Cover Picture: Spectroscopy and Redox Chemistry of Copper in Mordenite (ChemPhysChem 1/2014)

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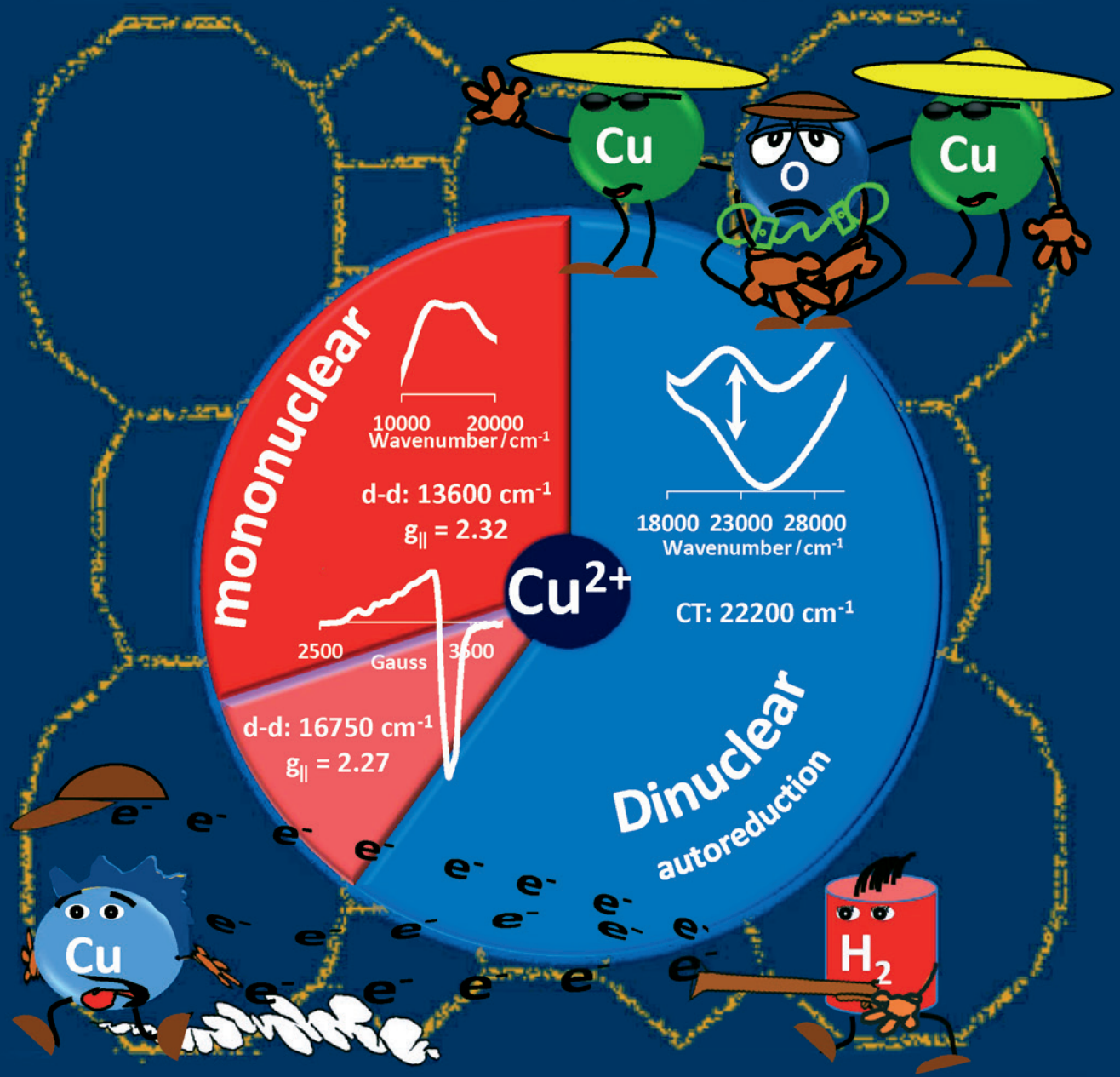

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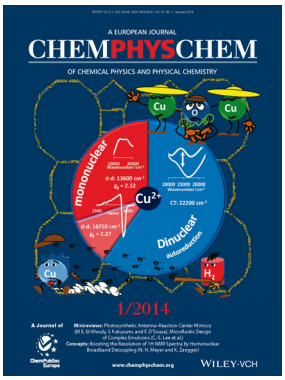
Cover Picture



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The cover picture shows the distribution of different copper sites and their main spectroscopic signatures in a highly loaded copper mordenite zeolite when calcinated in the presence of dioxygen. On p. 91 ff. E. I. Solomon, R. A. Schoonheydt, B. F. Sels et al. distinguish two mononuclear copper cations and one dinuclear copper cation with an entrapped oxygen atom and quantify them by their different reactivity towards reduction with H_2 and thermal autoreduction. The coordination chemistry of the Cu species and their location in the zeolite structure are key to understanding the different roles of each Cu site in catalysis.