

Electronic Supplementary Information

Supramolecular photocatalysts constructed with a photosensitizer unit having two tridentate ligands for CO₂ reduction

Yusuke Tamaki and Osamu Ishitani*

Department of Chemistry, School of Science, Tokyo Institute of Technology, 2-12-1-NE-1, Ookayama, Meguro-ku, Tokyo, 152-8550, Japan.

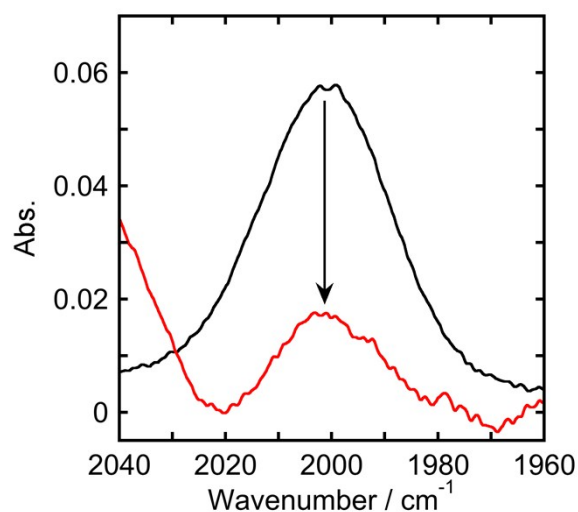


Figure S1. IR spectra before (black line) and after (red line) electrolysis of $[\text{Ru}(\text{mtpy})(\text{Clbpy})(\text{CO})]^{2+}$. The complex (1 mM) dissolved in an Ar-saturated DMA solution, containing Et_4BF_4 (0.1 M) as an electrolyte, was reduced at -1.45 V for 15 min using a reticulated vitreous carbon working electrode and a Ag/AgNO_3 reference electrode.

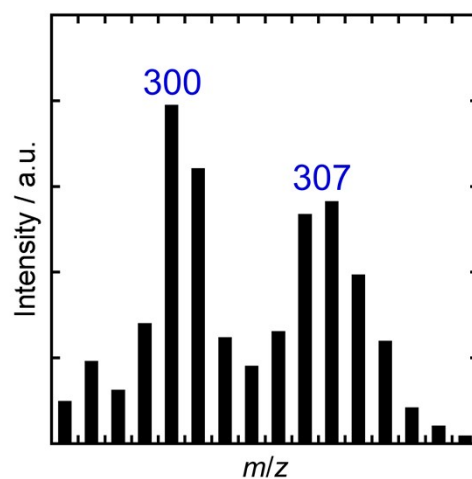


Figure S2. ESI-Mass spectrum of $[\text{Ru}(\text{mtpy})(\text{Clbpy})(\text{CO})]^{2+}$ after controlled potential electrolysis at -1.45 V for 15 min in a DMA solution containing Et_4BF_4 (0.1 M) as an electrolyte (mobile phase: acetonitrile). The peak at $m/z = 300$ is attributed to $[\text{Ru}(\text{mtpy})(\text{Clbpy})(\text{CO})]^{2+}$ and that at $m/z = 307$ is attributable to $[\text{Ru}(\text{mtpy})(\text{Clbpy})(\text{NCMe})]^{2+}$.