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Isotope effects on the picosecond time-resolved emission spectroscopy of tris(2,2'-bipyridine)ruthenium (II)

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Isotope Effects on the Picosecond Time-Resolved Emission Spectroscopy of Tris(2,2'-bipyridine)ruthenium (II) [*J. Am. Chem. Soc.* **2003**, *125*, 1706–1707]. Wesley R. Browne, Colin G. Coates, Clare Brady, Pavel Matousek, Michael Towrie, Stanley W. Botchway, Anthony W. Parker, Johannes G. Vos, and John J. McGarvey*

Page 1706: In the above article we reported that the luminescence lifetimes of the transition metal complexes [Ru-([H₈]-bpy)₃]Cl₂ (**1a**) and [Ru([H₁₆]-ph₂phen)]Cl₂ (**2a**) decayed within the instrument response time (<4 ps) to the long-lived ³MLCT emission (λ_{max} 610 nm), but for their deuterated analogues [Ru([D₈]-bpy)₃]Cl₂ (**1b**) and [Ru([D₁₄]-ph₂phen)]Cl₂ (**2b**) (where bpy = 2,2'-bipyridine, ph₂phen = 4,7-diphenyl-1,10-phenanthroline) the emission at 520 nm persisted for times beyond 200 ps. Our original assignment was that the longer-lived emission from the deuterated complexes was from the same excited state as the short luminescence lifetime for the non-deuterated complex. We now believe this to be in error. This new conclusion stems from our continuing investigations which, although confirming that both deuterated and non-deuterated ruthenium complexes give ultrafast luminescence (on 4 ps time scales), reveal that the observation of the longer-lived emission for the deuterated ruthenium complex prepared by other synthetic routes cannot be confirmed in every case.

Due to the susceptibility of luminescence measurements to interference from artifacts such as sample impurities, we originally undertook extensive investigations involving the study of the free ligand and the corresponding Fe(II) and Os(II) complexes, both perprotio and perdeuterio, as well as multiple purification steps of the complexes, with several independently prepared batches of samples. While we are presently unable to explain the source of the long-lived emission, it is certain that free ligand is not responsible. It is also certain that the observation of the longer-lived emission is linked directly to the deuteration process but not specifically to the deuterated complexes themselves.

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Rhodium-Catalyzed Carbonylative [3+2+1] Cycloaddition Reaction: Catalytic Formation of Bicyclic Cyclohexenones from Trienes and Carbon Monoxide [*J. Am. Chem. Soc.* **2004**, *126*, 2714–2715]. Sang Ick Lee, Ji Hoon Park, Young Keun Chung,* and Sueg-Geun Lee

Because of an error in assigning structures of products, the title of this paper should be changed to “Rhodium-Catalyzed Carbonylative [2+2+1] Cycloaddition Reactions: Catalytic Formation of Bicyclic Cyclopentanones”. The corrected chemical structures are deposited as Supporting Information and are completely analogous to those recently reported by Wender et al. [*J. Am. Chem. Soc.* **2004**, *126*, 5948–5949].

The authors regret the error and misinterpretation of the original data.

Pages 2714–2715: The term “bicyclic cyclohexenones” should be changed to “bicyclic cyclopentanones”.

Page 2714: The last two sentences of the first paragraph should be replaced with the following: “Recently, we have reported the reduced Pauson–Khand reaction (tandem carbonylation and hydrogenation) which gave cyclopentanones. Although the catalytic system is very efficient, the reaction condition needs to be improved.”

Page 2715: A reference to the data for **8a** was put in the Supporting Information.

Page 2715: The crystal structure of **8B** should be inserted as Figure 1.

Figure 1. Crystal structure of **8B**.

Page 2715: Equations 2 and 3 should be deleted.

Page 2715: In Scheme 1, the intermediate **E** should be changed to the π -allyl complex.

Supporting Information Available: Corrected chemical structures and X-ray crystallographic data (PDF, CIF). This material is available free of charge via the Internet at <http://pubs.acs.org>.

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