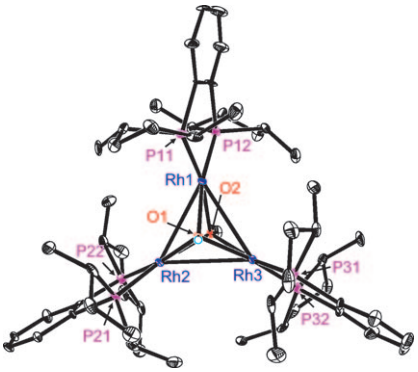
Asymmetric Hydrogenation

A. Preetz, W. Baumann, H.-J. Drexler, C. Fischer, J. Sun, A. Spannenberg, O. Zimmer, W. Hell, D. Heller*

Trinuclear Rhodium Complexes and Their Relevance for Asymmetric Hydrogenation

Chem. Asian J.
DOI: **10.1002/asia.200800184**

Basic effects: Stable trinuclear rhodium complexes are presented as possible diolefin-free precatalysts for asymmetric hydrogenation (see structure). It is shown that basic additives such as NEt_3 commonly used to manipulate enantioselectivities can lead to a deactivation by formation of the respective trinuclear complexes, and even prochiral olefins can initiate the formation of trinuclear complexes without other basic additives. However, acidic additives can reverse this effect.



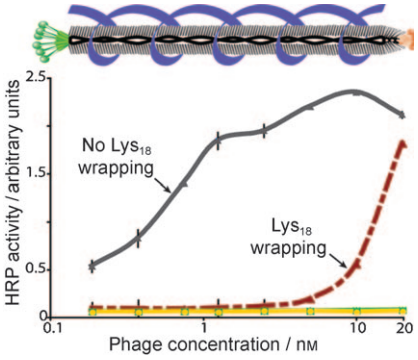
Molecular Display

J. A. Lamboy, P. Y. Tam, L. S. Lee, P. J. Jackson, S. K. Avrantinis, H. J. Lee, R. M. Corn, G. A. Weiss*

Chemical and Genetic Wrappers for Improved Phage and RNA Display

ChemBioChem
DOI: **10.1002/cbic.200800366**

Phage and RNA wrapping to target challenging proteins: Lysine peptides, introduced either chemically or genetically, mask the negatively charged surface of phage to abolish nonspecific binding to high-pI proteins. This wrapping strategy allowed successful selections, screens, and assays with previously inaccessible targets. In addition to phage display, lysine wrapping could be applied to other negatively charged display systems, such as ribosome and mRNA display.

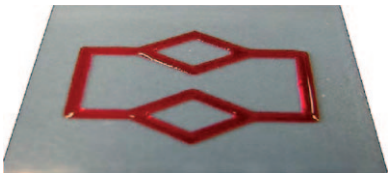


Microfluidics

T. A. Franke, A. Wixforth*

Microfluidics for Miniaturized Laboratories on a Chip

ChemPhysChem
DOI: **10.1002/cphc.200800349**



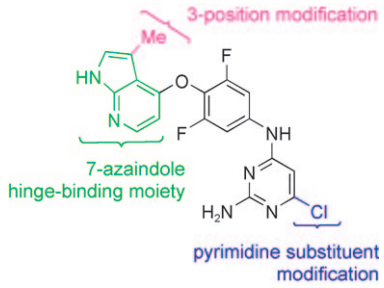
Hi-tech comes in small packages: Current state-of-the-art lab-on-a-chip technology is presented in this Review. On these small length scales the fluidics differ significantly from the macroscopic world. Actuation and mixing of fluids by surface acoustic waves are emphasized, with blood flow on a chip (see picture) providing a striking example of the potential of the lab-on-a-chip.

ROCK Inhibitors

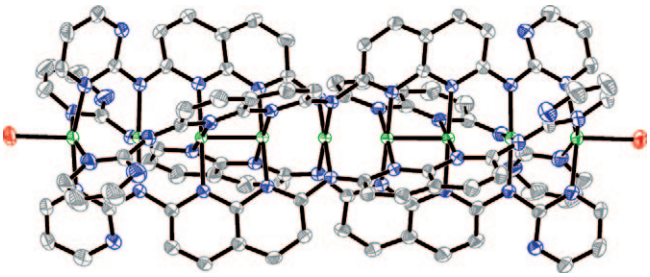
H. Schirok,* R. Kast, S. Figueroa-Pérez, S. Bennabi, M. J. Gnoth, A. Feurer, H. Heckroth, M. Thutewohl, H. Paulsen, A. Knorr, J. Hütter, M. Lobell, K. Münter, V. Geiß, H. Ehmke, D. Lang, M. Radtke, J. Mittendorf, J.-P. Stasch

Design and Synthesis of Potent and Selective Azaindole-Based Rho Kinase (ROCK) Inhibitors

ChemMedChem
DOI: **10.1002/cmdc.200800211**



A new compound class of Rho kinase (ROCK) inhibitors containing a 7-azaindole hinge-binding moiety was discovered. The introduction of substituents at the 3-position of the bicyclic ring system led to a significant increase in activity and permitted the design of compounds with a favorable pharmacokinetic profile. The ROCK inhibitors are orally bioavailable and mediate a sustained blood pressure lowering effect in vivo.



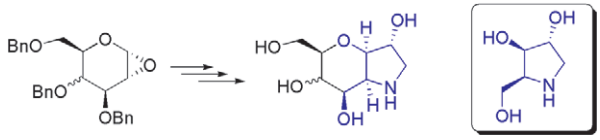
The new pyrimidyl- and naphthyridyl-modulated pentapyridyltetramine ligand (H_3N_9-2pm) and its linear nona- and octanickel chain complexes were successfully synthesized and structurally characterized. Their magnetic and electrochemical properties were investigated. (Color code: blue = N, green = Ni, red = Cl)

Linear Metal Chains

R. H. Ismayilov, W.-Z. Wang, R.-R. Wang, Y.-L. Huang, C.-Y. Yeh, G.-H. Lee, S.-M. Peng*

Stabilization of Long Cationic EMACs by Reduction or Loss of One Metal Ion

Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200800450**



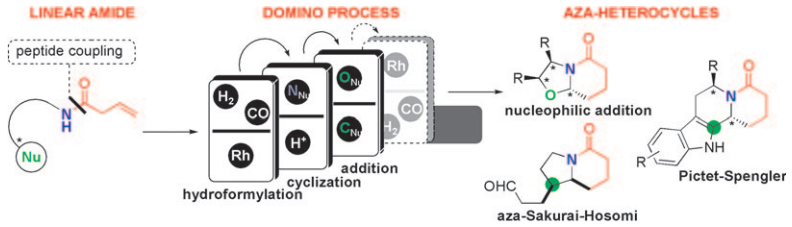
3,4,6-Tri-*O*-benzyl glycal epoxides have been efficiently converted into four sugar–iminosugar hybrid molecules made up of D-glucose and D-galactose with pyrrolidine-based iminosugars. These hybrid molecules were found to be moderate glycosidase inhibitors.

Iminosugar Hybrid Molecules

V. R. Doddi, H. P. Kokatla, A. P. J. Pal, R. K. Basak, Y. D. Vankar*

Synthesis of Hybrids of D-Glucose and D-Galactose with Pyrrolidine-Based Iminosugars as Glycosidase Inhibitors

Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200800770**



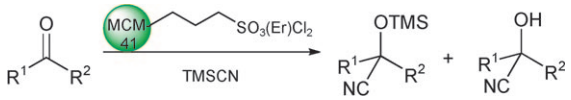
Dominating chemistry! The development of hydroformylative domino reactions of easily accessible vinyl acetamides is described. Extremely regioselective hydroformylation of terminal double bounds provides a transient *N*-acyliminium that can be trapped by various nucleophiles to give several aza-heterocyclic scaffolds in a diastereoselective manner (see scheme).

Heterocycles

E. Airiau, T. Spangenberg, N. Girard, A. Schoenfelder, J. Salvadori, M. Taddei, A. Mann*

A General Approach to Aza-Heterocycles by Means of Domino Sequences Driven by Hydroformylation

Chem. Eur. J.
DOI: **10.1002/chem.200801795**



EvEr green: A simple synthetic protocol has been developed for the solvent-free cyanosilylation reaction of aldehydes and ketones with trimethylsilylcyanide (TMSCN) catalysed by a new mesoporous silica supported Er^{III} catalyst. The catalyst can be recovered and reused in subsequent reactions without showing any loss of activity (three uses).

Solvent-free Reactions

A. Procopio,* G. Das, M. Nardi, M. Oliverio, L. Pasqua

A Mesoporous Er^{III}-MCM-41 Catalyst for the Cyanosilylation of Aldehydes and Ketones under Solvent-free Conditions

ChemSusChem
DOI: **10.1002/cssc.200800183**

Auf diesen beiden Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley InterScience leicht online zugänglich.