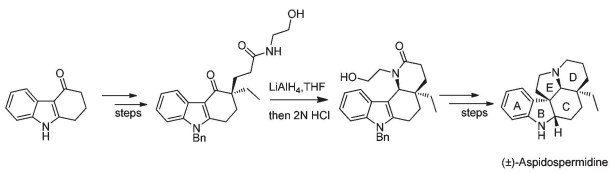
A cobalt acetylacetonate catalyzed oxidative diketonation of alkynes *via* C(sp)–H bond functionalization has been described. Its application to the synthesis of imidazoles has also been demonstrated.



Highly enantioselective synthesis of naphthoquinones and pyranonaphthoquinones catalyzed by bifunctional chiral bis-squaramides

Nagaraju Molleti and Vinod K. Singh*

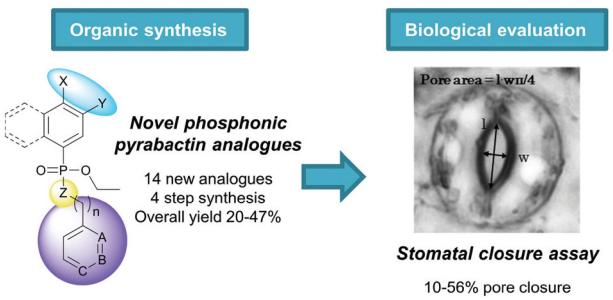
A variety of enantioenriched naphthoquinones has been synthesized in high yields and excellent enantioselectivities (up to >99% ee) using a bifunctional chiral bis-squaramide catalyzed conjugate addition of 2-hydroxy-1,4-naphthoquinone to 2-enoylpyridines.



Concise total synthesis of (±)-aspidospermidine

Haichen Ma, Xingang Xie, Peng Jing, Weiwei Zhang and Xuegong She*

(±)-Aspidospermidine (**1**) has been synthesized from the commercially available 2,3-dihydro-1*H*-carbazol-4(9*H*)-one **6** in 10 steps with 20% overall yield. The key step of the strategy is a one-pot carbonyl reduction/iminium formation/intramolecular conjugate addition reaction that may be applied for the synthesis of other kinds of *Aspidosperma* alkaloids.



Phosphonamide pyrabactin analogues as abscisic acid agonists

M. Van Overtveldt, T. S. A. Heugebaert, I. Verstraeten, D. Geelen and C. V. Stevens*

A 4-step synthesis towards phosphonic pyrabactin analogues is presented. *Via* a stomatal closure and germination assay, their ability to selectively induce the ABA-signaling pathway was demonstrated.

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