SPOTLIGHTS ...



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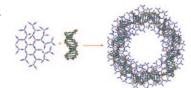


Photoluminescent Nanorings

Y. You,* Z. Yu, M. Cui, C. Hong*

Preparation of Photoluminescent Nanorings with Controllable Bioreducibility and Stimuli-Responsiveness

Ring around the rosy: A novel multifunctional disulfide-containing hyperbranched poly(amido amine) that is stimuli-responsive, biocompatible, biodegradable, and photoluminescent can assemble DNA into a well-defined nanoring with strong photoluminescence. The nanoring is stimuli-responsive and the ring wall is biocompatible and controllably bioreducible; it has potential applications in gene and drug delivery, and molecular imaging.



Angew. Chem. Int. Ed. DOI: 10.1002/anie.200906707

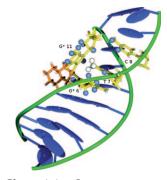


DNA Structures -

K. Kubíček, J. Monnet, S. Scintilla, J. Kopečná, F. Arnesano, L. Trantírek, C. Chopard, G. Natile, J. Kozelka*

Unusual Interstrand Pt(S,S-diaminocyclohexane)-GG Crosslink Formed by Rearrangement of a Classical Intrastrand Crosslink Within a DNA Duplex

An unusual G_6G_{11} **interstrand crosslink** is formed by spontaneous rearrangement of the canonical G_5G_6 intrastrand crosslink generated from the DNA duplex d(CCTT $G_5G_6T_7C_8TC$)- d($G_{11}AGACCAAGG$) and Pt(S_1S_2 -diaminocyclohexane)²⁺ (the enantiomer of the antitumor drug oxaliplatin). The final product provides a rare example of intramolecular self-intercalation of DNA.



Chem. Asian J.
DOI: 10.1002/asia.200900655

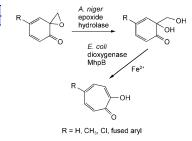


Biosynthesis

M. Xin, T. D. H. Bugg*

Biomimetic Formation of 2-Tropolones by Dioxygenase-Catalysed Ring Expansion of Substituted 2,4-Cyclohexadienones

At sixes and sevens: We have demonstrated experimentally the proposed ring expansion in the biosynthesis of substituted 2-tropolones. Treatment of four cyclohexa-2,4-dienones with the non-haem iron(II)-dependent extradiol catechol dioxygenase MhpB from *E. coli* resulted in the formation of 2-tropolones through a pinacol-type rearrangement. This ring expansion could also be effected nonenzymatically by treatment with 1,4,7-triazacyclononane and FeCl₂.

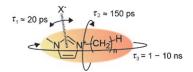


ChemBioChem

DOI: 10.1002/cbic.200900631



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ChemPhysChem

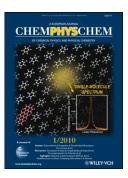
DOI: 10.1002/cphc.200900642

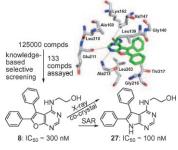
Ionic Liquids

K. Nakamura,* T. Shikata

Systematic Dielectric and NMR Study of the Ionic Liquid 1-Alkyl-3-Methyl Imidazolium

Dynamics of ionic liquids: Broad band dielectric relaxation and NMR studies for a series of 1-alkyl-3-methylimidazolium cations and various counter anionic species provide the dynamical aspects for ionic liquid molecules (see figure).





ChemMedChem

DOI: 10.1002/cmdc.200900339

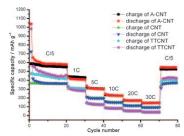
Drug Discovery

M. S. Coumar, M.-T. Tsai, C.-Y. Chu, B.-J. Uang, W.-H. Lin, C.-Y. Chang, T.-Y. Chang, J.-S. Leou, C.-H. Teng, J.-S. Wu, M.-Y. Fang, C.-H. Chen, J. T.-A. Hsu, S.-Y. Wu, Y.-S. Chao, H.-P. Hsieh*

Identification, SAR Studies, and X-ray Co-crystallographic Analysis of a Novel Furanopyrimidine Aurora Kinase A Inhibitor

Aurora blocked: Herein we disclose a combination of knowledge-, chemistry-, and structure-based strategies for the identification and development of hits as Aurora kinase A inhibitors. The compounds identified in this study could be used as starting points for the development of future novel Aurora kinase inhibitors as anticancer agents.





ChemSusChem

DOI: 10.1002/cssc.200900131

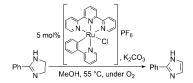
Carbon Nanotubes

Y.-J. Xu, X. Liu, G. Cui,* B. Zhu, G. Weinberg, R. Schlögl, J. Maier, D. S. Su*

A Comparative Study on the Lithium-Ion Storage Performances of Carbon Nanotubes and Tube-in-Tube Carbon Nanotubes

Tube or not tube? A comparative study of the electrochemical performance of carbon nanotubes and tube-in-tube carbon nanotubes demonstrates a dependence effect of lithium-ion storage behavior on the detailed nanostructure of carbon nanotubes.





ChemCatChem

DOI: 10.1002/cctc.200900251

Homogeneous Catalysis

A. Taketoshi, A. Tsujimoto, S. Maeda, T. Koizumi, T. Kanbara*

Aerobic Oxidative Dehydrogenation of 2-Substituted Imidazolines Promoted by a Cyclometalated Ruthenium Catalyst

Complex answer to a simple question: The aerobic oxidative dehydrogenation of 2-substituted imidazolines to their corresponding imidazoles has been achieved. A cyclometalated homogeneous $Ru^{\rm III}$ complex, $[RuCl(ppy)(tpy)][PF_6]$ (see scheme), worked as a catalyst under mild conditions without the need for a co-oxidant.



SPOTLIGHTS

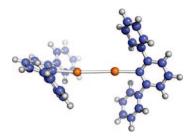


Subvalent Alkaline Earth Compounds

S. Krieck, L. Yu, M. Reiher, M. Westerhausen*

Subvalent Organometallic Compounds of the Alkaline Earth **Metals in Low Oxidation States**

Alkaline earth metals are regarded as redox-inert; only the oxidation state +2 seems to have significance. In the last few years, sophisticated procedures led to the isolation of compounds with lowvalent alkaline earth metals, and several concepts of their stabilization are discussed. Metal-metal bond formation (blue: C, grey: H, orange: Ca) is one possibility to obtain subvalent compounds.



Eur. J. Inorg. Chem. DOI: 10.1002/ejic.200900966

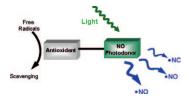


Bifunctional Antioxidants

E. Vittorino, S. Sortino*

A Phenolic Antioxidant Releasing Nitric Oxide on Demand

We have designed and synthesized, by a very simple procedure, a water-soluble molecular conjugate that combines radical scavenging properties to the delivery of nitric oxide in a way exclusively controlled by visible light external stimuli.



Eur. J. Org. Chem.

DOI: 10.1002/ejoc.200901207

