

Redox reactions in Prussian blue containing paint layers as a result of light exposure

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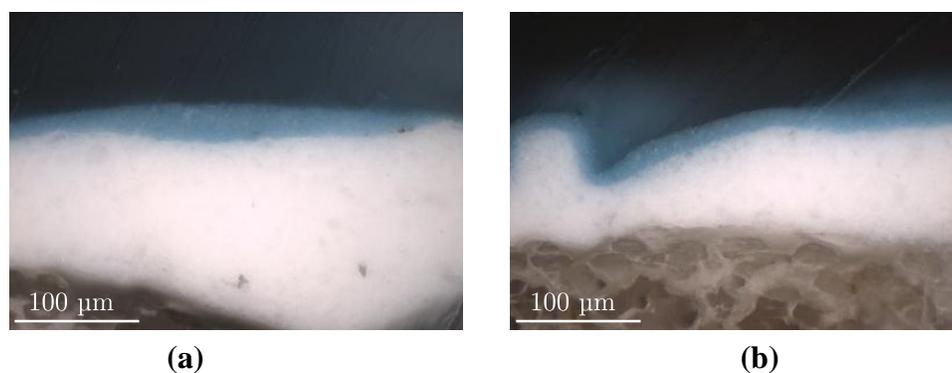


Figure S-1. Reflected light dark field illumination optical micrograph of a cross-section of the unexposed, **a**, and light exposed, **b**, Prussian blue **3** mixed with $(\text{PbCO}_3)_2\text{Pb}(\text{OH})_2$ pigment in a 1:100 ratio. Both the unexposed and light exposed paint layers are homogeneously colored.

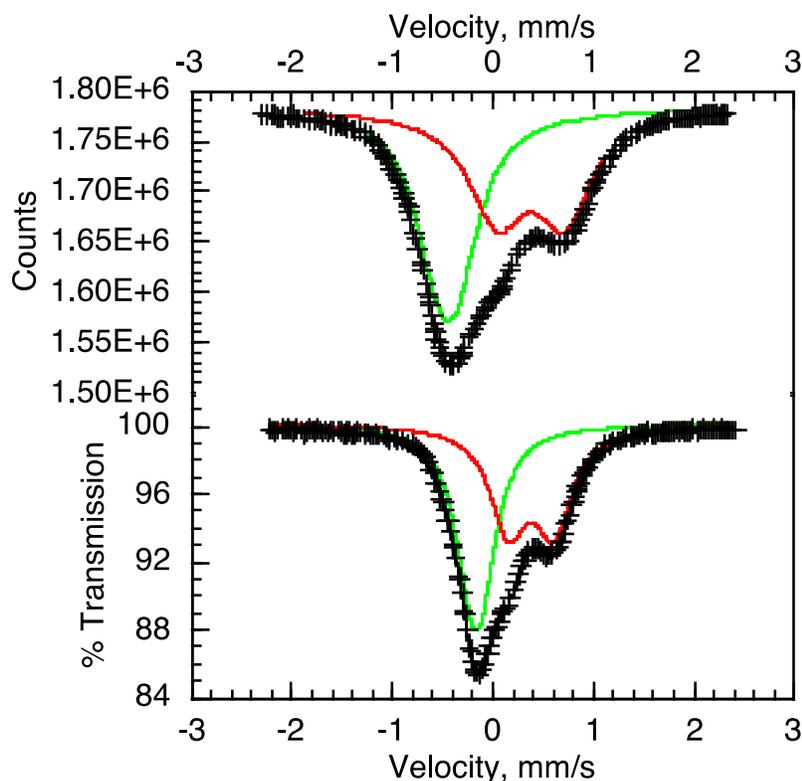


Figure S-2. The room temperature Mössbauer spectrum of $\text{Fe}^{\text{III}}[\text{Fe}^{\text{III}}(\text{CN})_6]\cdot 4\text{H}_2\text{O}$, **5** as published in reference 1, upper spectrum, and with the corrected velocity scale, lower spectrum.

The upper spectrum shown in Figure S-2 was obtained from digitizing the spectrum shown in Figure 3 of reference S-1. The green and red solid lines were assigned^{S-1} to low-spin iron(III) and high-spin iron(III), respectively. The lower spectrum shown in Figure S-2 was obtained from digitizing the spectrum provided^{S-2} by Yusuf. The green and red solid lines are assigned to low-spin iron(II/III) and high-spin iron(III), respectively. The figure clearly emphasizes that the velocity scale used in the published^{S-1} spectrum is incorrect. In addition, the 15 percent absorption observed at ca. zero velocity is too large and indicates that the absorber was too thick and as a consequence, the lines are not Lorentzian as would be clearly apparent in the residuals of the fit.

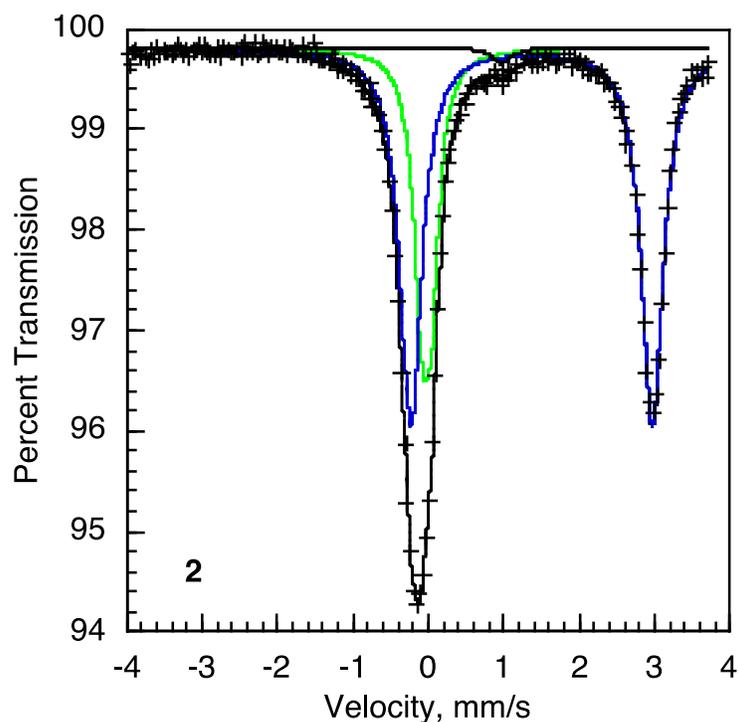


Figure S-3. The Mössbauer spectrum of $\text{Fe}_2^{\text{II}}[\text{Fe}^{\text{II}}(\text{CN})_6]$, **2**, obtained^{S-3} at 77 K. The green, blue, and black solid lines represent the low-spin iron(II), high-spin iron(II), and an impurity components, respectively.

References

- (S-1) A. Kumar, S. M. Yusuf, and L. Keller, *Phys. Rev. B* 2005, **71**, 054414.
- (S-2) S. M. Yusuf, personal communication via e-mail, 5 February 2010.
- (S-3) K. Jr. Maer, M. L. Beasley, R. L. Collins, and W. O. Milligan, *J. Am. Chem. Soc.* 1968, **90**, 3201.