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Cover

See Lisa M. Eubanks, Tobin J. Dickerson and Kim D. Janda, page 458.
Shown is the structure of the light chain metalloprotease of botulinum neurotoxin (left lens) and a rationally designed small molecule inhibitor (right lens) with proven efficacy in animals. Image reproduced by permission of Lisa M. Eubanks, Tobin J. Dickerson and Kim D. Janda, *Chem. Soc. Rev.*, 2007, 36, 458.



Inside cover

See Adair D. Richards and Alison Rodger, page 471.
The structure of B-DNA with two synthetic metallomolecule binders: hexammine cobalt and cis-platin. Image reproduced by permission of Adair D. Richards and Alison Rodger, *Chem. Soc. Rev.*, 2007, 36, 471.

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C17

Drawing together the research highlights and news from all RSC publications, *Chemical Science* provides a 'snapshot' of the latest developments across the chemical sciences showcasing newsworthy articles, as well as the most significant scientific advances.

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March 2007/Volume 4/Issue 3

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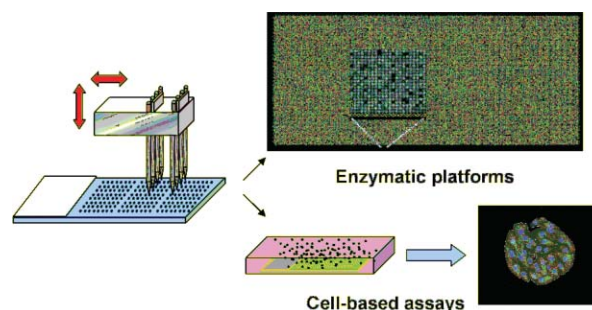
TUTORIAL REVIEWS

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Microarray platforms for enzymatic and cell-based assays

Juan J. Díaz-Mochón, Guilhem Tourniaire and Mark Bradley*

A tutorial review about microarrays which revises basic concepts before moving on to look at applications including enzymatic and cell-based assays.



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Technological advancements for the detection of and protection against biological and chemical warfare agents

Lisa M. Eubanks, Tobin J. Dickerson* and Kim D. Janda*

In light of recent bioterrorist events worldwide, efficient methods to combat this emergent danger are vital.

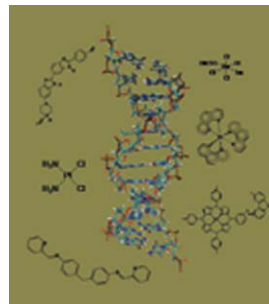


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Synthetic metallomolecules as agents for the control of DNA structure

Adair D. Richards and Alison Rodger*

Different ways in which synthetic metallomolecules bind to and alter the structure of DNA are presented that can be used to probe these interactions.

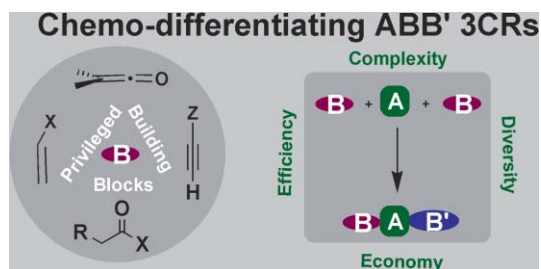


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Chemo-differentiating ABB' multicomponent reactions. Privileged building blocks

David Tejedor* and Fernando García-Tellado*

Three for the prices of two! The design and chemical instrumentation of a novel multicomponent reaction concept: transforming bimolecular domino reactions into multicomponent reactions.

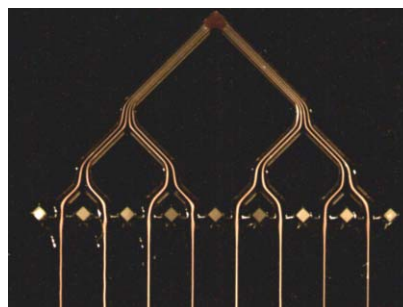


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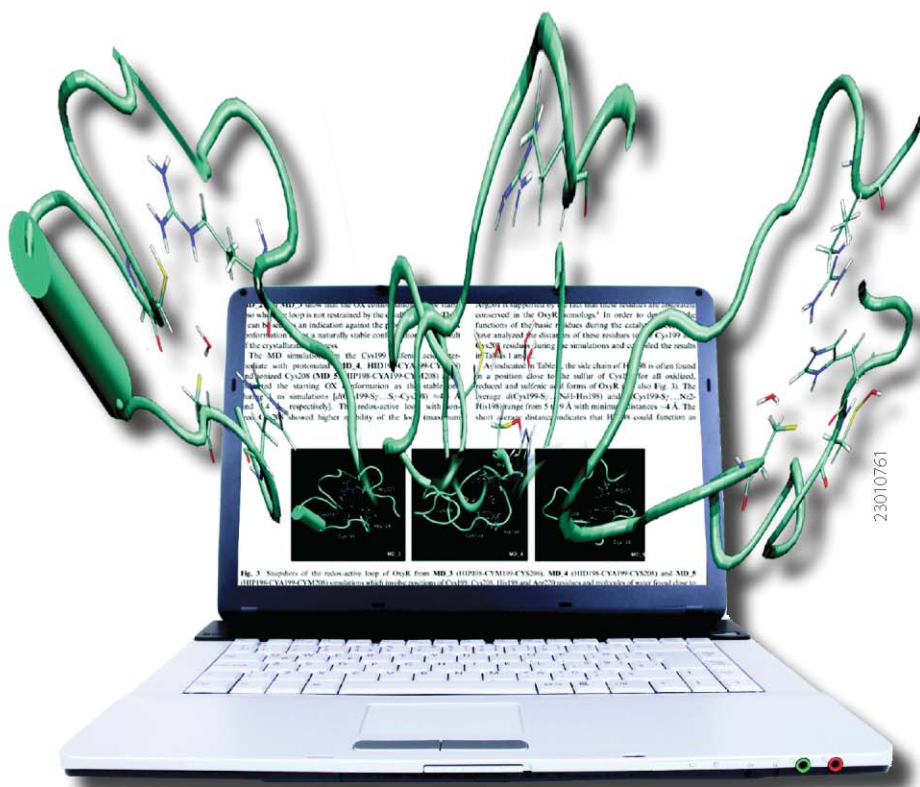
Chip integrated strategies for acoustic separation and manipulation of cells and particles

Thomas Laurell,* Filip Petersson and Andreas Nilsson

This tutorial review outlines the fundamental work performed on continuous flow acoustic standing wave separation of particles in micro scale systems.



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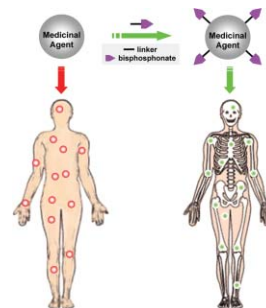
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'Magic bullets' for bone diseases: progress in rational design of bone-seeking medicinal agents

Sufeng Zhang, Geeti Gangal and Hasan Uludağ*

Incorporating bone-seeking bisphosphonates into molecules leads to diagnostic and therapeutic agents that target skeletal tissues instead of distributing non-specifically throughout the body.

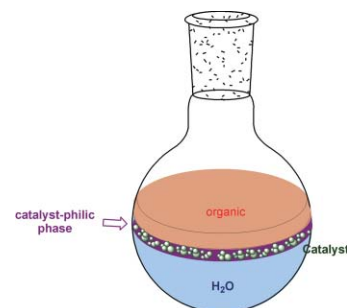


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Multiphase heterogeneous catalysis mediated by catalyst-philic liquid phases

Pietro Tundo* and Alvise Perosa*

Catalyst-philic phases, made by onium salts, PEGs, water, or ionic liquids, promote the catalytic activity of heterogeneous catalysts, facilitate product-catalyst separation, and boost the efficiency of a chemical process.

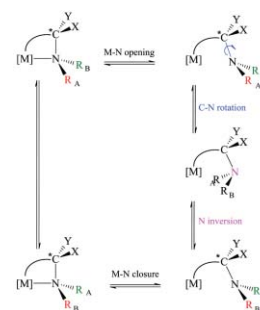


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Dynamic stereochemical rearrangements in chiral organometallic complexes


Peter J. Heard

Many organometallic complexes are fluxional. The presence of a chiral centre in such molecules provides an excellent spectroscopic handle, enabling novel dynamic processes to be observed.



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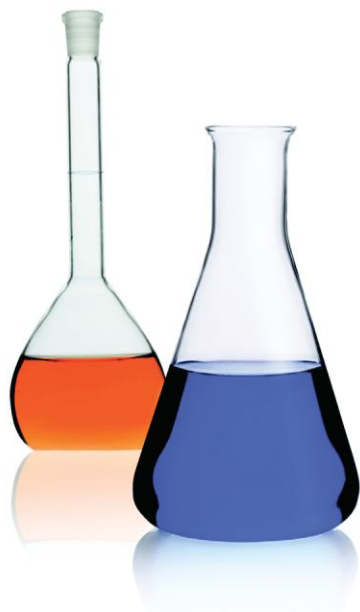
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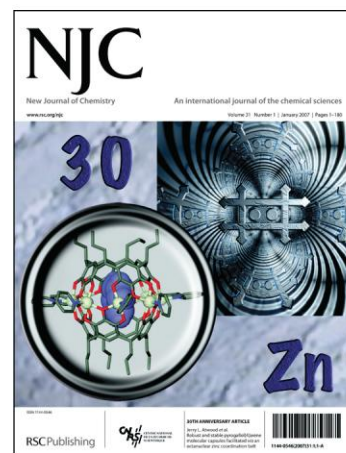
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