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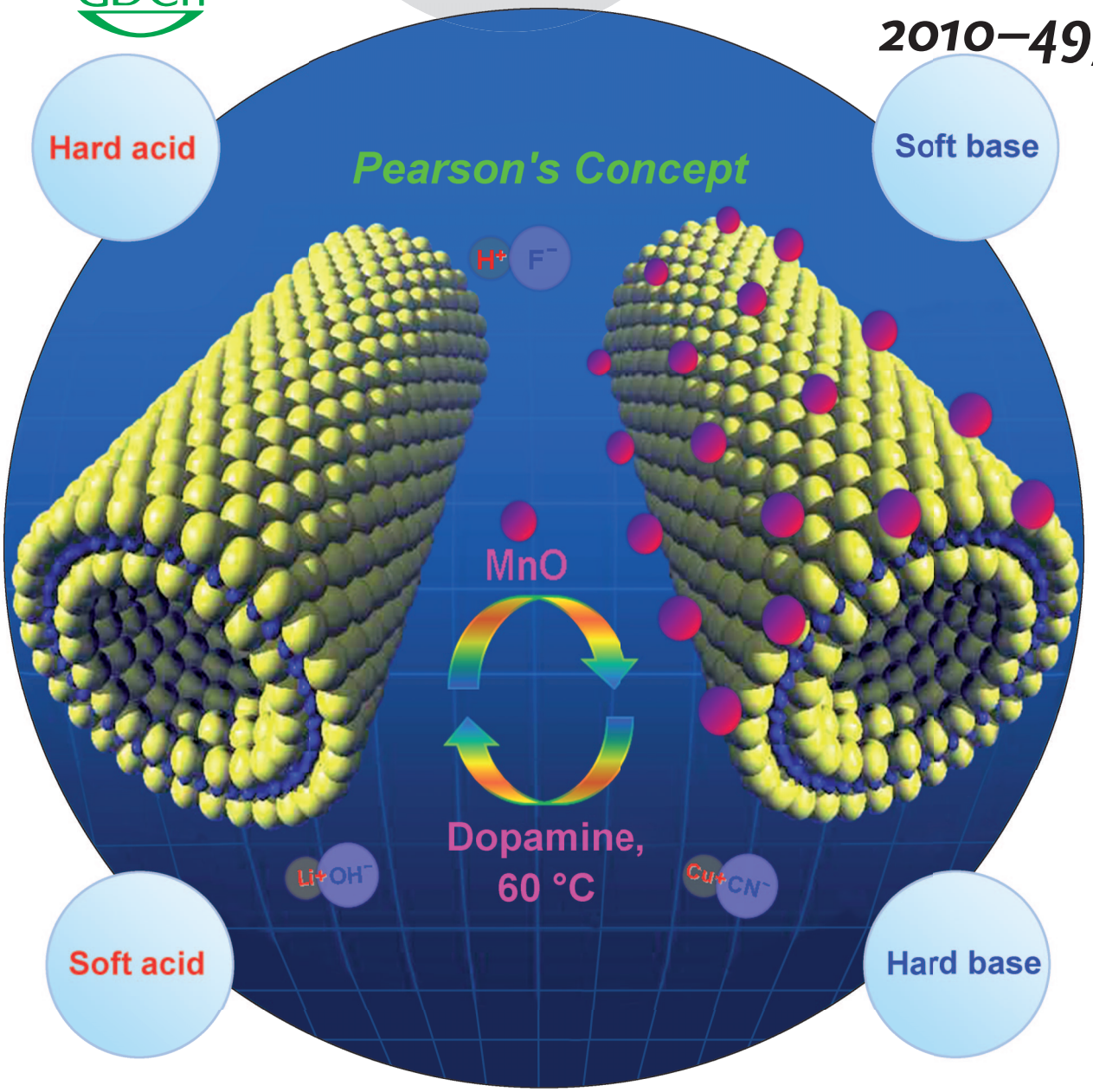

Nobel Lectures: Telomeres/Telomerase
J. W. Szostak • E. H. Blackburn • C. W. Greider

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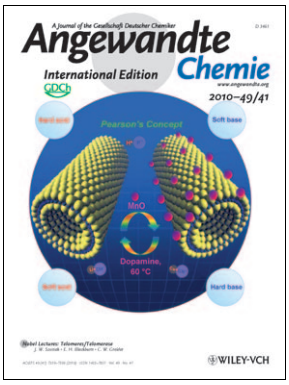
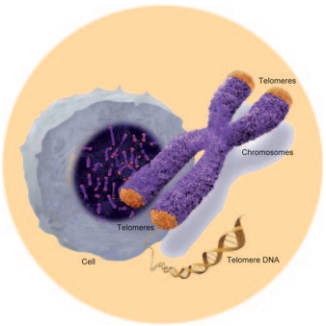
Cover Picture

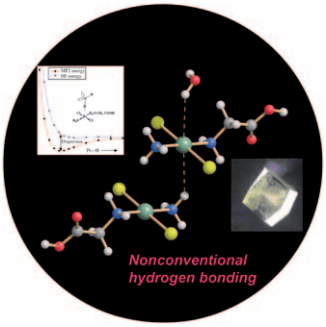


Jugal Kishore Sahoo, Muhammad Nawaz Tahir, Aswani Yella, Thomas D. Schladt, Enrico Mugnaoli, Ute Kolb, and Wolfgang Tremel*

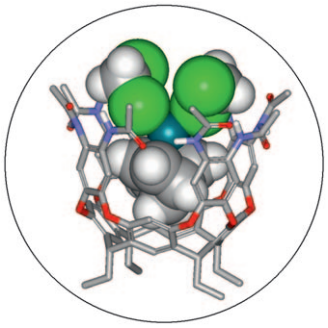
The use of layered chalcogenide nanoparticles in composite materials was facilitated by a better binding of the nanoparticles to the chalcogenide/matrix interface. In their Communication on page 7578 ff. W. Tremel et al. present a strategy for the reversible functionalization and formation of MS_2/MO_x nanoparticle assemblies. This functionalization, in which the Pearson HSAB concept is tested on the nanoscale, allows kinetic and thermodynamic control of the product.



Nobel Lectures
The Nobel Prize for Medicine 2009 was awarded for the discovery of how chromosome ends are protected by telomeres and the enzyme telomerase. The developments leading to the discovery are presented first-hand by the laureates J. W. Szostak, E. H. Blackburn, and C. W. Greider in the Reviews starting from page 7386 ff.



Nonclassical Hydrogen Bonds
Ab initio calculations have predicted that neutral Pt^{II} complexes form hydrogen bonds with H_2O, in which Pt^{II} acts as a Lewis base. In their Communication on page 7440 ff., J. Kozelka et al. confirm these calculations through the identification of such nonclassical bonds in *trans*-$[PtCl_2(NH_3)(N\text{-glycine})]\cdot H_2O$ by neutron diffraction.



Hydrogenation
The hydrogenation of norabornadiene by a catalytically active species, derived from the inclusion of a rhodium complex within a deep-cavity cavitand, is described by P. Ballester, A. Vidal-Ferran, and co-workers in their Communication on page 7489 ff. The cavitand serves as a second-sphere ligand, thus modifying the reactivity of the rhodium complex.