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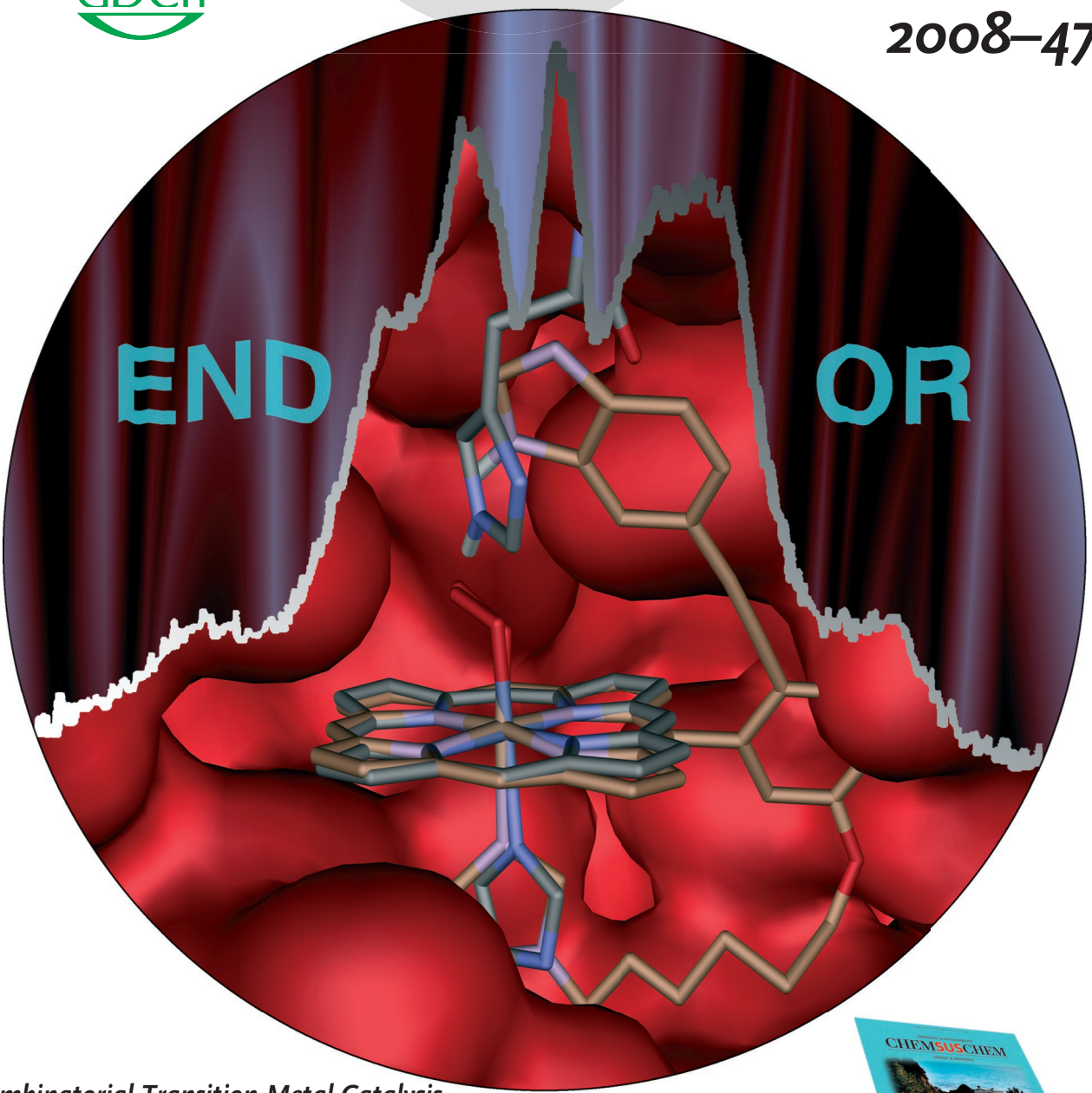

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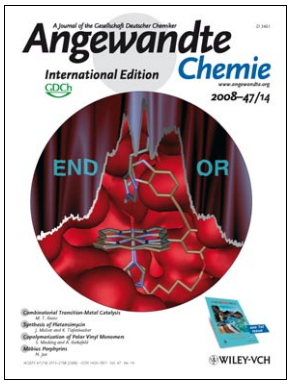
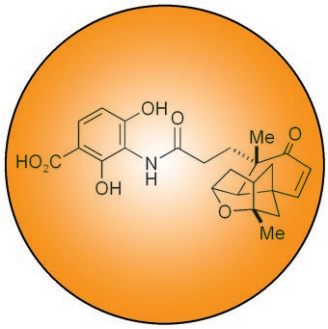
Cover Picture



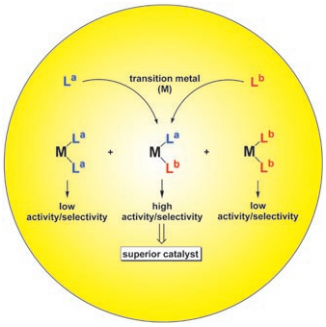
Henry Dube, Besnik Kasumaj, Carlos Calle, Makoto Saito, Gunnar Jeschke, and François Diederich*

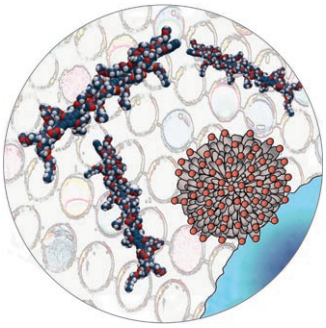
A direct look at hydrogen bonding is possible with a synthetic cobalt(II) porphyrin model complex for myoglobin and hemoglobin. A dipolar distal hydrogen bond to bound dioxygen has been directly identified and characterized by pulse Davies-ENDOR spectroscopy. The complete EPR parameters for this interaction are given by F. Diederich et al. in their Communication on page 2600 ff. A similar but stronger distal hydrogen bond was revealed by the same methods in the dioxygen adduct of natural cobalt myoglobin, thus demonstrating that the synthetic complex is an excellent model for the natural protein.



Synthesis of platensimycin
In their Minireview on page 2548 ff., J. Mulzer and K. Tiefenbacher present the great variety of synthesis routes to the recently discovered antibiotic natural product platensimycin. These routes have been developed in numerous research groups in a very short time.

Combinatorial Transition-Metal Catalysis
The mixing of two monodentate ligands in the presence of a transition metal provides two homo-combinations and one heterocombination. If the latter is most active, it will define the catalytic profile, as described in the Review by M. T. Reetz on page 2556 ff.





Bioanalysis
Noncovalent conjugates from a polymer and gold nanoparticles have been developed which can rapidly and efficiently identify bacteria. The method is based upon a specific fluorescence response of the analytes, as V. Rotello, U. Bunz, and co-workers describe in their Communication on page 2590 ff.