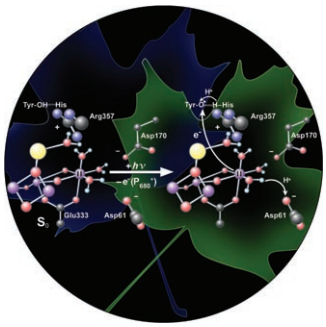
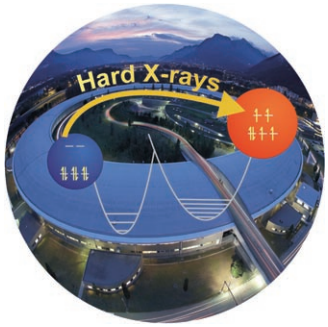
Cover Picture

Hyon Bin Na, Jung Hee Lee,* Kwangjin An, Yong Il Park, Mihyun Park, In Su Lee, Do-Hyun Nam, Sung Tae Kim, Seung-Hoon Kim, Sang-Wook Kim, Keun-Ho Lim, Ki-Soo Kim, Sun-Ok Kim, and Taeghwan Hyeon*

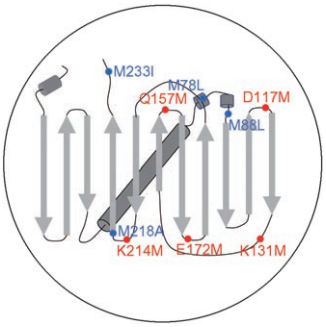
Manganese oxide nanoparticles have emerged as a powerful contrast agent for molecular and cellular magnetic resonance imaging (MRI). In their Communication on page 5397 ff., J. H. Lee, T. Hyeon, and co-workers demonstrate manganese oxide nanoparticle contrast-enhanced MRI (MONEMRI) with the clear imaging of various mice brain structures as well as the selective imaging of cancer cells (see contrast-enhanced MRI images on the right side of the cover picture; center: "Woman with a Parasol" by Claude Monet, Copyright: Board of Trustees, National Gallery of Art, Washington, DC).



Water Oxidation in PSII
Proton-coupled electron transfer plays an important role in how photosystem II uses light to form oxygen from water. T. J. Meyer et al. shed light on the mechanism of this process in their Review on page 5284 ff.



Spin-State Trapping
In their Communication on page 5306 ff., G. Vankó, F. Renz, and co-workers report the use of hard X-rays as a new excitation source to generate metastable high-spin states in iron compounds (photo: ESRF/P. Ginter).



Mutant Identification
The global incorporation of noncanonical amino acids into recombinant proteins is described by D. A. Tirrell and T. H. Yoo in their Communication on page 5340 ff. as an efficient method for the identification of mutant methionyl-tRNA synthetases.