

Supporting Information

Electrofluorochromism Based on Valence Change of Europium Complexes in Electrochemical Devices with Prussian Blue as Counter Electrode

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Figure Captions

Fig. S1.

XRD patterns of the PB-modified electrode. ITO electrode is also shown at the bottom for comparison.⁵¹

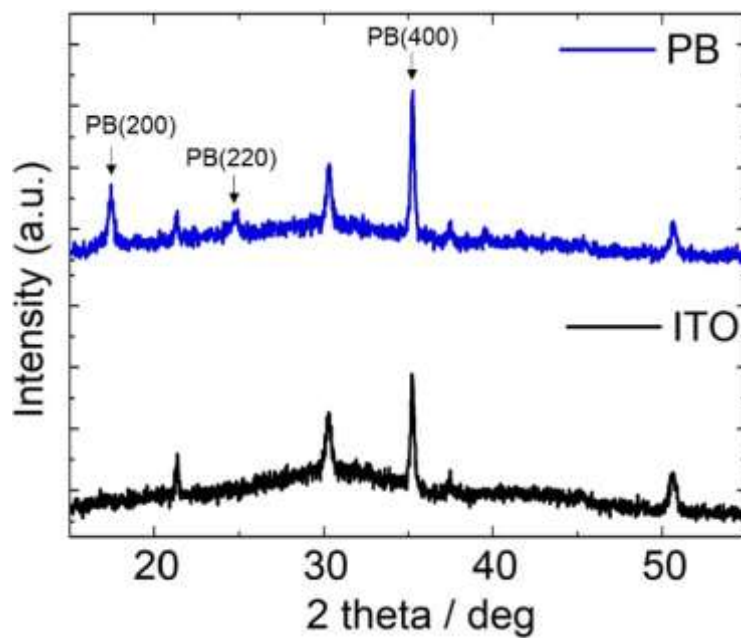


Fig. S2.

Absorption spectrum of the PB-modified electrode.

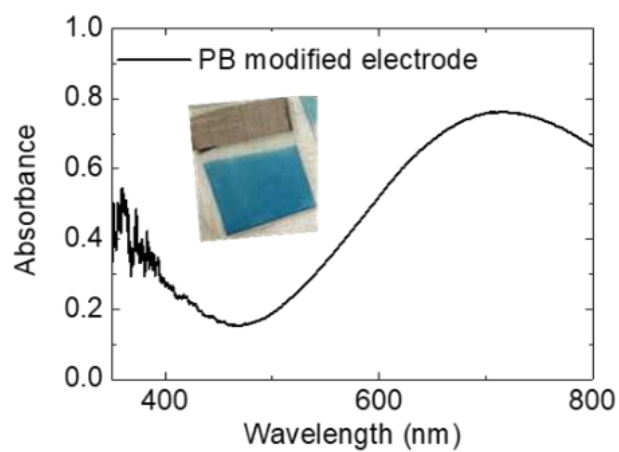


Fig. S3.

Absorption spectra of the PB-modified electrode under bias potentials of +1.0 V (black) and -2.0 V (red) in PEG₄₀₀ containing (a) LiCF₃SO₃ (500 mM) and (b) LiCF₃SO₃ (500 mM) and Eu(hfa)₃·(H₂O)₂ (10 mM).

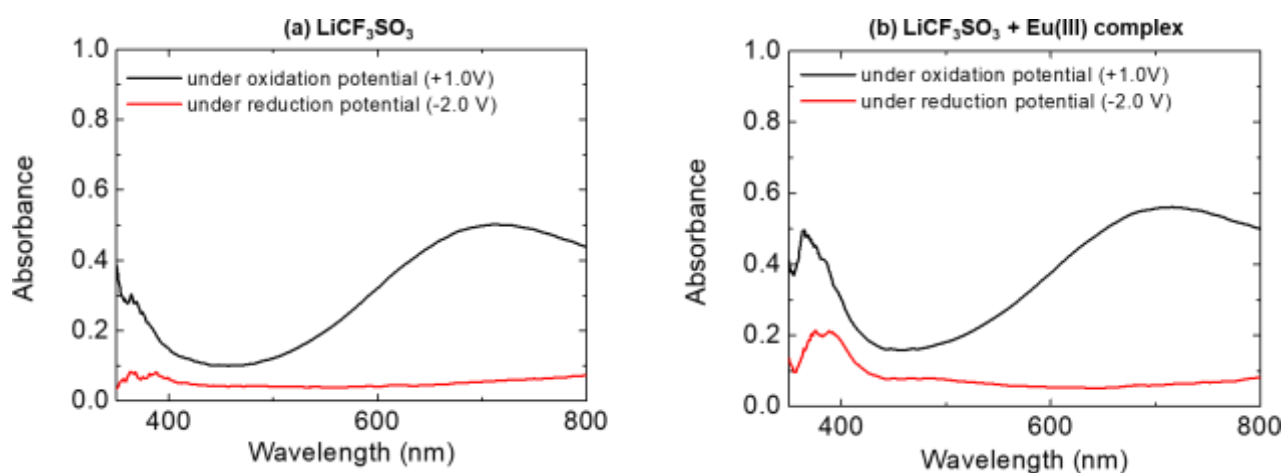


Fig. S4.

Changes in the absorption at 700 nm (top) and cyclic voltammogram (bottom) of the PB-modified electrode in PEG₄₀₀ electrolyte solution containing Eu (NO₃)₃·6H₂O (10 mM).

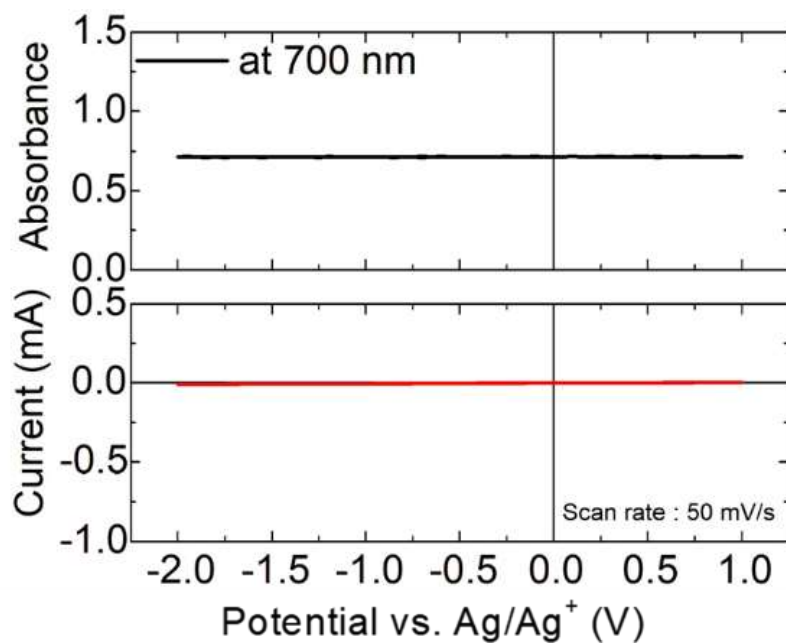


Fig. S5.

Cyclic voltammograms of $\text{Eu}(\text{NO}_3)_3 \cdot 6(\text{H}_2\text{O})$ in PEG_{400} . ($[\text{LiCF}_3\text{SO}_3] = 500 \text{ mM}$ (black line), $[\text{LiCF}_3\text{SO}_3] = 500 \text{ mM}$ and $[\text{Eu}(\text{NO}_3)_3 \cdot (\text{H}_2\text{O})_2] = 10 \text{ mM}$ (red line)).

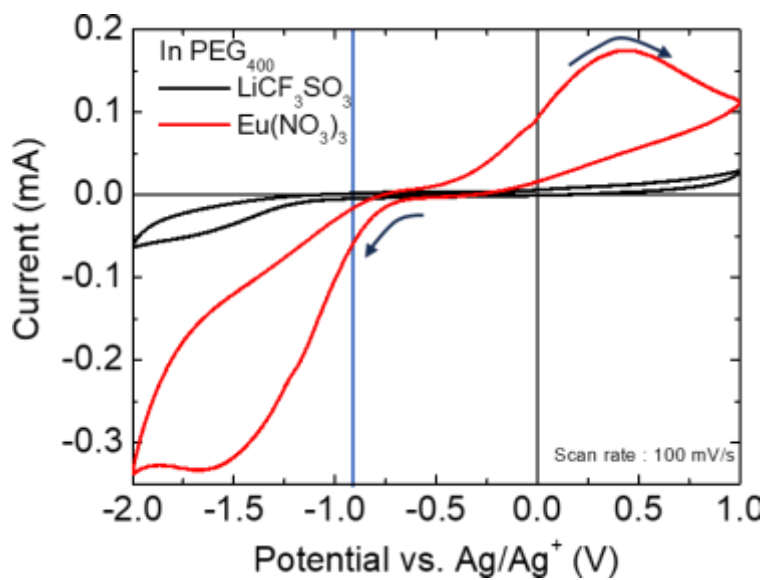


Fig. S6.

Cyclic voltammograms of the two-electrode devices (ITO-ITO (black line), ITO-CM (red line), and ITO-PB (blue line)).

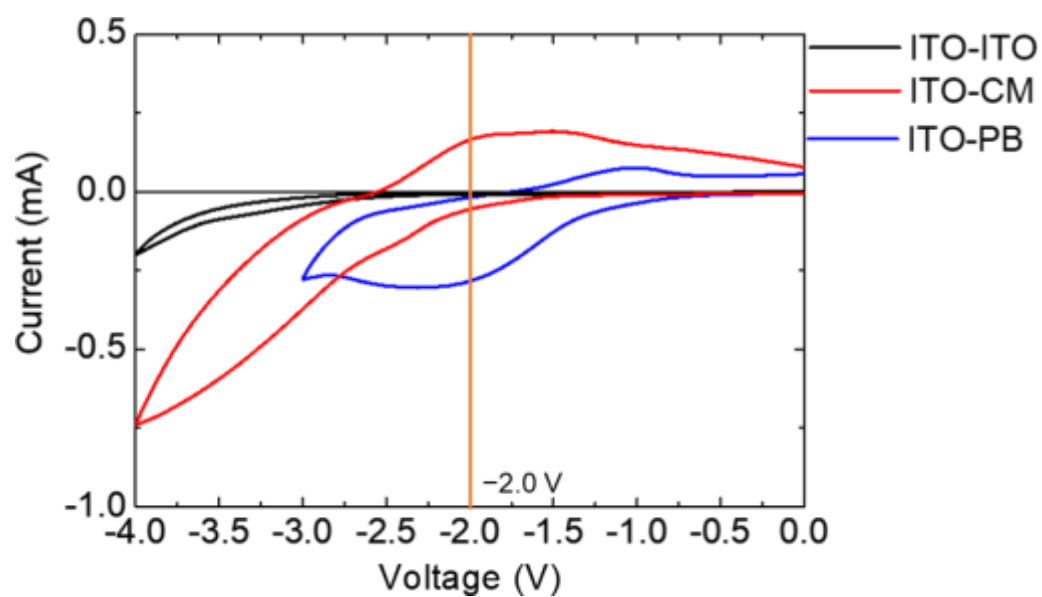


Fig. S7.

Fluorescence switching responses of the ITO-ITO and ITO-PB devices monitored (a) at 615 nm and (b) at 420 nm under different applied voltages of -2.4 to $+1.5$ V (ITO-ITO device), -0.9 to $+2.5$ V (ITO-PB device) with a step duration time of 100 and 300 s at each voltage. The excitation wavelength was 365 nm.

