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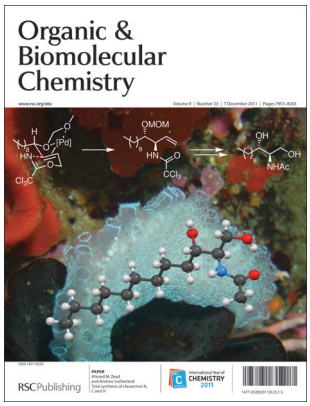

Cover

Ahmed M. Zead and Andrew Sutherland, pp. 8030–8037. Total synthesis of clavaminol A, C and H, using an ether directed palladium(II)-catalysed Overman rearrangement. Background photograph reproduced with permission from Peter Southwood, Southern Underwater Research Group (SURG).

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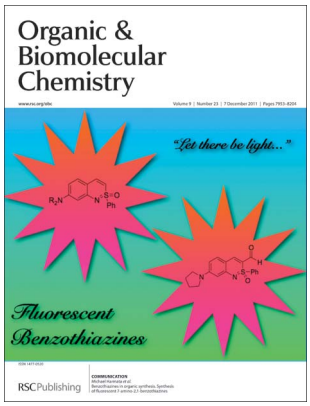

Inside cover

See Michael Harmata *et al.*, pp. 7979–7982.

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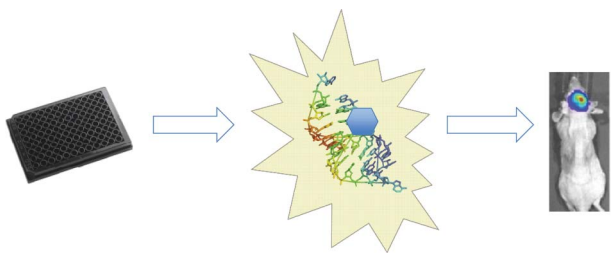
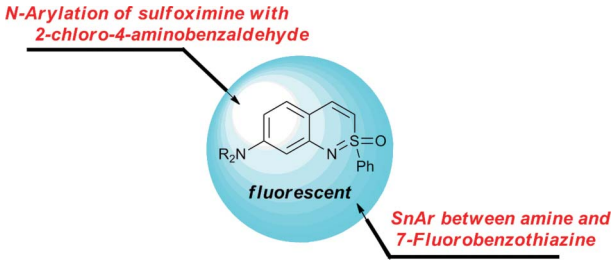
PERSPECTIVE



COMMUNICATIONS



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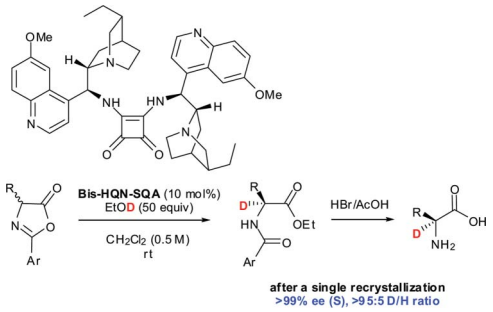

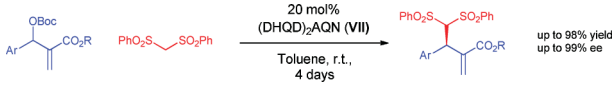

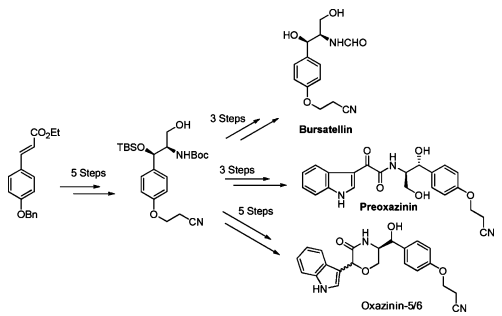

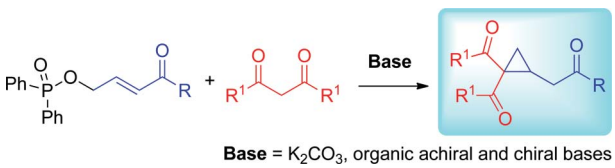

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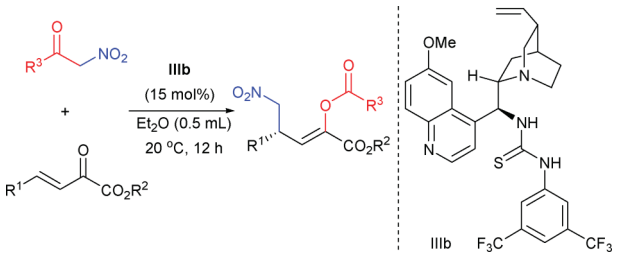
COMMUNICATIONS

7997

Organocatalytic asymmetric Michael-type reaction between β,γ-unsaturated α-keto ester and α-nitro ketone

Pengfei Li, Sau Hing Chan, Albert S. C. Chan* and Fuk Yee Kwong*

Michael-type reaction between β,γ-unsaturated α-keto ester and α-nitro ketone resulted in 47–94% yield and 68–96% ee, which offered efficient access to chiral 5-nitro-pent-2-enoates, a precursor to chiral α-ketolactam.

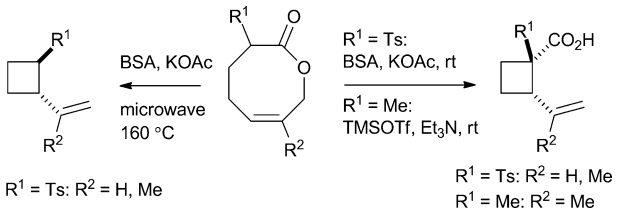


8000

Transannular Claisen rearrangement reactions for the synthesis of vinylcyclobutanes: formal synthesis of (±)-grandisol

Donald Craig,* Kiyohiko Funai, Sophie J. Gore, Albert Kang and Alexander V. W. Mayweg

Unsaturated eight-membered lactones undergo decarboxylative and non-decarboxylative transannular Ireland–Claisen rearrangement reactions, to give substituted vinylcyclobutanes. A formal synthesis of (±)-grandisol is described.

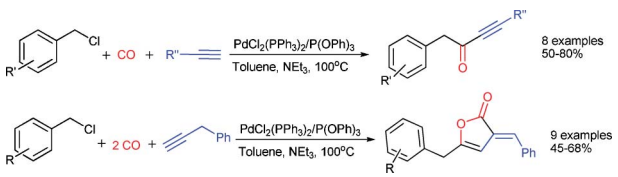


8003

Palladium-catalyzed carbonylative coupling of benzyl chlorides with terminal alkynes to give 1,4-diaryl-3-butyn-2-ones and related furanones

Xiao-Feng Wu, Helfried Neumann and Matthias Beller*

Palladium-catalyzed carbonylative coupling of benzyl chlorides with terminal alkynes to give the corresponding alkynones and furanones has been developed. 8 different alkynones and 9 different furanones were prepared in moderate yields.



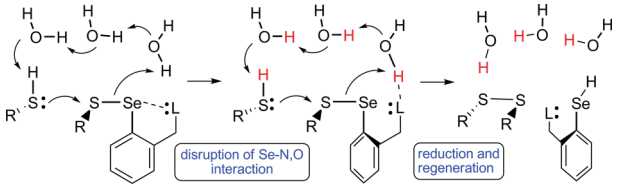
PAPERS

8006

Tuning the activity of glutathione peroxidase mimics through intramolecular Se···N,O interactions: A DFT study incorporating solvent-assisted proton exchange (SAPE)

Craig A. Bayse* and Andrea Pavlou

DFT-SAPE studies using explicit water molecules to facilitate proton exchange in gas-phase models show that the GPx-like activity of ortho-substituted aryl selenols depends on the ease of displacement of the Se···N,O donor–acceptor interaction.



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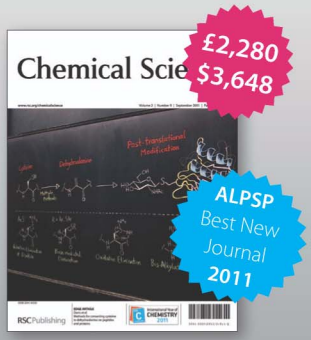

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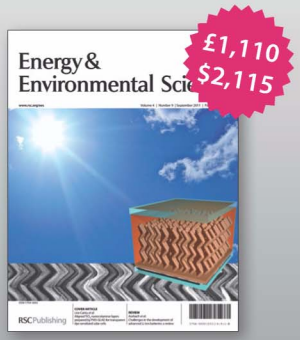

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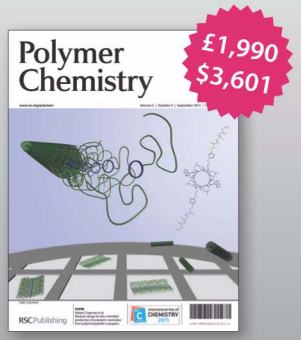

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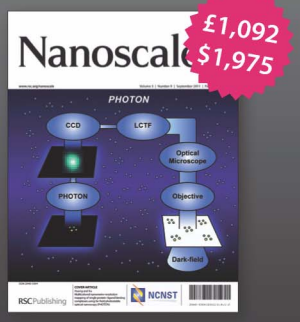

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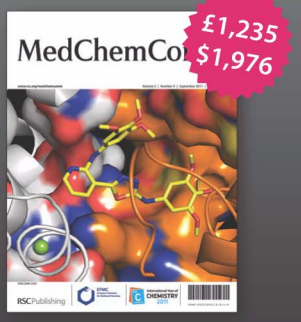

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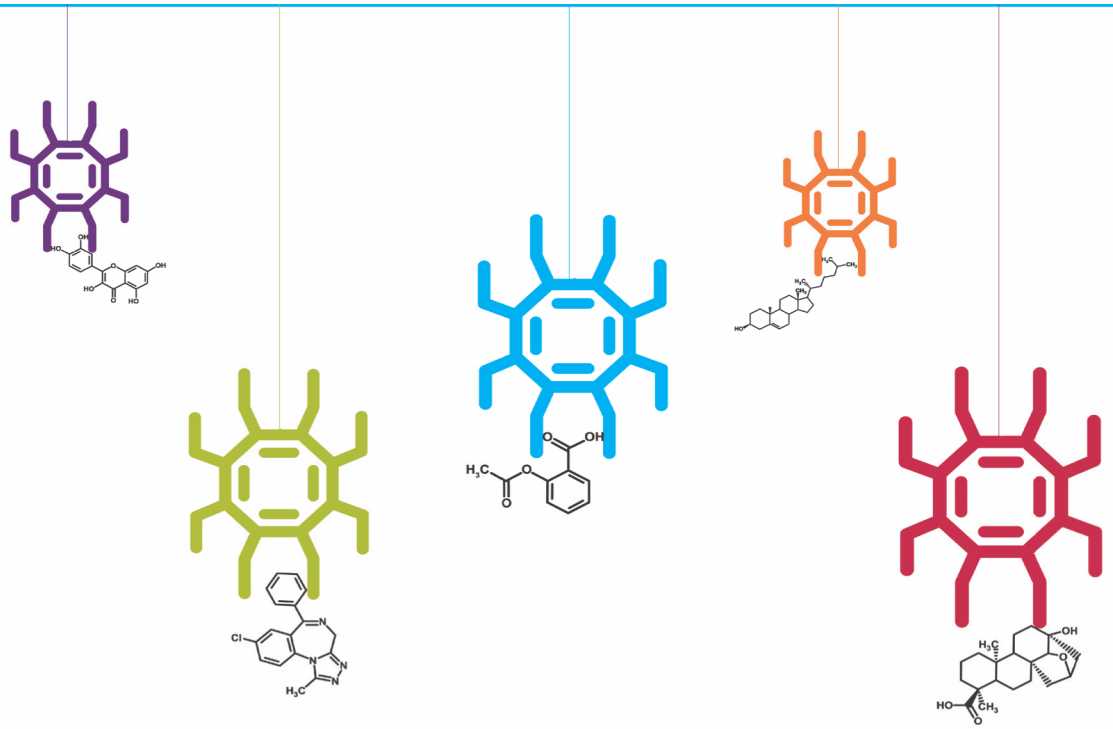

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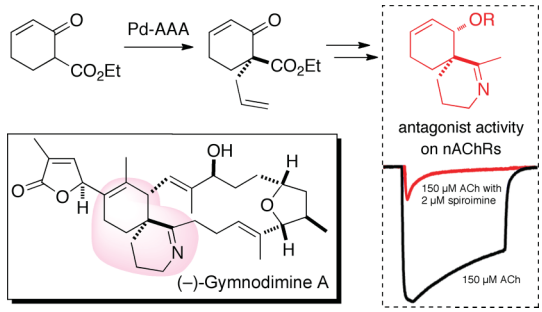

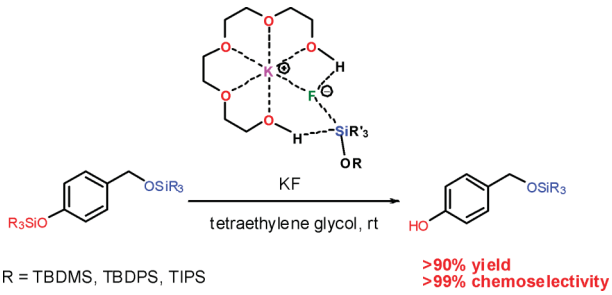

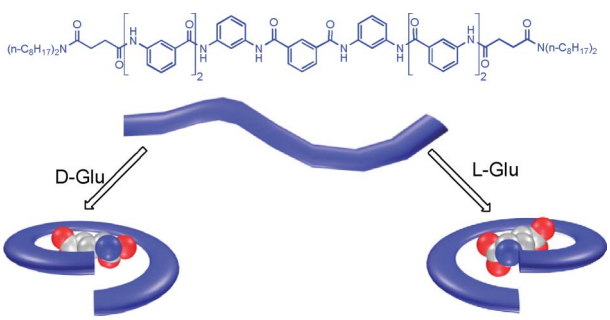

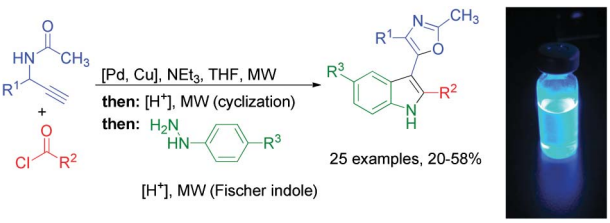

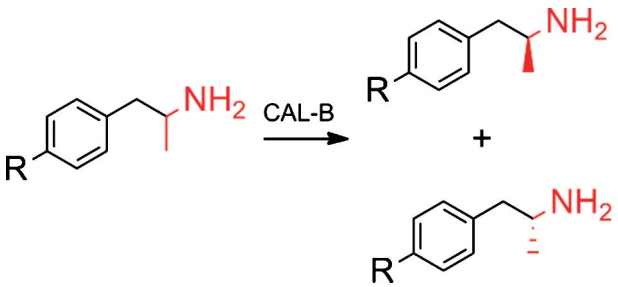

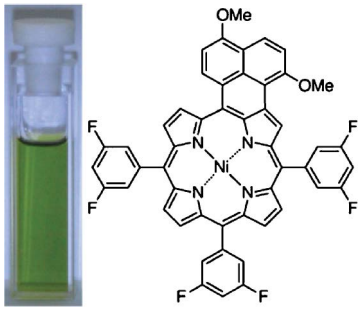

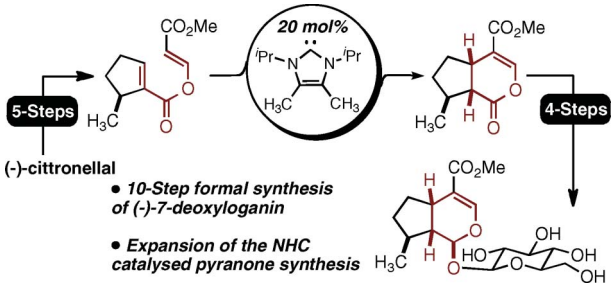

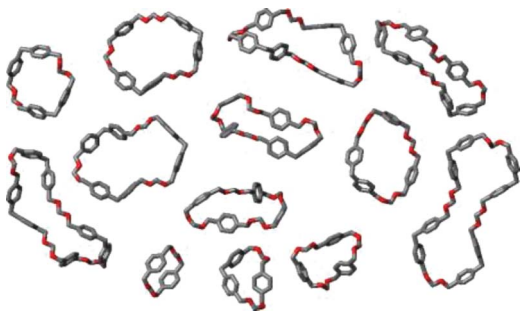

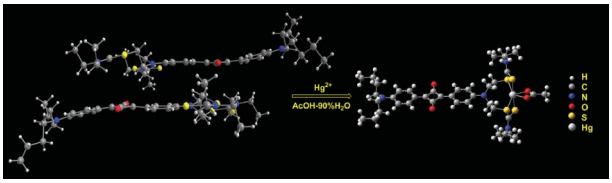

Dual-mode unsymmetrical squaraine-based sensor for selective detection of Hg^{2+} in aqueous media

Cheng Chen, Haijun Dong, Yaqing Chen, Liangqia Guo, Zhenyu Wang, Jian-Jun Sun and Nanyan Fu*

A novel "turn-on" fluorescent and colorimetric chemosensor based on unsymmetrical squaraine dye (**USQ-1**) for the selective detection of Hg^{2+} in aqueous media is described, and a recognition mechanism *via* the Hg^{2+}-induced deaggregation of the dye molecule based on the binding mode is proposed.

