Additions and Corrections

1999, Volume 38

Craig A. Kelly*, Elliott L. Blinn, Nadia Camaioni, Mila D'Angelantonio, Quinto G. Mulazzani*: Mechanism of CO_2 and H^+ Reduction by Ni(cyclam)$^+$ in Aqueous Solution. A Pulse and Continuous Radiolysis Study.

Page 1582: Equations 18 and 19 should read as follows:

$$\frac{1}{A_{380}} = \frac{1}{A_0} + \frac{2K_{15}k_{16}[\mathrm{H}^+]}{(1 + K_{15}[\mathrm{H}^+])\epsilon_{380}l}\, t \tag{18}$$

$$\frac{1}{A_{380}} = \frac{1}{A_0} + k_{\mathrm{obs}}t \tag{19}$$

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Yukinari Sunatsuki, Hiromitsu Shimada, Toshihiro Matsuo, Masaaki Nakamura, Fumiaki Kai, Naohide Matsumoto,* and Nazzareno Re: Synthesis, Magnetic Properties, and Incomplete Double-Cubane Structure of Manganese(III)−Metal(II) Complexes [Mn(MeOH)L(OH)-M(bpy)]$_2$ (M = Zn, Cu, Ni, and Mn; H_4L = 1,2-Bis(2-hydroxybenzamido)benzene; bpy = 2,2′-Bipyridine).

Pages 5566−5574: We made a serious error in interpretation of compound **4** (Mn−Mn complex). The Mn−Mn complex **4** should be described as $\mathrm{Mn^{III}_4O_2}$ ([Mn(MeOH)LOMn(bpy)]$_2$) involving di-μ-oxo dimer Mn_2O_2 than $\mathrm{Mn^{III}_2Mn^{II}_2(OH)_2}$ involving di-μ-hydroxo dimer. On the basis of the number of structural data of the polynuclear Mn complexes reported so far, (1) the Mn−Mn separation for central dimeric unit of 2.744(3) Å is too short for $\mathrm{[Mn^{II}(OH)]_2}$ dimer but is typical for Mn_2O_2 dimers with Mn = $\mathrm{Mn^{III}}$ or $\mathrm{Mn^{IV}}$; (2) the Mn−O distances in the central dimeric unit are too short for the $\mathrm{Mn^{II}}$−OH distance, close to that for Mn_2O_2 dimers with Mn = $\mathrm{Mn^{III}}$, and slightly longer for $\mathrm{Mn^{IV}}$; (3) the coordination bond distances in the central dimer are 1.890(6), 1.889(6), 2.088(10), and 2.079(10) Å in plane and 2.269(6) and 2.315(6) Å in axial positions; the axial elongation is typical for $\mathrm{Mn^{III}}$ ion; (4) the bond distances for Mn1 and Mn2 have the same pattern and magnitudes of distances, indicating these two Mn ions assume the same oxidation state, $\mathrm{Mn^{III}}$; (5) the crystallographic analysis has not enough accuracy to determine the hydrogen atoms, so it is difficult to distinguish $\mathrm{Mn^{III}O}$ from $\mathrm{Mn^{II}OH}$; (6) it is known that a reaction of $\mathrm{Mn(H_2O)bpyCl_3}$ gives di-μ-oxo-bridged dimer; (7) the effective magnetic moment per molecule at room temperature, 7.40 μ_{B}, is close to the spin-only value of 7.34 μ_{B} for magnetically non-interacting $\mathrm{Mn^{III}_2}$ low-spin $\mathrm{Mn^{II}_2(OH)_2}$ with a spin system (2, $^1/_2$, $^1/_2$, 2) and extremely smaller than 9.79 μ_{B} for non-interacting $\mathrm{Mn^{III}_4O_2}$ with (2, 2, 2, 2), respectively. However, the magnetic behavior can be well interpreted by assuming strong antiferromagnetic coupling in the central dinuclear unit with the parameters of $g = 1.95$, $J = -2.3\ \mathrm{cm^{-1}}$, and $J' = -60.3\ \mathrm{cm^{-1}}$ for (2, 2, 2, 2). Strong antiferromagnetic coupling has been reported in the Mn_2O_2 core with bpy ligands and M = $\mathrm{Mn^{III}}$, $\mathrm{Mn^{IV}}$. We correct all the interpretation in Mn−Mn complex **4** in the paper with haste in order to avoid confusion and silly influence in Mn cluster chemistry, although the other measurements should finally confirm the oxidation state among the possible oxidation states $\mathrm{Mn^{III}_4O_2}$, $\mathrm{Mn^{III}_3Mn^{IV}O_2}$, and $\mathrm{Mn^{III}_2Mn^{IV}_2O_2}$.

Table 3 and page 5571: $\mu_{\mathrm{Mn}} = [2S_{\mathrm{Mn}}(S_{\mathrm{Mn}} + 1)]^{1/2}$, $\mu_{\mathrm{M}} = [2S_{\mathrm{M}}(S_{\mathrm{M}} + 1)]^{1/2}$ should be $\mu_{\mathrm{Mn}} = 2[S_{\mathrm{Mn}}(S_{\mathrm{Mn}} + 1)]^{1/2}$, $\mu_{\mathrm{M}} = 2[S_{\mathrm{M}}(S_{\mathrm{M}} + 1)]^{1/2}$.

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