π Electrons decide…

CHEMISTRY
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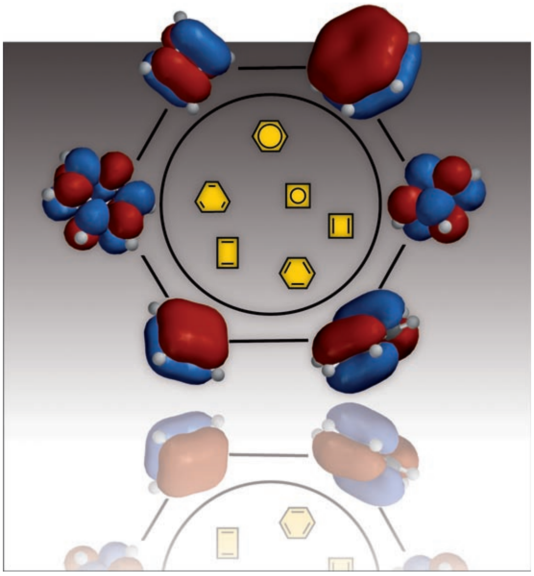
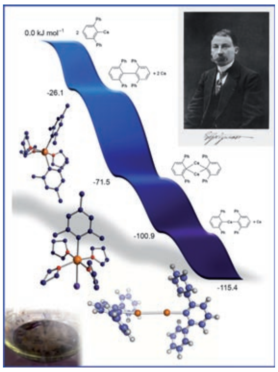
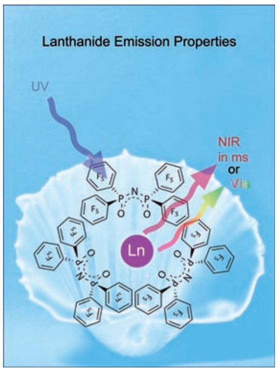
… about aromatic delocalization versus antiaromatic localization of the double bonds in benzene and cyclobutadiene, respectively. In their Full Paper on page 6321 ff., S. C. A. H. Pierrefixe and F. M. Bickelhaupt present a molecular-orbital (MO) model of aromaticity that augments the modern valence-bond picture available.

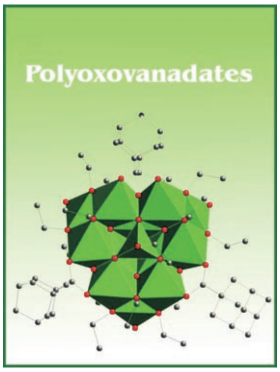




Organometallic Chemistry
In their Concept article on page 6292 ff., M. Westerhausen et al. discuss the organometallic chemistry of the heavy alkaline earth metals calcium, strontium, and barium. Due to the existence of straightforward procedures for the synthesis of organic calcium compounds, it is envisaged that the importance of this substance class will be enhanced and a wide range of applications will be developed.

Lanthanide Complexes
In their Full Paper on page 6308 ff., Z. Pikramenou et al. demonstrate that aromatic C–F substitution in an imidodiphosphinate binding site leads to complexes with unparalleled photophysical behaviour in the NIR and visible region. The HF_{20}tpip ligand provides a ligand framework structure that leads to stable, luminescent [Ln(F_{20}tpip$)_3$] complexes for all lanthanides and provides a ligand framework, with no high-energy X–H vibrations and aryl sensitiser groups, that is able to assemble in a shell arrangement around the metal.





Oxo–Vandium Clusters
In their Full Paper on page 6329 ff., E. J. L. McInnes, R. H. Laye et al. describe the synthesis and characterisation of several new members of the family of polyoxovanadate clusters, which have unprecedentedly low oxidation states. Solvothermal conditions are essential for the formation of these species, and the level of oxidation of the isolated clusters is in part controlled by the crystallisation time.

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