A variety of SHOP...

...-type catalysts, in which the C= C(O) double bond of nickel phosphanylenolates $[Ni{Ph_2PC(R^1)}]$ $C(R^2)O$ {Ph(PPh₃)] was substituted by electron-withdrawing substituents, were assessed as ethyleneoligomerization and -polymerization catalysts and compared with Keim's complex [Ni{Ph₂PCH= C(Ph)O}Ph(PPh₃)] (1). Regardless of their relative electron-withdrawing strength, all of these substituents induced an increase in activity with respect to 1. A rationale for the influence of the double-bond substituents of the P,O-chelate unit on the catalytic properties is proposed by Matt et al. in their Full Paper on page 5210 ff.









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Allylation Reactions

In their Concept article on page 5178 ff., C. Bruneau et al. describe the catalytic chemistry of pentamethylcyclopentadienyl–ruthenium complexes bearing nitrogen ligands such as acetonitrile or bipyridine. These complexes have revealed their ability to activate allylic halides and carbonates to generate [Ru(Cp*)(η^3 -allyl)] complexes that can be isolated and fully characterized.

Heterogeneous Chiral Catalysts

In their Concept article on page 5188 ff., K. Ding et al. describe a new strategy, that is, a "self-supporting" approach, for the immobilization of homogeneous catalysts through self-assembly of chiral multitopic ligands and metal ions without the use of any support. On the basis of this strategy, the chiral multitopic ligand can spontaneously form a chiral environment inside the cavities of or on the surface of the solids for enantioselective control of the reaction, and the metal ions act as the catalytically active centers.





Bond Fission

In their Full Paper on page 5199 ff., H. Berke et al. describe a unique reaction sequence in which treatment of $[Re(=CHPh)-(NO)_2(PR_3)_2][BAr^F_4]$ with acetonitrile promotes a reaction in the ligand sphere of this complex. Experimental observations with concomitant DFT calculations elucidated the reaction mechanism, which involves the coupling of a coordinated nitrosyl ligand, a carbene unit, and an acetonitrile molecule to yield the (1Z)-N-[imino(phenyl)methyl]ethanimidate ligand. A key step of this reaction sequence is the migration of the benzylidene moiety into the NO ligand.

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