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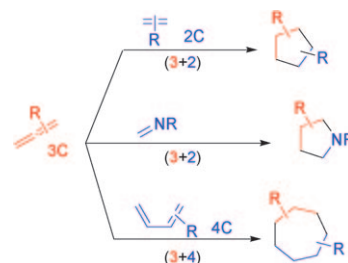


## Cycloaddition

F. López,\* J. L. Mascareñas\*

Allenes as Three-Carbon Units in Catalytic Cycloadditions: New Opportunities with Transition-Metal Catalysts

**Three of a kind:** The use of allenes as 3C-atom components in catalytic cycloadditions is being increasingly demonstrated. In this concept, an overview of the existing methods is presented with an emphasis on those more recent contributions involving the use of  $\text{Pt}^{\text{II}}$  and  $\text{Au}^{\text{I}}$  catalysts.



Chem. Eur. J.  
DOI: 10.1002/chem.201002366

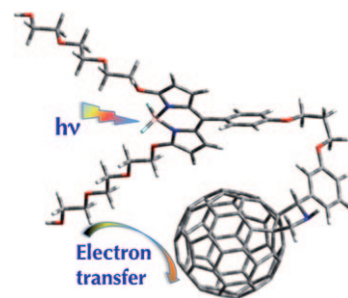


## Electron Transfer

J.-Y. Liu, M. E. El-Khouly, S. Fukuzumi,\* D. K. P. Ng\*

Photoinduced Electron Transfer in a Distyryl BODIPY–Fullerene Dyad

**Charge separation:** A novel distyryl BODIPY–fullerene dyad has been prepared (see figure) which, upon excitation at the distyryl BODIPY moiety, undergoes a facile photoinduced electron transfer to give a relatively long-lived charge-separated state.



Chem. Asian J.  
DOI: 10.1002/asia.201000537

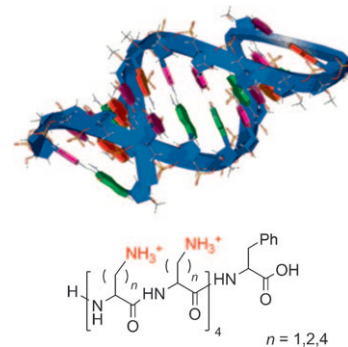


## Oligonucleotides

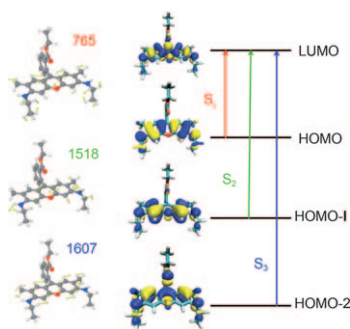
M. Murtola, S. Zaramella, E. Yeheskiely, R. Strömberg\*

Cationic Peptides that Increase the Thermal Stabilities of 2'-O-MeRNA/RNA Duplexes but Do Not Affect DNA/DNA Melting

**Helix discrimination:** If a double-stranded oligonucleotide complex in solution encounters a peptide carrying multiple opposite charges, it appears far from obvious that this will necessarily have a positive effect upon the thermal stability of the complex. Fascinatingly, though, these relatively flexible short peptides discriminate between affecting DNA/DNA B-type helices and 2'-O-MeRNA/RNA A-type duplexes.



ChemBioChem  
DOI: 10.1002/cbic.201000324



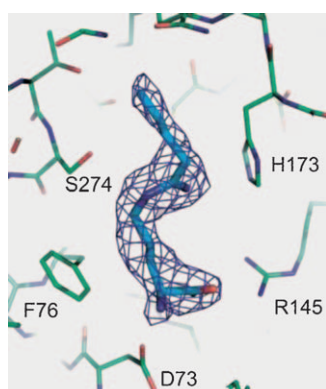
ChemPhysChem  
DOI: 10.1002/cphc.201000868

### Hyper-Raman Scattering

C. B. Milojević, D. W. Silverstein, L. Jensen,\* J. P. Camden\*

Probing One-Photon Inaccessible Electronic States with High Sensitivity: Wavelength Scanned Surface Enhanced Hyper-Raman Scattering

**How exciting!** A combined experimental and theoretical study of the surface-enhanced hyper-Raman scattering (SEHRS) provides a detailed picture of the electronic excited state of the benchmark Rhodamine 6G molecule (see picture). These results demonstrate the ability of SEHRS to explore excited states that are not easily accessible via one-photon excitation using nonlinear spectroscopy at very low ( $10^{-10}$  M) concentrations.



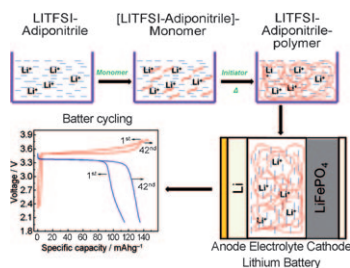
ChemMedChem  
DOI: 10.1002/cmdc.201000392

### Activity Probes

M. Lluís, Y. Wang, A. F. Monzingo, W. Fast,\* J. D. Robertus\*

Characterization of C-Alkyl Amidines as Bioavailable Covalent Reversible Inhibitors of Human DDAH-1

**Inhibition, interrupted:** A series of dual-targeted DDAH-1/NO synthase inhibitors were ranked for potency within cells, and the most potent compound was characterized in detail. X-ray crystallography and isothermal titration calorimetry were used to compare binding to wild-type and mutant DDAH-1 to dissect the contribution of reversible covalent bond formation to the potency of these C-alkyl amidine inhibitors.



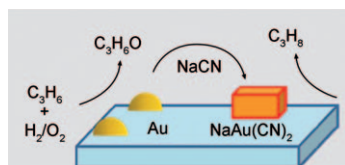
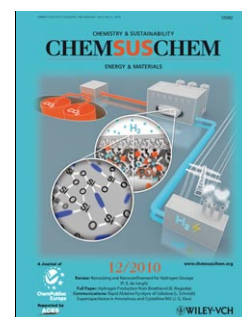
ChemSusChem  
DOI: 10.1002/cssc.201000249

### Lithium-Ion Batteries

M. Patel, M. U. M. Patel, A. J. Bhattacharyya\*

A Cross-Linked Soft Matter Polymer Electrolyte for Rechargeable Lithium-Ion Batteries

**Ion man:** A soft matter cross-linked polymer electrolyte with superior mechanical, thermal, and electrochemical properties is synthesized by using a new methodology for application in lithium-ion batteries.



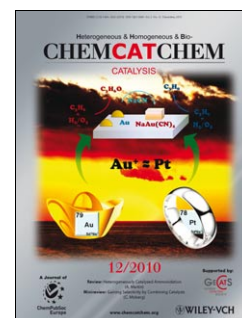
ChemCatChem  
DOI: 10.1002/cctc.201000218

### Gold Analysis

S. T. Oyama,\* J. Gaudet, W. Zhang, D. S. Su, K. K. Bando

Platinum-Like Catalytic Behavior of  $\text{Au}^+$

**All that glitters isn't necessarily platinum:** Treatment of supported gold nanoparticles with cyanide solutions does not dissolve the metal, but instead causes reprecipitation of gold(I) cyanide. The selectivity of the resulting catalyst in the reaction of propylene with  $\text{H}_2/\text{O}_2$  mixtures changes dramatically from propylene oxide to propane, a product typical of platinum.



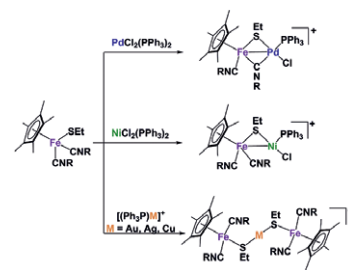


## Heteronuclear Complexes

P. Chen, Y. Peng, C. Jia, J. Qu\*

Synthesis of a New Family of Heteronuclear Thiolate Iron Complexes that Contain Isocyanide Ligands

A new series of heteronuclear thiolate iron complexes including heterobinuclear Fe–SEt–M (M = Pd or Ni) units and heterotrinuclear Fe–SEt–M–SEt–Fe (M = Au, Ag, or Cu) species with isocyanide ligands have been prepared, and their characterizations are also investigated.



*Eur. J. Inorg. Chem.*

DOI: 10.1002/ejic.201000676

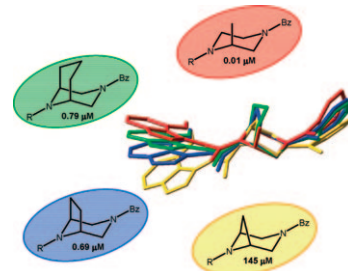


## Diazabicyclo Analogs of HIV Inhibitor

L. Legnani, D. Colombo, E. Cocchi, L. Solano, S. Villa, L. Lopalco, V. Asti, L. Diomedè, F. Marinone Albini, L. Toma\*

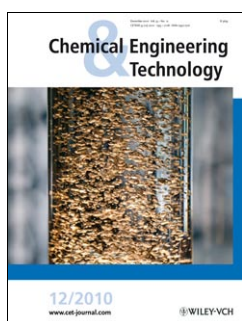
Modeling and Spectroscopic Studies of Synthetic Diazabicyclo Analogs of the HIV-1 Inhibitor BMS-378806 and Evaluation of Their Antiviral Activity

A viral neutralization assay on a panel of six HIV-related pseudoviruses allowed the determination of the antiviral activity of three diazabicyclo analogs of BMS-378806, in which the axial methyl group on its piperazine ring is replaced by a carbon bridge. The diazabicyclooctane and -nonane derivatives show a significant infectivity reduction power that is related to their conformational preference.



*Eur. J. Org. Chem.*

DOI: 10.1002/ejoc.201001073

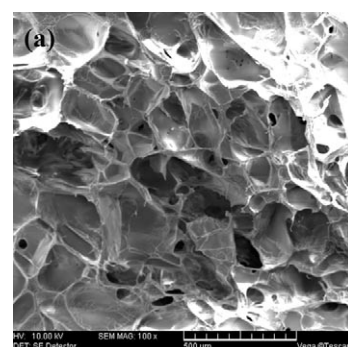


## Drug Delivery

D. Huo, J. Yang, C. Hou\*, M. Yang

Macroporous Poly(*N*-isopropylamide-co-acrylamide) Hydrogels Prepared by Two-Step Polymerization for Drug Delivery Applications

Macroporous poly(*N*-isopropylamide-co-acrylamide) hydrogels with a very fast thermoresponsive rate were successfully prepared by a two-step polymerization method. This rate and the mechanical strength of the hydrogels drastically changed by freezing the reaction mixture after 3 min of the first polymerization. The two-step polymerization proved to be a promising method for biomacromolecular drugs.



*Chem. Eng. Tech.*

DOI: 10.1002/ceat.201000129