Inorganic Chemistry

Addition/Correction

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Correction to Structural, Electronic, and Acid/Base Properties of $[Ru(bpy)_2(bpy(OH)_2)]^{2+}$ (bpy = 2,2′-Bipyridine, $bpy(OH)_2$ = 4,4′-Dihydroxy-2,2′-bipyridine)

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Page 2759. In the original version of the manuscript, two pK_a values for subsequent deprotonation of the diprotic complex $[Ru(bpy)_2(bpy(OH)_2)]^{2+}$ are reported at 2.7 and 5.8; however, the UV/Visible spectra do not change until the latter pK_a value (the second deprotonation step; Figure 6). A recent series of experiments with a monoprotic complex suggest that the first deprotonation observed is likely occurring from the neutralization of excess acid used to ensure protonation of the complex. We have since confirmed that this is also the case with $[Ru(bpy)_2(bpy(OH)_2)]^{2+}$. This result changes the interpretation in the manuscript with respect to the complex $[Ru(bpy)_2(bpy(OH)_2)]^{2+}$ having only an average pK_a value of 5.8 and further helps to clarify why the UV/Visible absorbance spectrum does not begin to change until pH ∼ 5. This result is in accordance with another ruthenium complex studied by Gratzel et al. (ref 37 in the manuscript) that has an average pK_a value of 5.1 with four ionizable protons for comparison.

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