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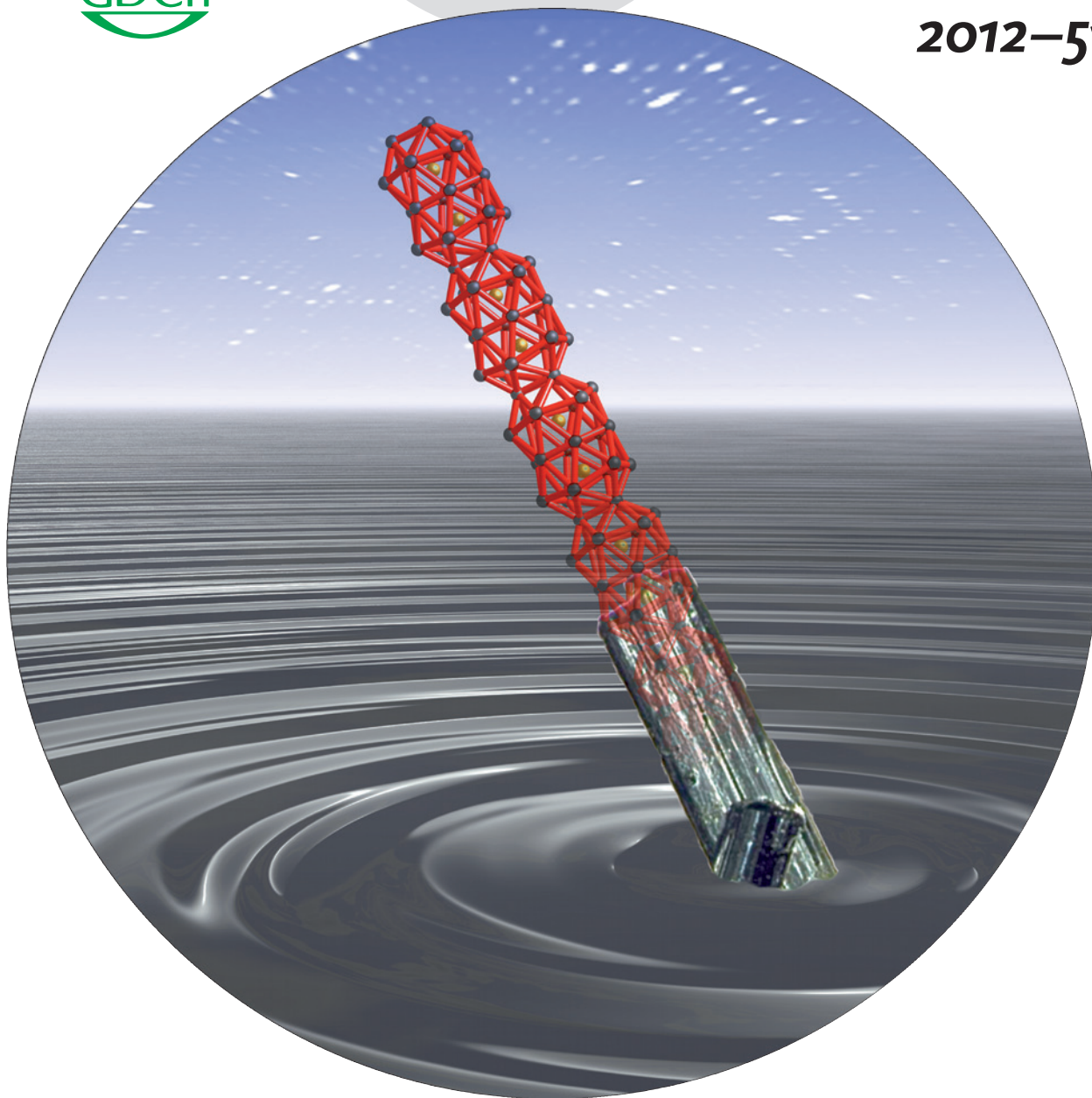
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Allenes in Catalytic Asymmetric Synthesis

Review by S. Ma and S. Yu

Kinetic Isotope Effects

Essay by J. F. Hartwig and E. M. Simmons

Highlights: Bioactive Nanovehicles • Amide Solvolysis

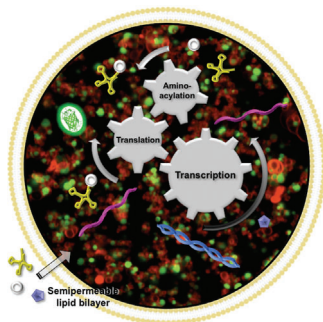
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Cover Picture

Constantin Hoch* and Arndt Simon

The most mercury-rich sodium amalgam, $\text{Na}_{11}\text{Hg}_{52}$, is prepared as single crystals by the combination of electrolytic and thermochemical methods. As C. Hoch and A. Simon show in their Communication on page 3262 ff. this amalgam has a close relationship to the chloralkali process and a surprisingly complex structure for a binary compound. Such mercury-rich amalgams serve as models of polar metals in which a transition from the classical metal-metal bonding towards ionic bonding occurs.

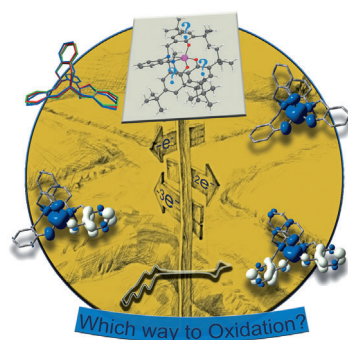
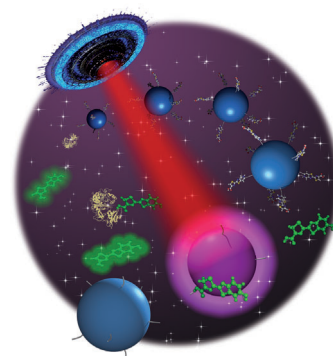


Bioreactors

Lipid vesicles with semipermeable boundaries that contain protein synthesis machinery are described by C. Danelon and co-workers in their Communication on page 3114 ff. This approach shows great potential for the construction of an elementary cell having an active interface with the environment.

Bioimaging

In their Communication on page 3125 ff. X. Liu, B. Xing, and co-workers describe a bioimaging system that uses upconversion nanoparticles to convert near-infrared light into UV light, which causes the uncaging and release of D-luciferin.



Coordination Chemistry

C. N. Verani and co-workers describe bioinspired iron(III) complexes for stabilizing radicals in their Communication on page 3178 ff. Small changes to the ligand or electrolyte totally alter the sequence of ligand oxidation.