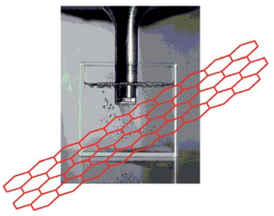
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

Nanomaterials

G. Cravotto,* P. Cintas*

Sonication-Assisted Fabrication and Post-Synthetic Modifications of Graphene-Like Materials

Sound—action! Inexpensive graphitic precursors can be transformed into invaluable graphenes (both single and few layers) using ultrasonication as the key step. This safe wet chemistry enables rapid dispersion and formation of stable colloids (see figure). This minireview unveils the rich and sound science behind the lab trick.



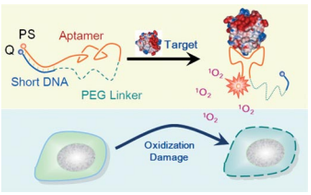
Chem. Eur. J.
DOI: **10.1002/chem.200903259**

Photosensitizers

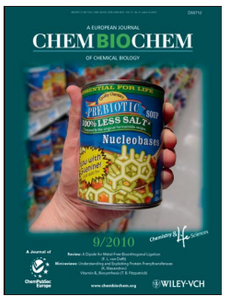
Z. Tang, Z. Zhu, P. Mallikaratchy, R. Yang, K. Sefah, W. Tan*

Aptamer–Target Binding Triggered Molecular Mediation of Singlet Oxygen Generation

Molecular mediation of singlet oxygen generation is demonstrated based on a newly engineered aptamer probe. Both ATP and human α-thrombin aptamers were engineered to testify to this design, and both showed that the production of singlet oxygen can be triggered and quantitatively mediated by the presence of target molecules. Moreover, both photosensitizer aptamer switch (PAS) probes showed excellent selectivity toward their targets. These results suggest that a PAS can serve as a smart photodynamic therapy agent.



Chem. Asian J.
DOI: **10.1002/asia.200900545**

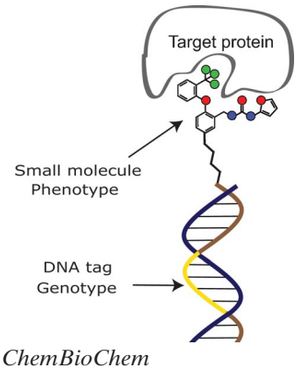


DNA-Encoded Chemical Library

J. Scheuermann,* D. Neri*

DNA-Encoded Chemical Libraries: A Tool for Drug Discovery and for Chemical Biology

DNA decoder: The collection of organic molecules, individually coupled to distinctive oligonucleotides, is generally referred to as "DNA-encoded chemical library". In full analogy to phage display technology, these libraries can be panned on immobilized target proteins and analyzed (before and after selection) by suitable "decoding" methods (for example, DNA-sequencing).



ChemBioChem
DOI: **10.1002/cbic.201000066**

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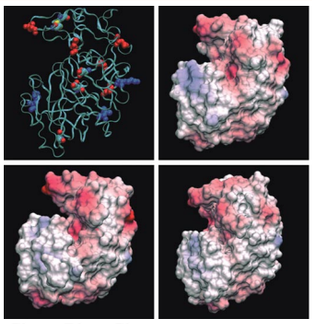


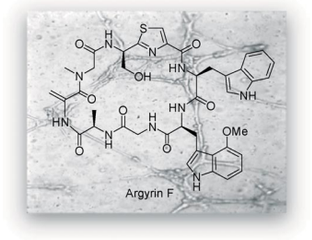
ChemPhysChem
DOI: **10.1002/cphc.200901038**

Protein Encapsulation

L. Giussani, E. Fois, E. Gianotti, G. Tabacchi, A. Gamba, S. Coluccia*

On the Compatibility Criteria for Protein Encapsulation inside Mesoporous Materials

Compatible partners: A modelling study provides insight into the properties relevant for enzyme encapsulation inside mesoporous silica materials. Pepsin is negatively charged but its surface presents both positive and negative patches (see picture). Its structure has a significant rigidity and stability combined with atomic-scale flexibility. These factors could contribute to the production of bioinorganic hybrids.



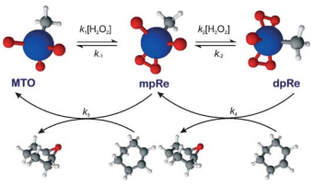
ChemMedChem
DOI: **10.1002/cmdc.201000080**

Antitumor Agents

L. Bülow, I. Nickeleit,* A.-K. Girbig, T. Brodmann, A. Rentsch, U. Eggert, F. Sasse, H. Steinmetz, R. Frank, T. Carlomagno, N. P. Malek, M. Kalesse*

Synthesis and Biological Characterization of Argyrin F

Argyrin F unfolds its promising antitumor activity twice: First through stabilization of the tumor suppressor protein p27 and second by vascular damage.



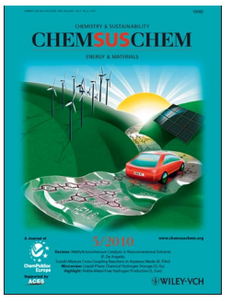
ChemSusChem
DOI: **10.1002/cssc.201000022**

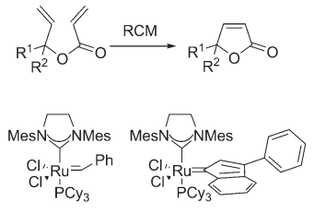
Catalysis

M. Crucianelli,* R. Saladino,* F. De Angelis

Methyltrioxorhenium Catalysis in Nonconventional Solvents: A Great Catalyst in a Safe Reaction Medium

Oxyfunctionalization reactions with methyltrioxorhenium (MTO), one of the most-studied organometallic rhenium derivatives, are the subject of this Review. A detailed account is given of the catalytic activity and selectivity of MTO in nonconventional solvents or under solvent-free conditions, using H_2O_2 or urea-hydrogen peroxide complex as primary oxidants.





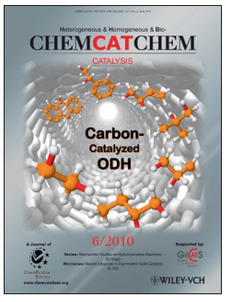
ChemCatChem
DOI: **10.1002/cctc.200900282**

Homogeneous Catalysis

B. Schmidt,* D. Geißler

Ring-Closing Metathesis of Acrylates: A Comparative Study

Closed for business: Second-generation benzylidene and indenylidene complexes both catalyze the ring-closing metathesis (RCM; see scheme) of acrylates to butenolides in good yields. The initial concentration of the substrate is a more important factor in the success of metathesis-based butenolide synthesis than the amount of catalyst used.



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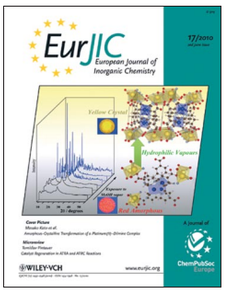
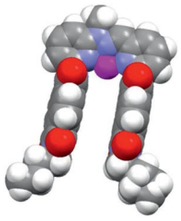


Dynamic Tweezers

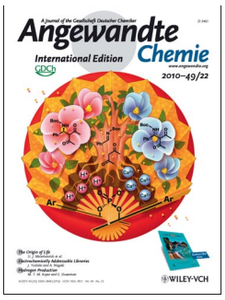
S. Ulrich, A. Petitjean, J.-M. Lehn*

Metallo-Controlled Dynamic Molecular Tweezers: Design, Synthesis, and Self-Assembly by Metal-Ion Coordination

We report the design and synthesis of metallo-controlled dynamic molecular tweezers. The presence of large aromatic arms impacts the coordination-driven self-assembly due to additional supramolecular interactions. These dynamic devices can efficiently bind, in solution, coordinating and non-coordinating molecular substrates.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200901262**

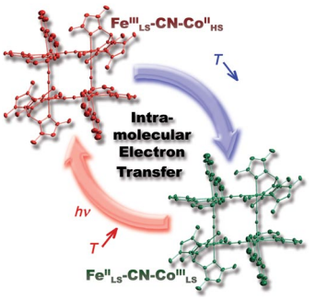


Bistable Materials

Y. Zhang, D. Li, R. Clérac,* M. Kalisz, C. Mathonière,* S. M. Holmes*

Reversible Thermally and Photoinduced Electron Transfer in a Cyano-Bridged $\{Fe_2Co_2\}$ Square Complex

Flip to be square: Structural, spectroscopic, magnetic, and photomagnetic studies conclusively demonstrate that a tetranuclear cyanometalate $\{Fe_2Co_2\}$ complex undergoes reversible thermally and light-induced changes in its optical and magnetic properties. This bistability is induced by an intramolecular electron transfer, as observed in three-dimensional Co/Fe Prussian blue compounds (see picture).



Angew. Chem. Int. Ed.
DOI: **10.1002/anie.201000765**

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