

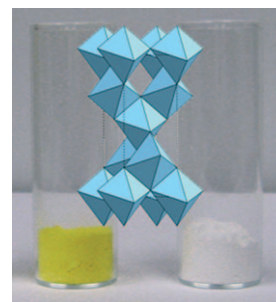


## Anatase Pigments

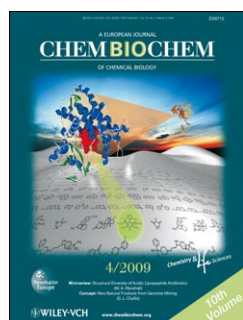
M. Ghosh, V. Pralong, A. Wattiaux, A. W. Sleight, M. A. Subramanian\*

Tin(II) Doped Anatase (TiO<sub>2</sub>) Nanoparticles: A Potential Route to “Greener” Yellow Pigments

**Benign by design:** Tin(II) doped anatase TiO<sub>2</sub> nanoparticles, a potential candidate as environmentally benign yellow pigments, have been synthesized. The presence of Sn<sup>2+</sup> in anatase structure has been confirmed by various analytical techniques including optical and <sup>119</sup>Sn Mössbauer spectroscopy.



*Chem. Asian J.*  
DOI: 10.1002/asia.200900028

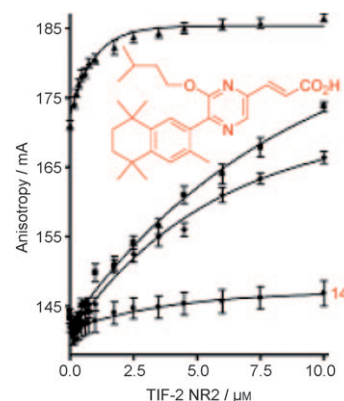


## Retinoid Receptors

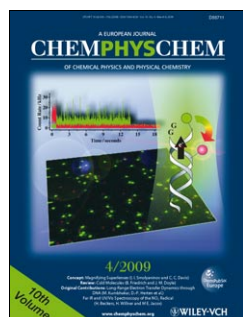
J. García, H. Khanwalkar, R. Pereira, C. Erb, J. J. Voegel, P. Collette, P. Mauvais, W. Bourguet, H. Gronemeyer,\* Á. R. de Lera\*

Pyrazine Arotinoids with Inverse Agonist Activities on the Retinoid and Reginoid Receptors

**RAR and RXR agonists:** A collection of pyrazine-based RAR/RXR ligands were prepared by a series of palladium catalyzed cross-coupling reactions and characterized. Structure–activity relationships were elucidated. Retinoic acid receptor (RAR)  $\alpha/\beta$ -subtype-selective and retinoid X receptor (RXR) inverse agonist activities are described for pyrazine acrylic acid arotinoid, **14d**.



*ChemBioChem*  
DOI: 10.1002/cbic.200900030



## Carbon Nanotubes

J.-W. Shen, T. Wu,\* Q. Wang,\* Y. Kang, X. Chen

Adsorption of Insulin Peptide on Charged Single-Walled Carbon Nanotubes: Significant Role of Ordered Water Molecules

**Ordered hydration shells:** The more ordered hydration shells outside the charged CNT surfaces prevent more compact adsorption of the peptide in the charged CNT systems (see picture), but peptide binding strengths on the charged CNT surfaces are stronger due to the electrostatic interaction.



*ChemPhysChem*  
DOI: 10.1002/cphc.200800836

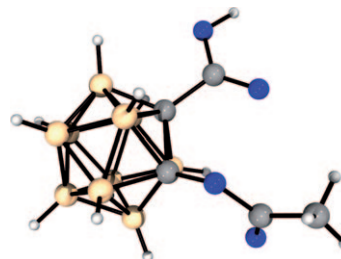


## Drug Design

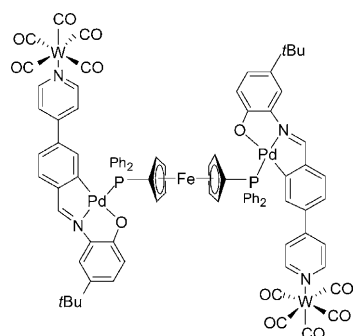
M. Scholz, K. Benschdorf, R. Gust, E. Hey-Hawkins\*

Asborin: The Carbaborane Analogue of Aspirin

**Asborin**, the carbaborane analogue of aspirin, was obtained by a high-yield synthetic procedure and proved to be an active cyclooxygenase (COX) inhibitor (H: white, B: beige, C: gray, O: blue).



*ChemMedChem*  
DOI: 10.1002/cmdc.200900072



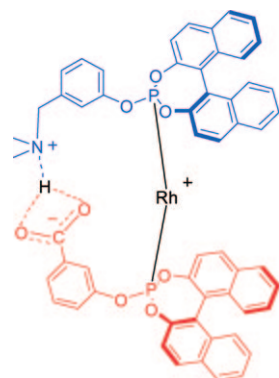
*Eur. J. Inorg. Chem.*  
DOI: 10.1002/ejic.200900052

### Cyclopalladated Metalloligands

N. Gómez-Blanco, J. J. Fernández,\* A. Fernández, D. Vázquez-García, M. López-Torres, J. M. Vila\*

Cyclometallated [C,N,O] Complexes as Metalloligands: Synthesis and Structural Characterisation of New Di-, Tri-, Tetra- and Pentanuclear Heterometallic Complexes

Palladium(II) compounds with terdentate [C,N,O] ligands bearing pyridine rings may behave as new metalloligands through their non-coordinated nitrogen atoms. The  $\pi$ - $\pi$  slipped stacking interactions found in the solid state for these complexes suggest a certain degree of metalloaromaticity.



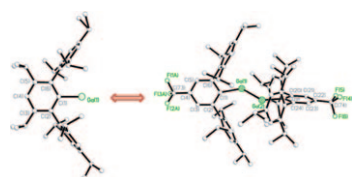
*Eur. J. Org. Chem.*  
DOI: 10.1002/ejoc.200900158

### Asymmetric Catalysis

L. Pignataro, B. Lynikaite, J. Cvengroš, M. Marchini, U. Piarulli,\* C. Gennari\*

Combinations of Acidic and Basic Monodentate Binaphtholic Phosphites as Supramolecular Bidentate Ligands for Enantioselective Rh-Catalyzed Hydrogenations

The combination of two chiral BINOL-derived monodentate phosphites, containing either a carboxylic acid or a tertiary amine, can be seen as a supramolecular bidentate P-ligand self-assembled through an acid-base interaction. These ligands are effective in the Rh-catalyzed enantioselective hydrogenation of methyl 2-acetamidoacrylate.



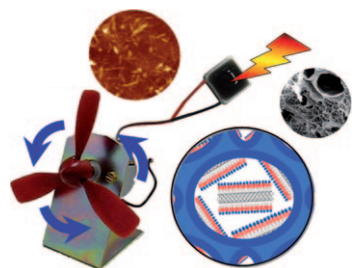
*Chem. Eur. J.*  
DOI: 10.1002/chem.200900201

### Gallium Chemistry

Z. Zhu, R. C. Fischer, B. D. Ellis, E. Rivard, W. A. Merrill, M. M. Olmstead, P. P. Power,\* J. D. Guo, S. Nagase,\* L. Pu

Synthesis, Characterization and Real Molecule DFT Calculations for Neutral Organogallium(I) Aryl Dimers and Monomers: Weakness of Gallium–Gallium Bonds in Digallenes and Digallynes

**Move closer:** The gallium–gallium bond strength in terphenyl gallium(I) dimers [ArGaGaAr] (see figure) is similar to those in other molecules with closed shell interactions, implying that the Ga–Ga bond in doubly reduced  $\text{Na}_2[\text{ArGaGaAr}]$  is much closer to a single than a triple one.



*ChemSusChem*  
DOI: 10.1002/cssc.200900066

### Actuators

E. Miyako,\* H. Nagata, R. Funahashi, K. Hirano, T. Hirotsu

Light-Triggered Thermoelectric Conversion Based on a Carbon Nanotube–Polymer Hybrid Gel

**Lights? Nanotubes? Action!** A hydrogel comprising lysozymes, poly(ethylene glycol), phospholipids, and functionalized single-walled carbon nanotubes is employed for light-driven thermoelectric conversion. A photoinduced thermoelectric conversion module based on the hydrogel functions as a novel electric power generator (see image). This concept may find application in various industries, such as robotics and aerospace engineering.

