Volume 13 | Number 1 | 7 January 2015 | Pages 1–316

Organic & Biomolecular Chemistry

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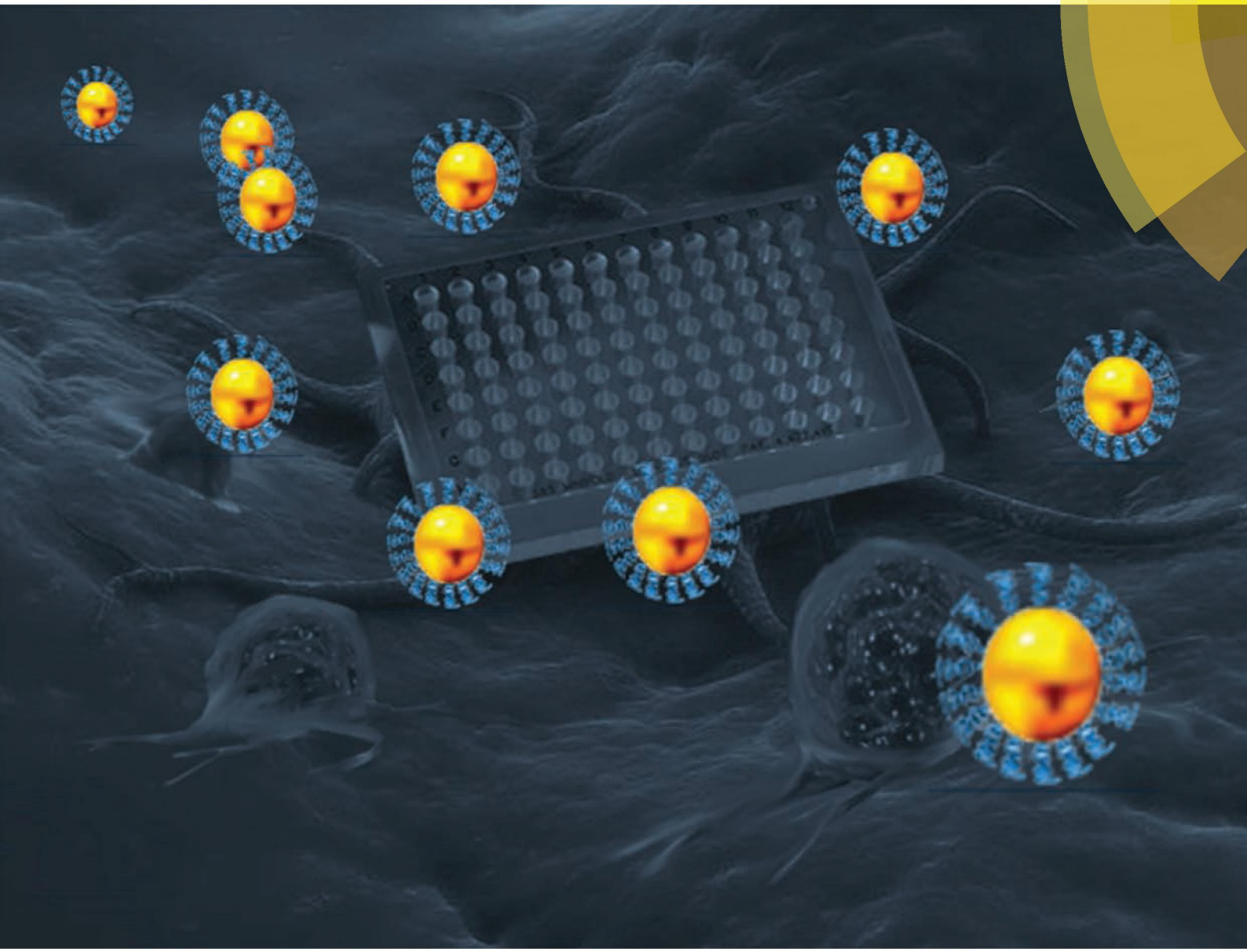

ISSN 1477-0520

ROYAL SOCIETY OF CHEMISTRY

PAPER
Sabine Schlecht *et al.*
Synthesis of tumor-associated MUC1-glycopeptides and their multivalent presentation by functionalized gold colloids

Organic & Biomolecular Chemistry

An international journal of synthetic, physical and biomolecular organic chemistry

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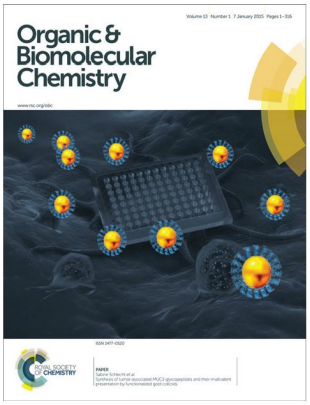

Cover
See Sabine Schlecht *et al.*, pp. 81–97.

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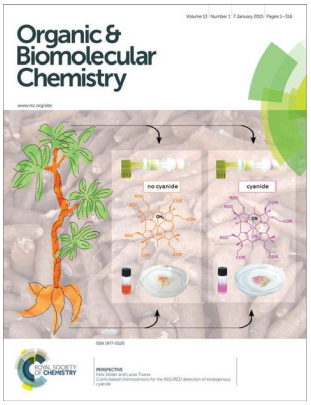

Inside cover
See Felix Zelder and Lucas Tivana, pp. 14–17.

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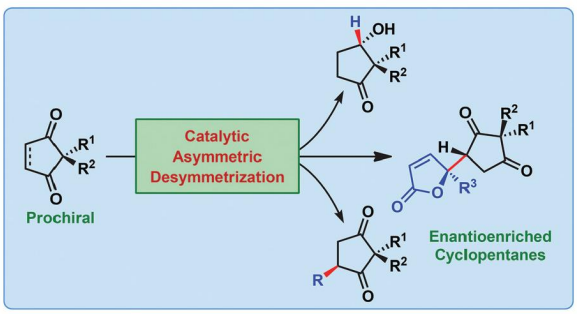

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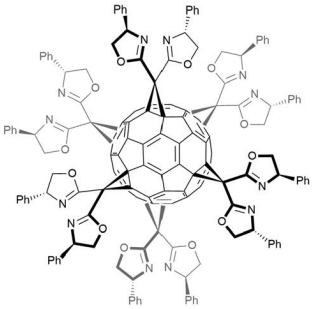

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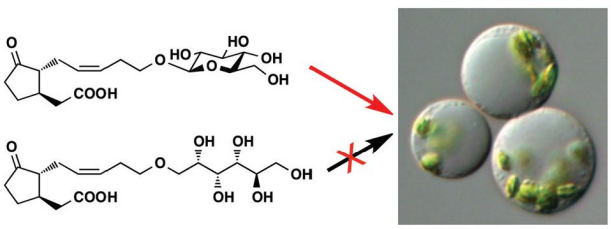

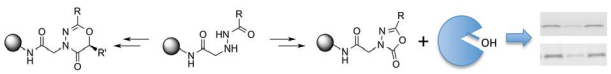

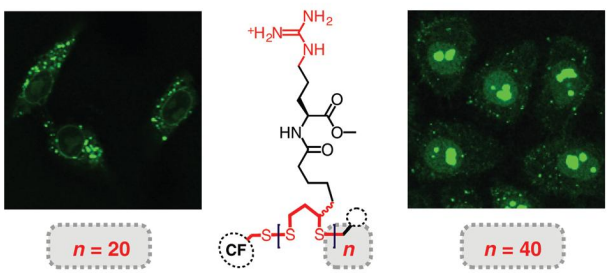

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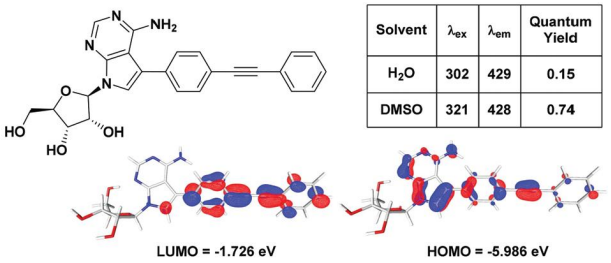

Design and synthesis of fluorescent 7-deazaadenosine nucleosides containing π-extended diarylacetylene motifs

Sara De Ornellas, John M. Slattery, Robert M. Edkins, Andrew Beeby, Christoph G. Baumann* and Ian J. S. Fairlamb*

A novel series of C-modified π-extended 7-deazaadenosines exhibit promising fluorescence properties.

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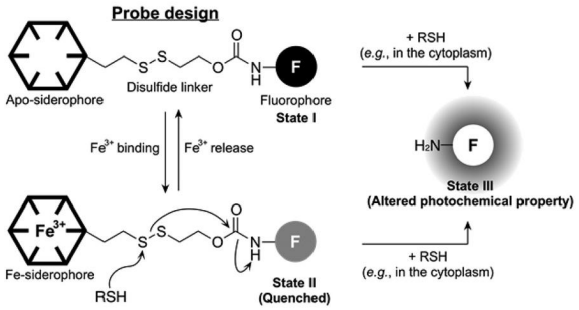

Development of a novel fluorescence probe capable of assessing the cytoplasmic entry of siderophore-based conjugates

Hyeon Seok Kim, Woon Young Song and Hak Joong Kim*

A novel fluorescence probe capable of assessing the cytoplasmic entry of siderophore-based conjugates was synthesized and evaluated by photochemical characterization and cell-based assays.

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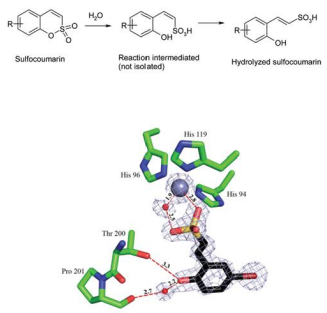

6-Substituted 1,2-benzoxathiine-2,2-dioxides are isoform-selective inhibitors of human carbonic anhydrases IX, XII and VA

Muhammet Tanc, Fabrizio Carta,* Andrea Scozzafava and Claudiu T. Supuran*

A series of 6-substituted 2-benzoxathiine-2,2-dioxides were synthesized starting from 2,5-dihydroxybenzaldehyde, and then screened *in vitro* for their inhibition properties against five human carbonic anhydrase (hCA, EC 4.2.1.1) isoforms.

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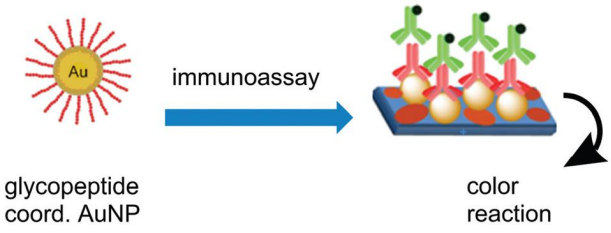

Synthesis of tumor-associated MUC1-glycopeptides and their multivalent presentation by functionalized gold colloids

Isabella Tavernaro, Sebastian Hartmann, Laura Sommer, Heike Hausmann, Christian Rohner, Martin Ruehl, Anja Hoffmann-Roeder and Sabine Schlecht*

The authors present the synthesis of novel MUC1-glycopeptide antigens and their multivalent presentation by gold colloids. Their biological activity was tested in a dot-blot immunoassay experiment.

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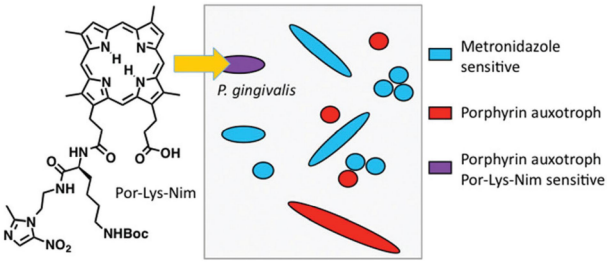

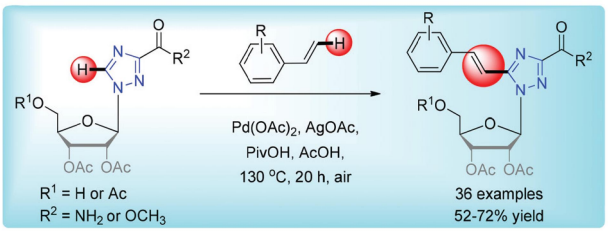

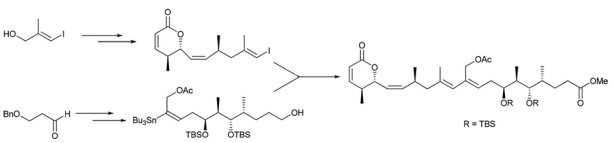

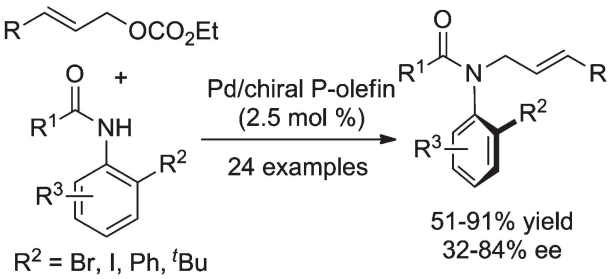

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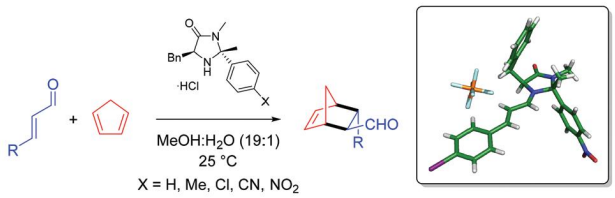

Improving catalyst activity in secondary amine catalysed transformations

John B. Brazier, Timothy J. K. Gibbs, Julian H. Rowley, Leopold Samulis, Sze Chak Yau, Alan R. Kennedy, James A. Platts and Nicholas C. O. Tomkinson*

Improved catalytic efficiency has been observed in the Diels–Alder cycloaddition by modification of the imidazolidinone architecture.

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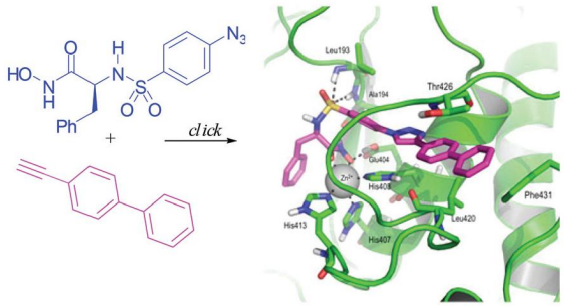

Design and synthesis of potent hydroxamate inhibitors with increased selectivity within the gelatinase family

José María Zapico, Anna Puckowska, Kamila Filipiak, Claire Coderch, Beatriz de Pascual-Teresa* and Ana Ramos*

Triazole-based inhibitors with high potency and selectivity for MMP-2 were obtained through a click chemistry approach.

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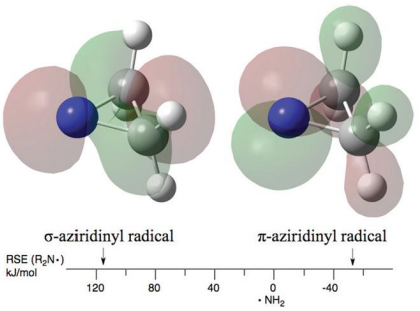

The stability of nitrogen-centered radicals

Johnny Hioe, Davor Šakić, Valerije Vrček* and Hendrik Zipse*

Radical stabilization energies (RSEs) for a large variety of aminyl and protonated amine radical cations have been calculated using high-level composite procedures.

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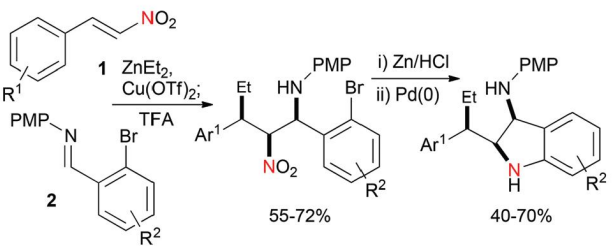

Stereoselective synthesis of 1,2-diamine containing indolines by a conjugate addition nitro-mannich reaction

James C. Anderson,* Ian B. Campbell, Sebastien Campos, Jonathan Shannon and Derek A. Tocher

The sequential use of the conjugate addition nitro-Mannich reaction, nitro reduction and then Pd-catalyzed intramolecular cyclisation allows the concise, stereodivergent synthesis of complex indolines.

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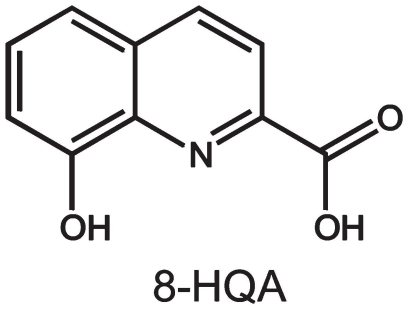

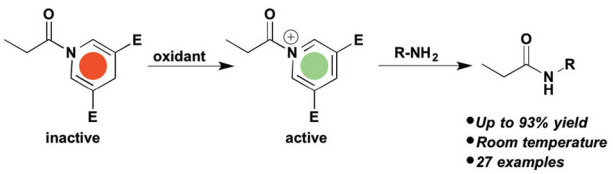

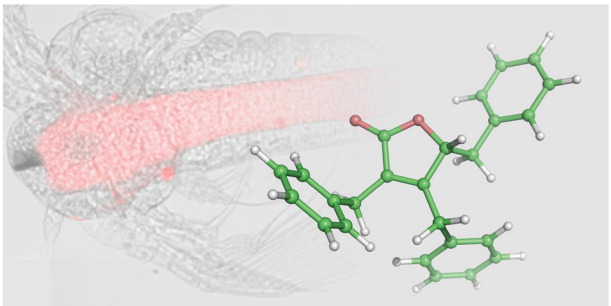

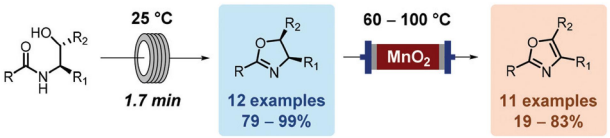

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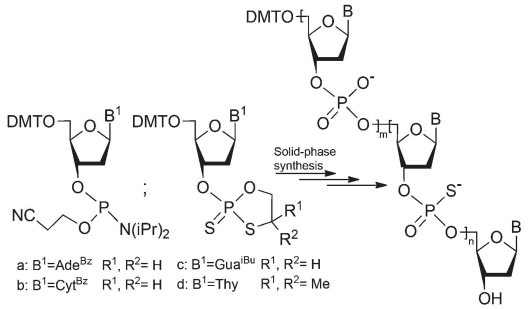

Synthesis of PS/PO-chimeric oligonucleotides using mixed oxathiaphospholane and phosphoramidite chemistry

Ewa Radzikowska and Janina Baraniak*

Chimeric oligonucleotides containing stereoregular phosphorothioate and natural phosphodiester linkages have been obtained on the solid phase support using nucleoside oxathiaphospholanes and commercially available nucleoside phosphoramidites.

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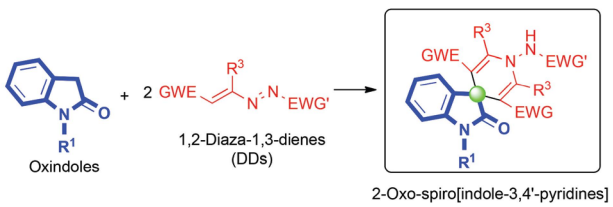

Synthesis of novel symmetrical 2-oxo-spiro[indole-3,4′-pyridines] by a reaction of oxindoles with 1,2-diaza-1,3-dienes

Orazio A. Attanasi, Linda A. Campisi, Lucia De Crescentini, Gianfranco Favi and Fabio Mantellini*

Synthesis of symmetrical 2-oxo-spiro[indole-3,4′-pyridines]: a novel example of spirocyclic oxindoles bearing a quaternary centre at the 3-position.

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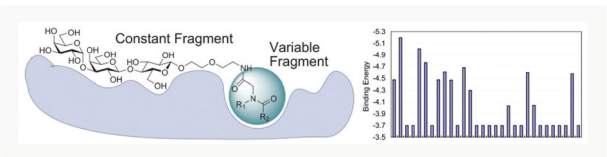

Evaluation of a focused virtual library of heterobifunctional ligands for *Clostridium difficile* toxins

Carlos A. Sanhueza, Jonathan Cartmell, Amr El-Hawiet, Adam Szpacenko, Elena N. Kitova, Rambod Daneshfar, John S. Klassen, Dean E. Lang, Luiz Eugenio, Kenneth K.-S. Ng, Pavel I. Kitov and David R. Bundle*

Higher activity glycopeptoid ligands for two large *Clostridium difficile* toxins TcdA and TcdB were discovered *via* modular fragment-based design and virtual screening.

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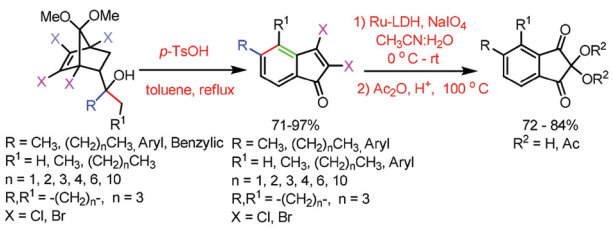

A domino reaction of tetrahalo-7,7-dimethoxy-bicyclo[2.2.1]heptenyl alcohols leading to indenones and a *de novo* synthesis of ninhydrin derivatives

Kaki Raveendra Babu and Faiz Ahmed Khan*

An acid mediated synthesis of indenones and a *de novo* synthesis of ninhydrin derivatives.

Copper-catalyzed regioselective synthesis of furan *via* tandem cycloaddition of ketone with an unsaturated carboxylic acid under air

Monoranjan Ghosh, Subhajit Mishra, Kamarul Monir and Alakananda Hajra*

A catalytic decarboxylative annulation has been developed for the regioselective synthesis of furans by the cycloaddition of ketones with α,β-unsaturated carboxylic acids in ambient air.