

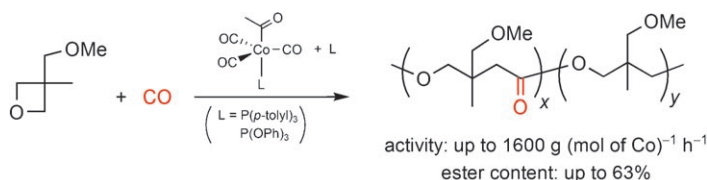
Ring-Opening Polymerization

Y. Permana, K. Nakano, M. Yamashita,
D. Watanabe, K. Nozaki*

Carbonylative Polymerization of
Oxetanes Initiated by Acetyl Cobalt
Complexes

Chem. Asian J.

DOI: 10.1002/asia.200700339



Cooperation required: The ring-opening polymerization of γ -lactone is not yet successful under practical conditions because rapid “back-biting” immediately takes place to re-form the original γ -lac-

tone owing to the thermodynamic stability of its five-membered-ring structure. Carbonylative polymerization of oxetane provides the poly(γ -lactone) unit effectively.

Small-Molecule Inhibitors

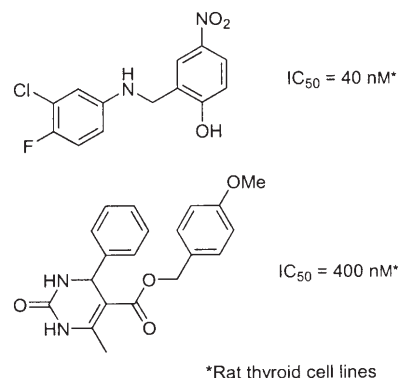
N. Lecat-Guillet, G. Merer, R. Lopez,
T. Pourcher, B. Rousseau, Y. Ambroise*

Small-Molecule Inhibitors of Sodium
Iodide Symporter Function

ChemBioChem

DOI: 10.1002/cbic.200700682

Inhibitors of the sodium iodide symporter have been identified by high-throughput screening. This discovery opens new perspectives for the elucidation of NIS regulation pathways and provides new leads for the development of anti-thyroid drugs.



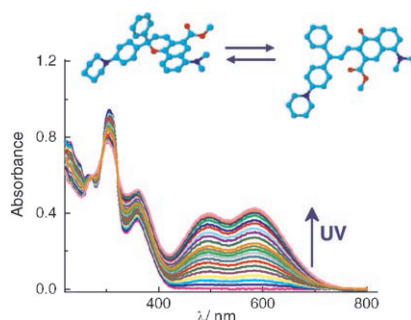
Photochromic Molecules

M. R. di Nunzio, P. L. Gentili,
A. Romani, G. Favaro*

Photochromic, Thermochromic, and
Fluorescent Spirooxazines and
Naphthopyrans: A Spectrokinetic and
Thermodynamic Study

ChemPhysChem

DOI: 10.1002/cphc.200700789



Switchable coloration: Spirooxazine (SO) and naphthopyran (NP) dyes transform into colored merocyanine forms under thermal and light stimulation, (see picture showing a NP dye). They act as effective thermochromic compounds at high temperature and efficient photochromic compounds at low temperature.

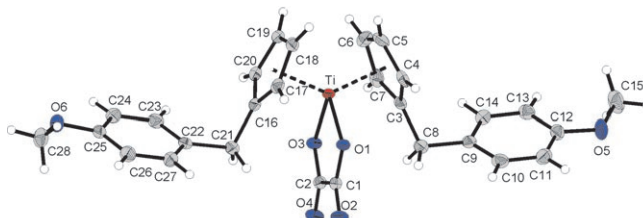
Metal-Containing Drugs

J. Claffey, M. Hogan, H. Müller-Bunz,
C. Pampillón, M. Tacke*

Oxali-Titanocene Y: A Potent Anticancer
Drug

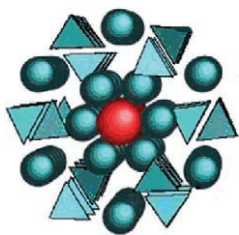
ChemMedChem

DOI: 10.1002/cmdc.200700302



In three simple steps the anticancer drug bis-[(*p*-methoxybenzyl)cyclopentadienyl]titanium(IV) oxalate (oxali-titanocene Y) can be synthesised from commercially available starting materials. Oxali-titano-

cene Y shows twice the cytotoxicity of cisplatin in pig kidney epithelial (LLC-PK) cells and is the most cytotoxic titanocene known.



The cluster-topotactic mechanism of the formation of apatite-type lanthanum silicate by mechanochemical treatment involving hydration of the starting compounds and acid–base reactions is shown. The formation of the LaAlO_3 phase, which depends on the sample stoichiometry, suggests the existence of a biphasic domain in the $\text{La}_2\text{O}_3\text{--SiO}_2\text{--Al}_2\text{O}_3$ phase diagram at room temperature.

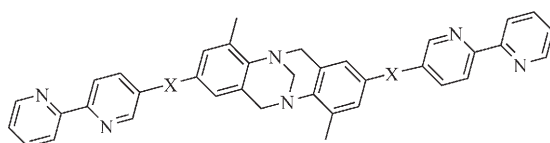
Nanocrystalline Lanthanum Silicates

T. Kharlamova,* S. Pavlova, V. Sadykov, M. Chaikina, T. Krieger, O. Lapina, D. Khabibulin, A. Ishchenko, V. Zaikovskii, C. Argiris, J. Frade

Al-Doped Apatite-Type Nanocrystalline Lanthanum Silicates Prepared by Mechanochemical Synthesis: Phase, Structural and Microstructural Study

Eur. J. Inorg. Chem.

DOI: 10.1002/ejic.200700972



X = single bond, ethynylene, ester, or amide linker

Dissymmetrical bis(bipyridine) ligands based on the Tröger's base scaffold have been synthesized with both rigid and flexible spacer units. These racemic ligands do form double- and triple-stranded helicates[jy]ntupon coordina-

tion to suitable transition metal ions. These self-assembly processes are diastereoselective in the cases of dinuclear Cu^+ , Ag^+ , and Fe^{2+} helicates but not in the case of Zn^{2+} complexes.

Diastereoselective Self-Assembly

U. Kiehne, T. Weilandt, A. Lützen*

Self-Assembly of Dinuclear Double- and Triple-Stranded Helicates from Bis(bipyridine) Ligands Derived from Tröger's Base Analogues

Eur. J. Org. Chem.

DOI: 10.1002/ejoc.200701215



Seeing red with dimers! BisBODIPYs, dimers of well-known boron dipyrin (BODIPY) fluorophores, have successfully been prepared from boron trifluoride and 2,2'-bidipyrins. The dimers display conformationally locked molecular structures and are characterized by an intense red fluorescence at 640 nm, with quantum yields of about 0.70 and Stokes shifts of at least 80 nm (see graphic).

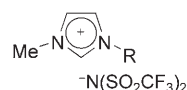
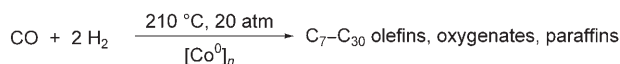
Fluorescence

M. Bröring,* R. Krüger, S. Link, C. Kleeberg, S. Köhler, X. Xie, B. Ventura, L. Flamigni

Bis(BF_2)-2,2'-Bidipyrins (BisBODIPYs): Highly Fluorescent BODIPY Dimers with Large Stokes Shifts

Chem. Eur. J.

DOI: 10.1002/chem.200701912



FT special report: Cobalt nanoparticles with a size of around 7.7 nm prepared in 1-alkyl-3-methylimidazolium bis(trifluoromethanesulfonyl)imide ionic liquids are effective catalysts for the Fischer–Tropsch (FT) synthesis, yielding

olefins, oxygenates, and paraffins ($\text{C}_7\text{--C}_{30}$). The nanoparticles are easily prepared by the decomposition of $[\text{Co}(\text{CO})_8]$ in the ionic liquid at 150°C and can be reused at least three times if they are not exposed to air.

Fischer-Tropsch Catalysts

D. O. Silva, J. D. Scholten, M. A. Gelesky, S. R. Teixeira, A. C. B. Dos Santos, E. F. Souza-Aguiar, J. Dupont*

Catalytic Gas-to-Liquid Processing Using Cobalt Nanoparticles Dispersed in Imidazolium Ionic Liquids

ChemSusChem

DOI: 10.1002/cssc.200800022