

Cover Picture

Dana S. Marlin, Eckhard Bill, Thomas Weyhermüller, Eva Rentschler, and Karl Wieghardt

The cover picture shows the structure of a paramagnetic dimanganese complex tethered to a distant organic radical. The long-distance magnetic interaction between the two $S = 1/2$ centers in this complex models a similar situation detected in the $S_2Y_z^{\cdot}$ state of photosystem II (PSII). In their article on page 4775, D. S. Marlin, E. Bill, and K. Wieghardt et al. shed light on the nature of this interaction through the use of SQUID magnetic measurements as well as dual-mode X-band EPR spectroscopy. One of the most remarkable features observed from such dual-mode EPR measurements is the identification of well-resolved “forbidden” half-field multiline signals at $g = 4$ that arise from the dipolar coupling. This latter feature may also be noteworthy in the context of a poorly understood signal at $g = 4.1$ that has been observed in various EPR spectra of PSII.

