Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics

Supplymentary Information for "**Photoresponse Enhancement by Mixing of an Alcohol-Soluble C_{60} Derivative into a Ruthenium Complex Monolayer**

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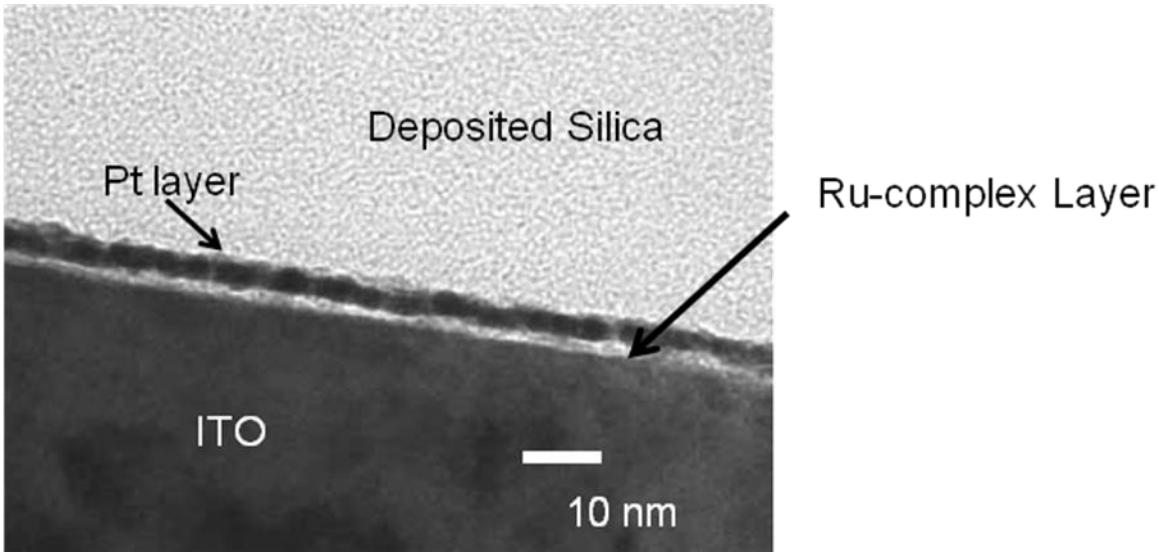

Figure S1 A cross-sectional TEM image of the Ru complex layer. The TEM image was taken at an electron acceleration energy of 300 keV using a Hitachi U-9000 electron microscope. The Ru complex layer was coated with a Pt and silica layer to reduce damage during the milling process. The thickness of the mixed layer was estimated to be 2.5 nm.

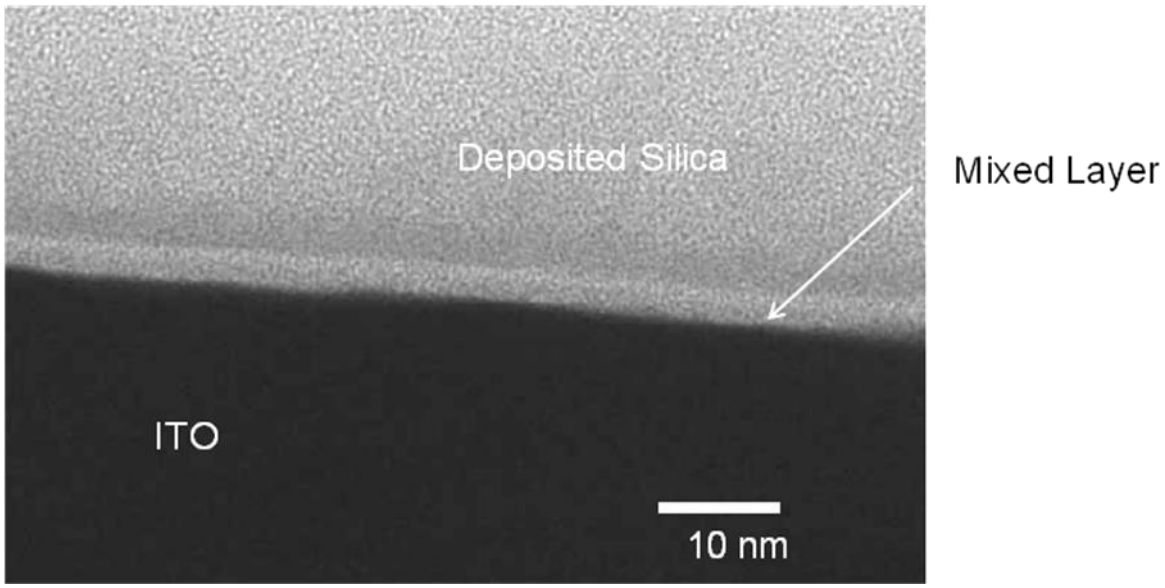

Figure S2 Cross-sectional TEM image of the mixed monolayer. The TEM image was also taken at an electron acceleration energy of 300 keV using a Hitachi U-9000 electron microscope. The Ru complex layer was coated with a silica layer to reduce damage during the milling process. The mixed layer appears amorphous in this image. Cf-C_{60} and Ru complexes cannot be distinguished. The thickness of the mixed layer was estimated to be 4.7 nm

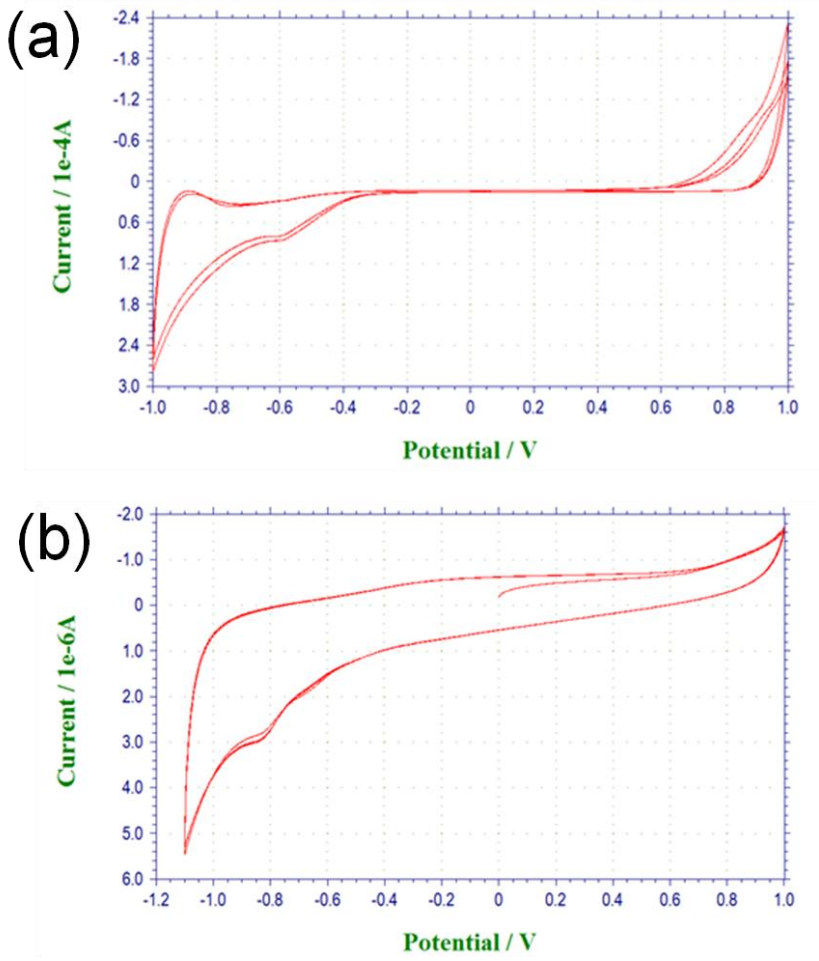

Figure S3 Cyclic voltammograms of (a) Cf-C_{60} film cast on an ITO substrate and (b) Cf-C_{60} in a liquid. The measurements were performed at 25 °C in aqueous 0.1 M Na_2SO_4 solution. The peak attributed to Cf-C_{60} was observed at (a) -0.62 V and (b) -0.8V.

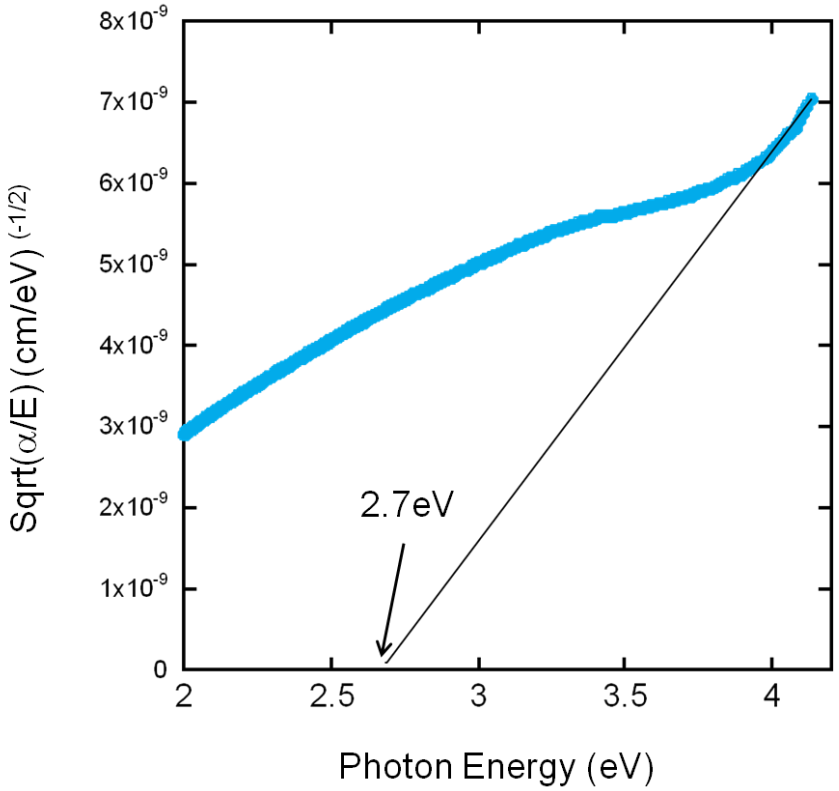

Figure S4 Tauc plots of the cast Cf-C_{60} film. The band gap of Cf-C_{60} was estimated as 2.7 eV by using a previously published method.[39]