

A Journal of the Gesellschaft Deutscher Chemiker

D 3461

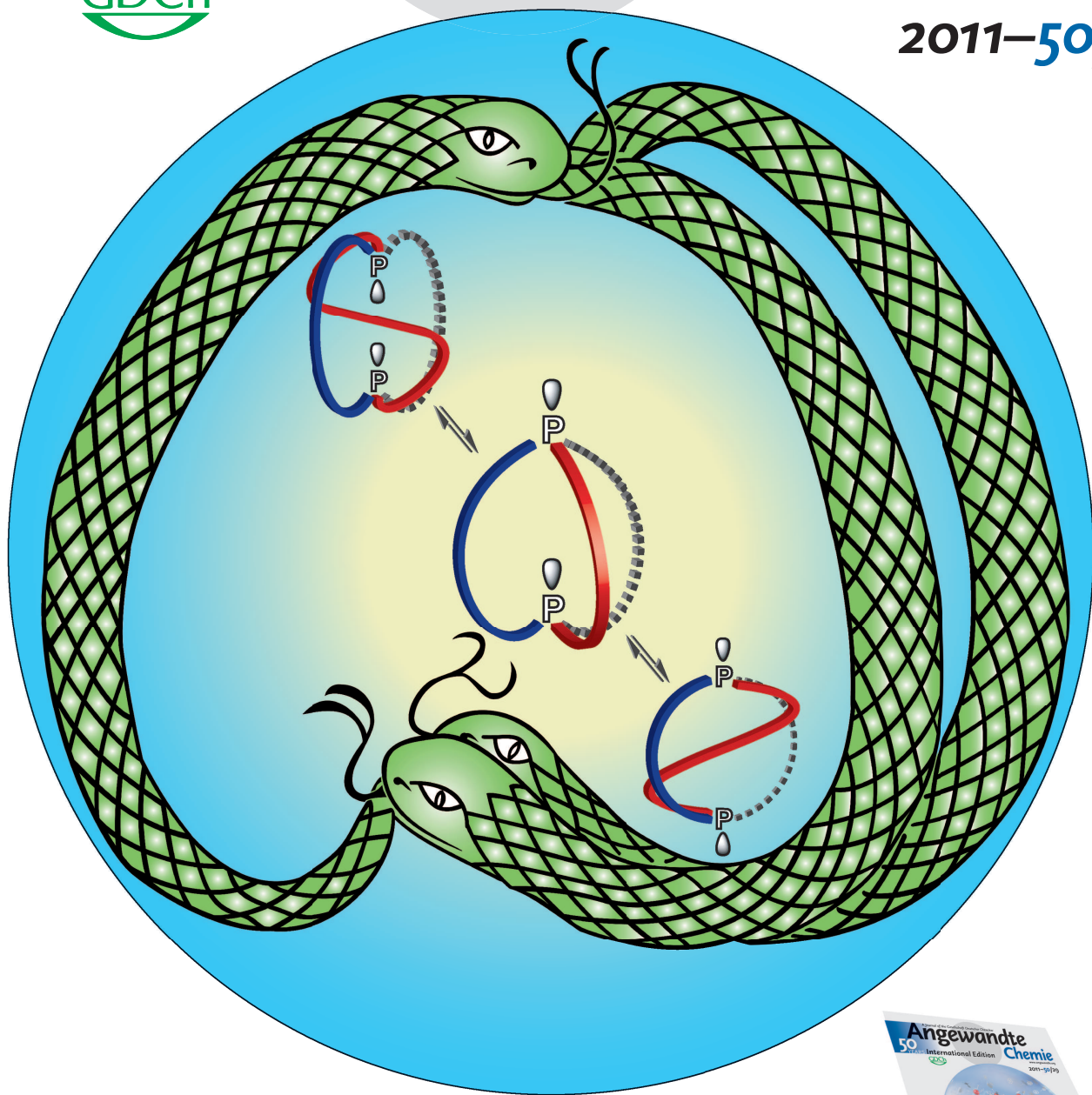
Angewandte Chemie

50 YEARS International Edition

GDCh

www.angewandte.org

2011–50/29



Ambident Reactivity

H. Mayr et al.

5-Hydroxymethylcytosine in the Genome

T. Carell et al.

Lithium Chloride in Organometallic Synthesis

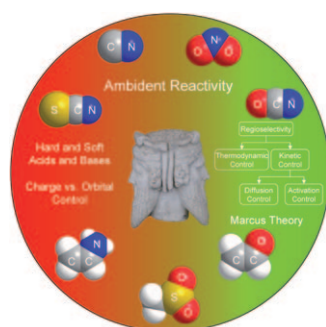
R. E. Mulvey and E. Hevia



Cover Picture

Susy Piovesana, Daniele M. Scarpino Schietroma, and Marco Bella*

Macrocyclic bicyclic molecules in which the three flexible diphosphine chains linking the bridgehead atoms undergo a topological process (homeomorphic isomerization) involving passing one chain through the ring formed by the other two, thereby turning the compound inside-out with apparent pyramidal inversion, are described by J. A. Gladysz and co-workers in their Communication on page 6647 ff. Modifying alchemical symbolism and in memory of Kekulé's famous dream, the diphosphines are represented by three Ouroboros snakes that form a cage by seizing each other's tails instead of their own.

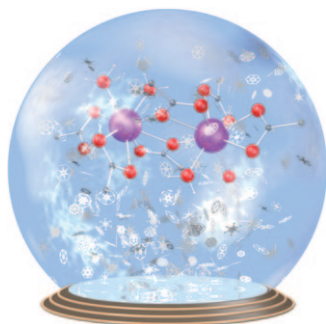
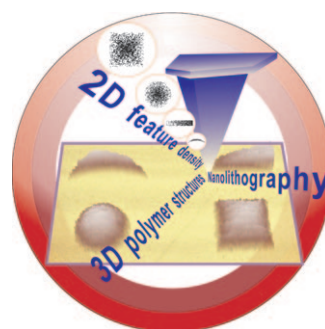


Reactivity of Ambident Nucleophiles

Many textbooks explain the course of reactions of ambident substrates with the help of the principle of hard and soft acids and bases—but, as H. Mayr et al. show in their Review on page 6470 ff., this has a hit rate of less than 50%. A qualitative Marcus model is suggested as an alternative.

Three-Dimensional Polymer Structures

A combination of dip-pen lithography and atom transfer radical polymerization enables nanobrushes to be precisely patterned to generate 3D images. In their Communication on page 6506 ff., Z. Zheng et al. use this approach to develop their own Mona Lisa.



Magnetocaloric Effects

High magnetic density and dominant ferromagnetism combine to endow gadolinium acetate tetrahydrate with an unprecedentedly large cryogenic magnetocaloric effect, as described by M. Evangelisti and co-workers in their Communication on page 6606 ff.