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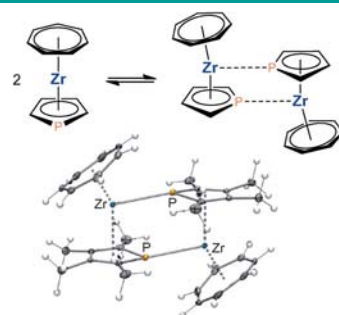


Phosphatrozircenes

A. Glöckner, T. Bannenberg, S. Büschel, C. G. Daniliuc, P. G. Jones, M. Tamm*

Cycloheptatrienyl Zirconium Sandwich Complexes with Lewis Basic Phospholyl Ligands (Phosphatrozircenes): Synthesis, Structure, Bonding and Coordination Chemistry

Molecular zwitter: Phospholylcycloheptatrienyl zirconium complexes exhibit ambiphilic reactivity and are able to develop unusual secondary interactions as a result of the isolobal replacement of a CH group in Lewis acidic $[(\eta^7\text{-C}_7\text{H}_7)\text{Zr}(\eta^5\text{-C}_5\text{H}_5)]$ (trozircene) by a Lewis basic phosphorus atom, and the bifunctional character of these molecules is illustrated by dimerisation in the solid state (see figure).



Chem. Eur. J.
DOI: 10.1002/chem.201100104

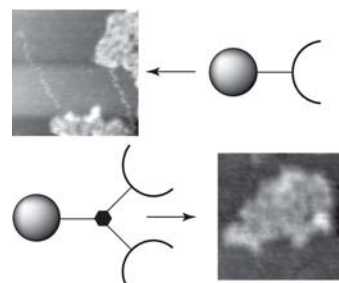


Supramolecular Oligomers

J. Santos, E. M. Pérez, B. M. Illescas, N. Martín*

Linear and Hyperbranched Electron-Acceptor Supramolecular Oligomers

Strip-tweezer: Monomers comprising one or two units of a TCAQ tweezer covalently connected to a fullerene derivative self-assemble in solution and on surfaces to form linear and hyperbranched supramolecular polymers respectively. These polymers constitute two of the first examples of purely electron-acceptor supramolecular polymers.



Chem. Asian J.
DOI: 10.1002/asia.201000832

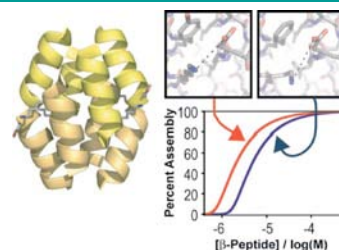


Protein Engineering

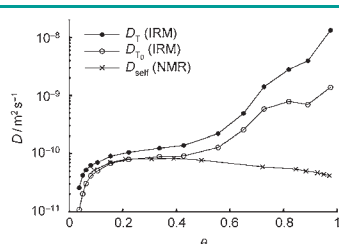
C. J. Craig, J. L. Goodman, A. Schepartz*

Enhancing β^3 -Peptide Bundle Stability by Design

Building β^3 -peptide bundles from the “bottom-up”: The high-resolution structure of the octameric β -peptide helical bundle Zwt-1F revealed the unique core packing and surface interactions that drive β -bundle assembly. Mutating residues at the surface and optimizing salt bridges can lead to dramatic increases in assembly and thermodynamic stability.



ChemBioChem
DOI: 10.1002/cbic.201000753



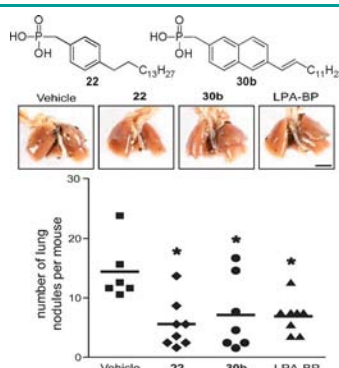
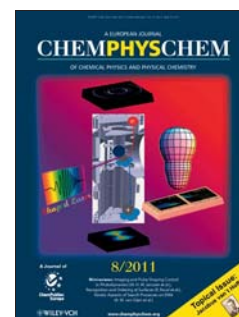
ChemPhysChem
DOI: 10.1002/cphc.201100072

Diffusion

C. Chmelik, D. Enke, P. Galvosas, O. Gobin, A. Jentys, H. Jobic, J. Kärger,* C. B. Krause, J. Kullmann, J. Lercher, S. Naumov, D. M. Ruthven, T. Titz

Nanoporous Glass as a Model System for a Consistency Check of the Different Techniques of Diffusion Measurement

The remarkable differences in the guest diffusivities in nanoporous materials found with the application of different measuring techniques are usually ascribed to the existence of a hierarchy of transport resistances. Diffusion measurements with nanoporous glasses where the existence of such resistances could be avoided are reported (see picture).



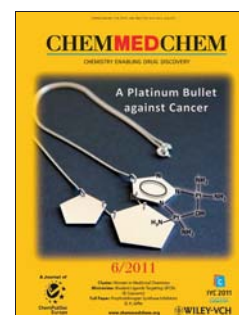
ChemMedChem
DOI: 10.1002/cmdc.201000425

Antitumor Agents

R. Gupte, R. Patil, J. Liu, Y. Wang, S. C. Lee, Y. Fujiwara, J. Fells, A. L. Bolen, K. Emmons-Thompson, C. R. Yates, A. Siddam, N. Panupinthu, T.-C. T. Pham, D. L. Baker, A. L. Parrill, G. B. Mills, G. Tigyi,* D. D. Miller*

Benzyl and Naphthalene Methylphosphonic Acid Inhibitors of Autotaxin with Anti-invasive and Anti-metastatic Activity

Inhibiting the ATX–LPA–LPA axis: New 4-substituted benzylphosphonic acid and 6-substituted naphthalen-2-ylmethylphosphonic acid analogues were synthesized, and the most potent ATX inhibitors, **22** and **30b**, show outstanding in vivo profiles by diminishing lung metastases of B16-F10 syngeneic mouse melanoma in a post-inoculation treatment model. These two lead compounds effectively inhibit the ATX–LPA–LPA axis both in vitro and in vivo.



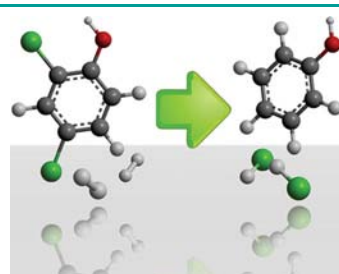
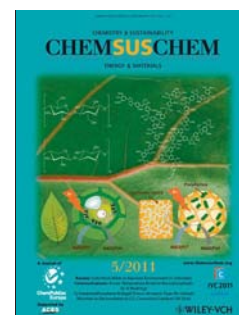
ChemSusChem
DOI: 10.1002/cssc.201000315

Carbon Nanotubes

C. Jin, T. C. Nagaiah, W. Xia, M. Bron, W. Schuhmann, M. Muhler*

Polythiophene-Assisted Vapor Phase Synthesis of Carbon Nanotube-Supported Rhodium Sulfide as Oxygen Reduction Catalyst for HCl Electrolysis

Rhodium Drive: Carbon nanotube-supported rhodium sulfide electrocatalysts are prepared by sequential chemical vapor deposition of iron, controlled vapor phase polymerization of thiophene, and finally impregnation of the rhodium precursor and pyrolysis. The electrocatalysts are applied in the oxygen reduction reaction under HCl electrolysis conditions.



ChemCatChem
DOI: 10.1002/cctc.201000432

Hydrodechlorination

M. A. Keane*

Supported Transition Metal Catalysts for Hydrodechlorination Reactions

Critical discharge concerns: The presence of chloro-organics in effluent discharges is of increasing concern, owing to the mounting evidence of adverse stratospheric ozone, ecological effects, and the impact on public health. Catalytic hydrodechlorination represents a progressive means of detoxification and recycling. This Review sets out the benefits over separation/oxidation methodologies and, focuses on the transformation of chloro-aromatics



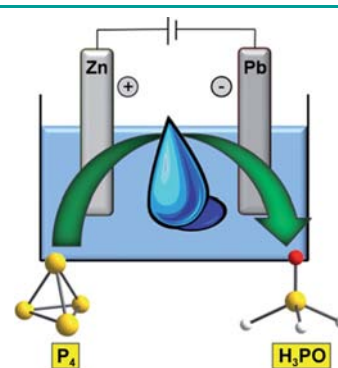


Phosphorus Chemistry

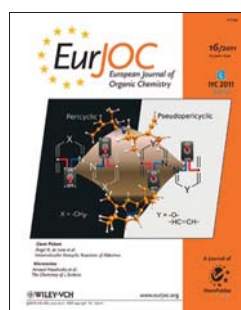
D. Yakhvarov,* M. Caporali, L. Gonsalvi, S. Latypov, V. Mirabello, I. Rizvanov, O. Sinyashin, P. Stoppioni, M. Peruzzini*

Experimental Evidence of Phosphine Oxide Generation in Solution and Trapping by Ruthenium Complexes

Phosphine oxide (H_3PO), the first defined compound of phosphorus in the oxidation state -1 , was obtained in solution by electrochemical methods starting from white phosphorus (see picture). H_3PO was characterized by NMR solution spectroscopy as a free molecule and isolated as a ligand in ruthenium(II) complexes following tautomerization to phosphinous acid, $\text{H}_2\text{P}(\text{OH})$.



Angew. Chem. Int. Ed.
DOI: 10.1002/anie.201100822

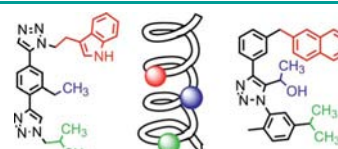


Triazole Helix Mimetics

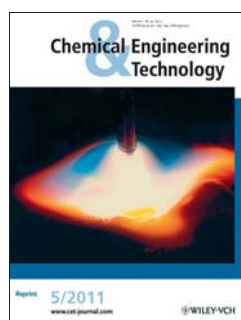
I. Ehlers, P. Maity, J. Aubé, B. König*

Modular Synthesis of Triazole-Containing Triaryl α -Helix Mimetics

Teraryl scaffolds that contain triazoles and reproduce amino acid side chains in positions i , $i+3$, and $i+7$ have been prepared as α -helix mimetics. Regioisomeric click reactions were used as key transformations.



Eur. J. Org. Chem.
DOI: 10.1002/ejoc.201001531

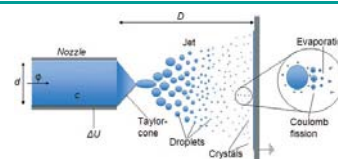


Electrospray Crystallization

N. Radacsi*, A. I. Stankiewicz, Y. L. M. Creyghton, A. E. D. M. van der Heijden, J. H. ter Horst

Electrospray Crystallization for High-Quality Submicron-Sized Crystals

Electrospray crystallization is proposed as a method for creating high-quality submicron-sized crystals of the energetic material cyclotrimethylene trinitramine (RDX). The friction sensitivity of the obtained unagglomerated submicron-sized crystals was lower than that of conventional RDX, indicating that they have a better internal quality.



Chem. Eng. Technol.
DOI: 10.1002/ceat.201000538