Supporting Information

Electrochemically Lighting Up Luminophores at Similar Low Triggering Potentials with Mechanistic Insights

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Content

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(a) DPV of luminophore/CON_4H_6 systems

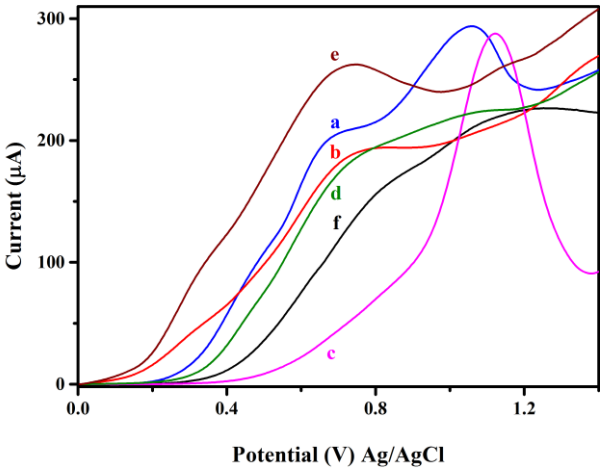

Figure S1. DPV profiles of (a, blue line) GCE|Au NCs/Nafion, (b, red line) GCE|CdSe NCs/Nafion, (c, magenta line) GCE|$Ru(bpy)_3^{2+}$/Nafion, (d, olive line) GCE|CIS/ZnS NCs/Nafion, (e, wine line) GCE|CdTe NCs/Nafion, and (f, black line) GCE|Nafion in 50 mM pH 7.4 Tris-HCl containing 50 mM KNO_3 and 50 mM CON_4H_6.

(b) LSW and ECL-potential profiles of luminophore/TPrA systems

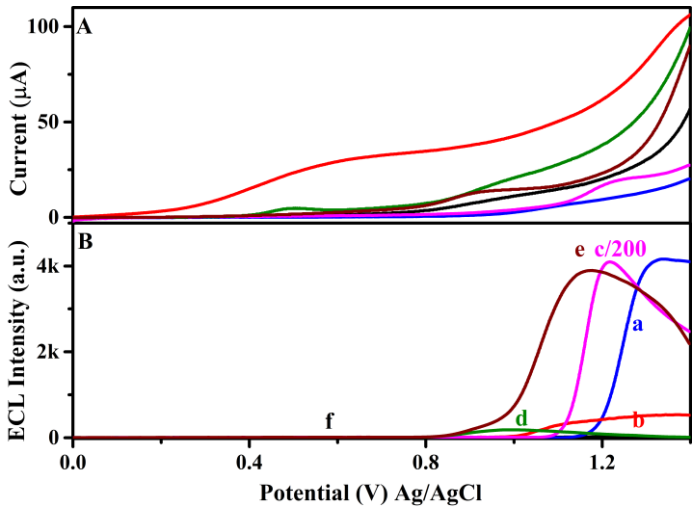

Figure S2. (A) LSW and (B) ECL-potential profiles of (a, blue line) GCE|Au NCs/Nafion, (b, red line) GCE|CdSe NCs/Nafion, (c, magenta line) GCE|$Ru(bpy)_3^2$/Nafion, (d, olive line) GCE|CIS/ZnS NCs/Nafion, (e, wine line) GCE|CdTe NCs/Nafion, and (f, black line) GCE|Nafion in 50 mM pH 7.4 Tris-HCl containing 50 mM KNO_3 and 0.1 mM TPrA at 50 mV/s.

(c) DPV, LSW and ECL of non-Nafion confined luminophores

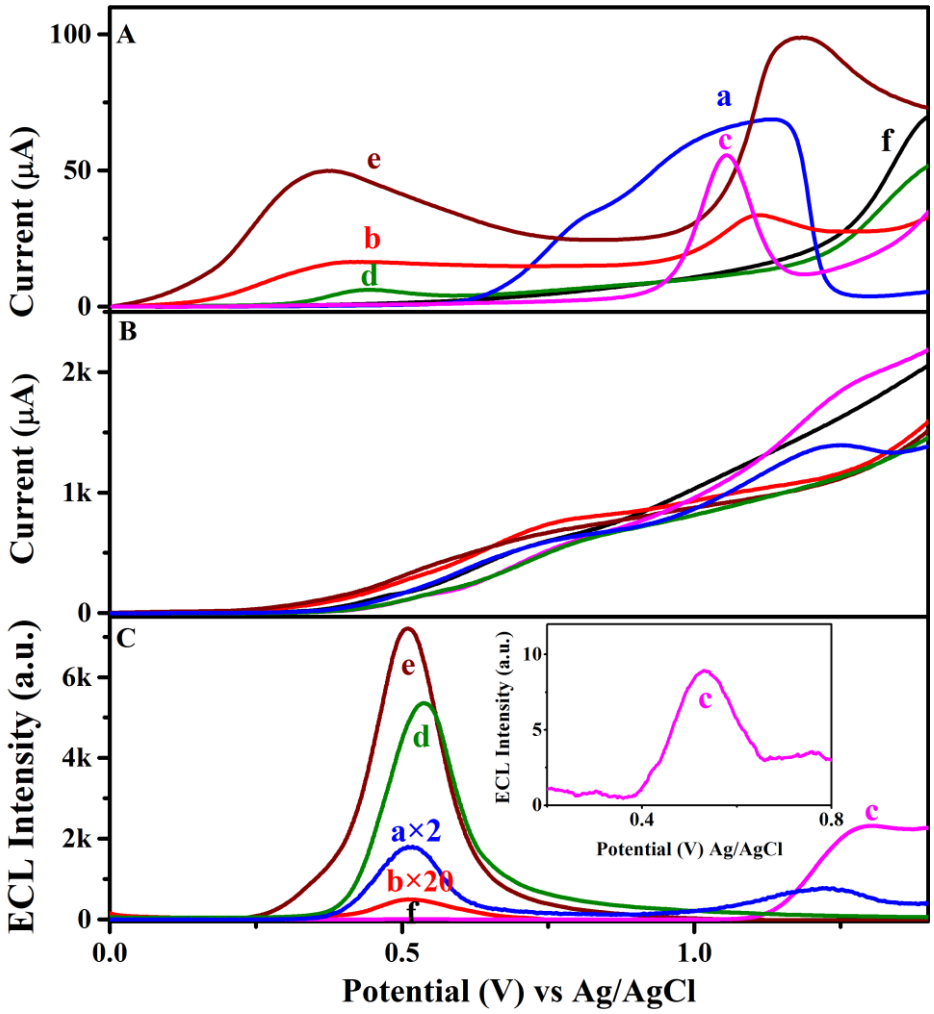

Figure S3. (A) DPV profiles of (a, blue line) GCE|Au NCs, (b, red line) GCE|CdSe NCs, (c, magenta line) GCE|$Ru(bpy)_3^{2+}$, (d, olive line) GCE|CIS/ZnS NCs, (e, wine line) GCE|CdTe NCs, and (f, black line) GCE in 50 mM pH 7.4 Tris-HCl containing 50 mM KNO_3; (B) LSW and (C) ECL-potential profiles of (a, blue line) GCE|Au NCs, (b, red line) GCE|CdSe NCs, (c, magenta line) GCE|$Ru(bpy)_3^2$, (d, olive line) GCE|CIS/ZnS NCs, (e, wine line) GCE|CdTe NCs, and (f, black line) GCE in 50 mM pH 7.4 Tris-HCl containing 50 mM KNO_3 and 50 mM CON_4H_6 at 50 mV/s.

(d) Spooling ECL spectra of surface-confined CIS/ZnS and CdTe NCs

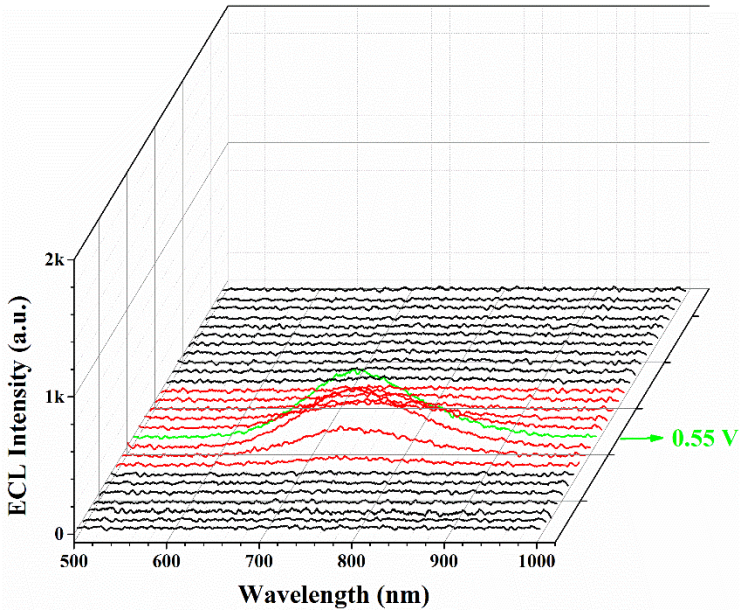

Figure S4. Spooling ECL spectra of GCE|CIS/ZnS NCs/Nafion in 50 mM pH 7.4 Tris-HCl containing 50 mM KNO_3 and 50 mM CON_4H_6 at 50 mV/s. Each spectrum is recorded with 1.0 s time intervals, that is, 50 mV potential intervals during the potential scan.

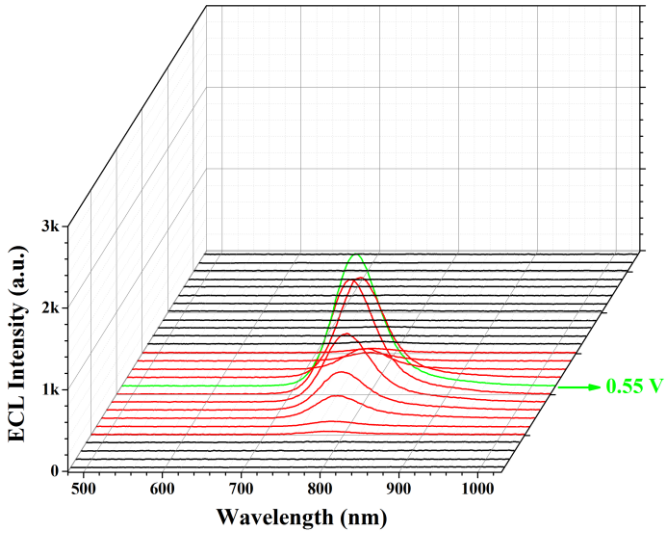

Figure S5. Spooling ECL spectra of GCE|CdTe NCs/Nafion in 50 mM pH 7.4 Tris-HCl containing 50 mM KNO_3 and 50 mM CON_4H_6 at 50 mV/s. Each spectrum is recorded with 1.0 s time intervals, that is, 50 mV potential intervals during the potential scan.