

Synthesis and properties of a novel tripodal bipyridyl ligand tb-carbinol and its Ru(II)-Re(I) trimetallic complexes: investigation of multimetallic artificial systems for the photocatalytic CO₂ reduction

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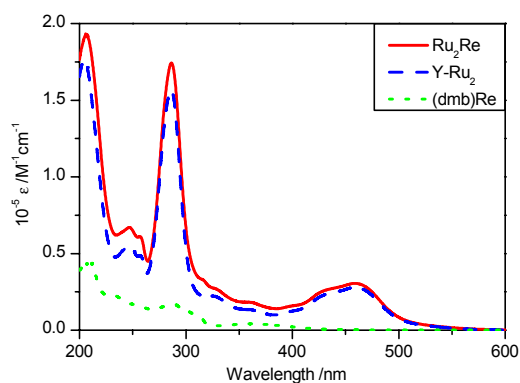


Figure S1. Absorption spectra of Ru₂Re (red line), Y-Ru₂ (blue dash line), and (dmb)Re(CO)₃Cl (green dot line) in acetonitrile at room temperature.

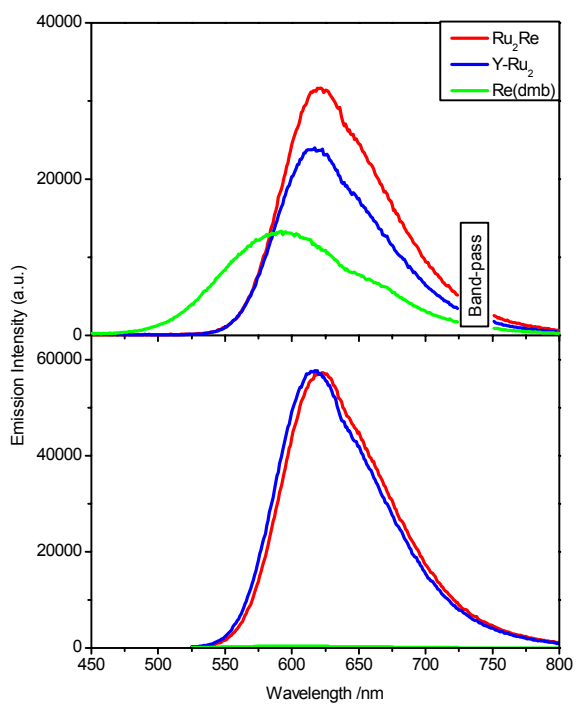


Figure S2. Emission spectra of Ru₂Re (1×10^{-5} M), Y-Ru₂ (1×10^{-5} M), and (dmb)Re(CO)₃Cl (1×10^{-5} M) in degassed acetonitrile excited at 370 nm (top) and 450 nm (bottom) at room temperature.

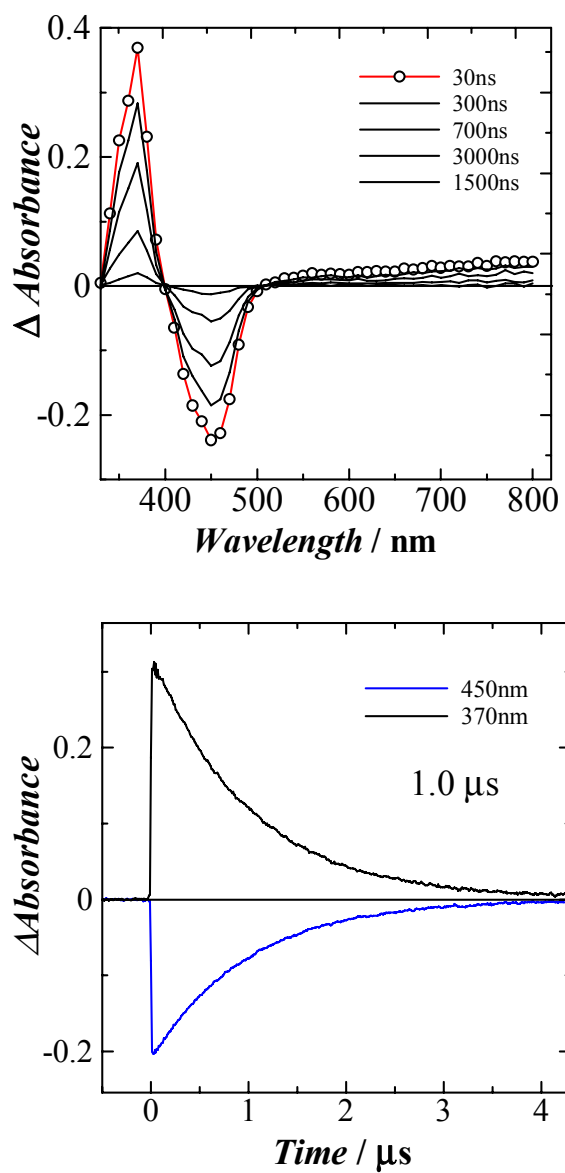


Figure S3. The transient absorption spectrum (top) and the transient states decay profiles (bottom) of $[(\text{bpy}_2\text{Ru})_3(\text{tb-carbinol})]^{6+}$ in degassed acetonitrile.

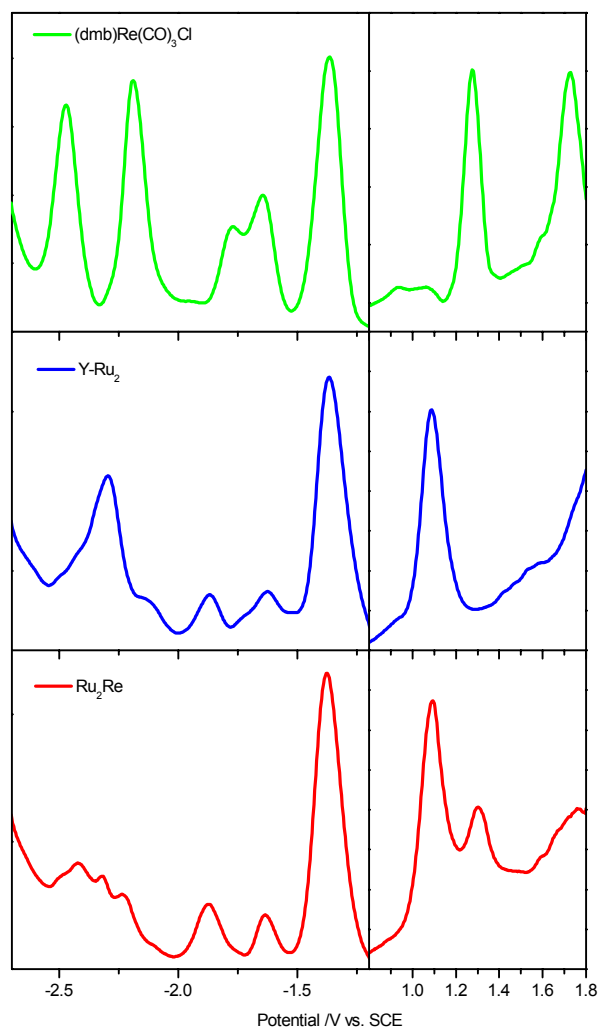


Figure S4. Differential Pulse Voltammograms of Ru₂Re (bottom, red line), Y-Ru₂ (middle, blue line), and (dmb)Re(CO)₃Cl (top, green line) in acetonitrile. The left part is the cathodic peaks; The right part represents the anodic peaks.