

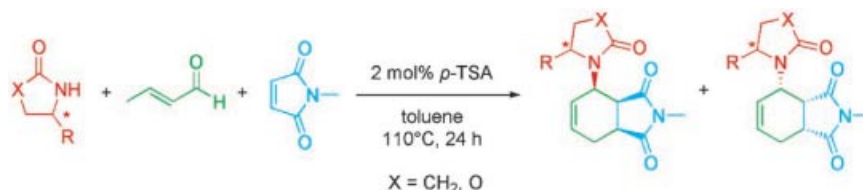
SPOTLIGHTS ...

Multicomponent Reactions

S. Hübner, H. Jiao, D. Michalik,
H. Neumann, S. Klaus, D. Strübing,
A. Spannenberg, M. Beller*

In Situ Generation of Chiral *N*-Dienyl Lactams in a Multicomponent Reaction: An Efficient and Highly Selective Way to Asymmetric Amidocyclohexenes

Chem. Asian J.
DOI: 10.1002/asia.



Three Amigos: The employment of chiral amides in combination with aldehydes and dienophiles in our novel multicomponent procedure allows the simple and efficient synthesis of amido-functionalized cyclohexene de-

rivatives (see scheme; *p*-TSA = *para*-toluenesulfonic acid). The multicomponent methodology circumvents the circuitous preparation of chiral *N*-dienyl lactams as they are generated in situ.

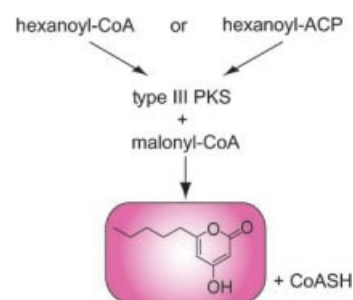
Polyketide Synthases

S. Grischow, T. J. Buchholz,
W. Seufert, J. S. Dordick,
D. H. Sherman*

Substrate Profile Analysis and ACP-Mediated Acyl Transfer in *Streptomyces coelicolor* Type III Polyketide Synthases

ChemBioChem
DOI: 10.1002/cbic.

Protein partners. We report the biochemical characterization of two type III polyketide synthases (PKS) from *Streptomyces coelicolor*. Remarkably, germicidin synthase (Gcs)/SCO7221 was able to utilize both acyl-CoA and acyl-ACP as starter units for the production of pyrone containing compounds.

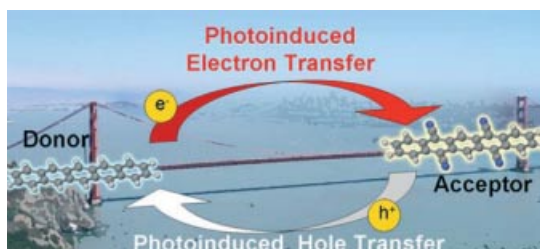


Electron Transfer

A. Van Vooren, V. Lemaure, A. Ye,
D. Beljonne, J. Cornil*

Impact of Bridging Units on the Dynamics of Photoinduced Charge Generation and Charge Recombination in Donor-Acceptor Dyads

ChemPhysChem
DOI: 10.1002/cphc.



Donor-bridge-acceptor architectures: The authors estimate, at a full quantum-chemical level, the various molecular parameters governing charge-transfer rates in model organic struc-

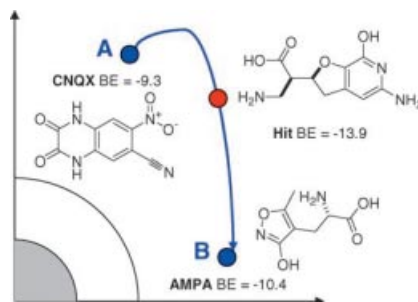
tures containing a donor and an acceptor unit connected by a bridging unit (see picture). The nature, size, and conformation of the bridging unit have been systematically varied.

Cheminformatics

R. van Deursen, J.-L. Reymond

Chemical Space Travel

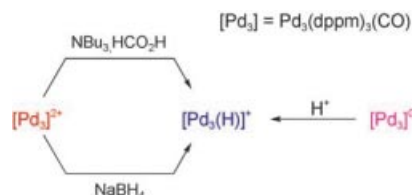
ChemMedChem
DOI: 10.1002/cmdc.



Space the final frontier! Modern medicine depends on the discovery of new drugs however, detailed knowledge of all possible organic molecules is not available. To travel in this so-called chemical space and discover new compounds, we wrote a spaceship program combining a point mutation generator with a selection module for target similarity. Thus, allowing travel from a starting molecule A to a target molecule B through a continuum of structural mutations.

... ON OUR SISTER JOURNALS

An unprecedented hydride adduct was formed upon the addition of formate to a dicationic palladium cluster $[\text{Pd}_3(\text{dppm})_3(\mu_3\text{-CO})]^{2+}$ (dppm = bis(diphenylphosphinomethane)). This is just one of the routes that can be used to form this product (see scheme). The palladium-hydride cluster has been fully characterised by both spectroscopic and electroanalytical methods.

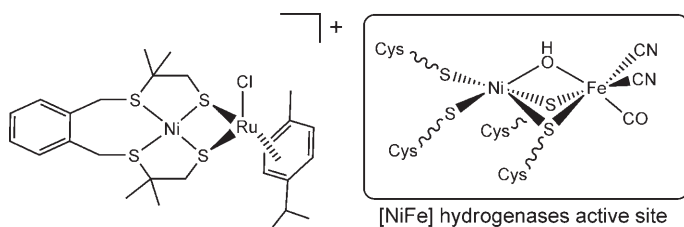


Cluster Compounds

C. Cugnet, D. Lucas,* E. Collange, B. Hanquet, A. Vallat, Y. Mugnier, A. Soldera, P. D. Harvey*

Generation, Characterization, and Electrochemical Behavior of the Palladium-Hydride Cluster $[\text{Pd}_3(\text{dppm})_3(\mu_3\text{-CO})(\mu_3\text{-H})]^+$ (dppm = Bis(diphenylphosphino-methane))

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



New dinuclear nickel-ruthenium catalysts for H_2 production that mimic the active site of $[\text{NiFe}]$ hydrogenases are described. The activity of these new

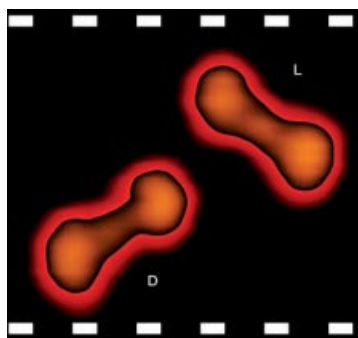
complexes is explained by the existence of a cooperative effect between the metal centers and is further related to their electronic properties.

Hydrogenase Models

Y. Oudart, V. Artero,* J. Pécaut, C. Lebrun, M. Fontecave

Dinuclear Nickel-Ruthenium Complexes as Functional Bio-Inspired Models of $[\text{NiFe}]$ Hydrogenases

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



Lights, camera, action! The general mechanism of biomolecular recognition introduced by Pauling more than 50 years ago has now been brought to the movie screen (see still frame; D: D-Phe-D-Phe, L: L-Phe-L-Phe). With STM movies, the chiral-recognition process of individual adsorbed di-phenylalanine molecules is followed to illustrate the dynamic induced-fit mechanism at the single-molecule level.

Molecular Recognition

M. Lingenfelder,* G. Tomba, G. Costantini, L. Colombi Ciacchi, A. De Vita, K. Kern

Tracking the Chiral Recognition of Adsorbed Dipeptides at the Single-Molecule Level

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



On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of

the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.