Electronic Supporting Information

Monochromatic and Electrochemical Switchable Electrochemiluminescence of Perovskite $CsPbBr_3$ Nanocrystals

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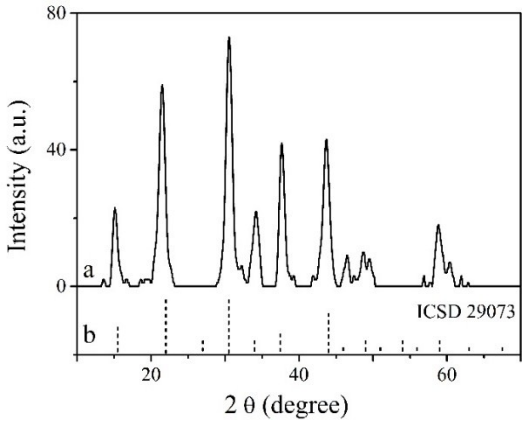

Fig. S1 (a) XRD pattern of as-prepared $CsPbBr_3$ NCs and (b) the reference pattern.

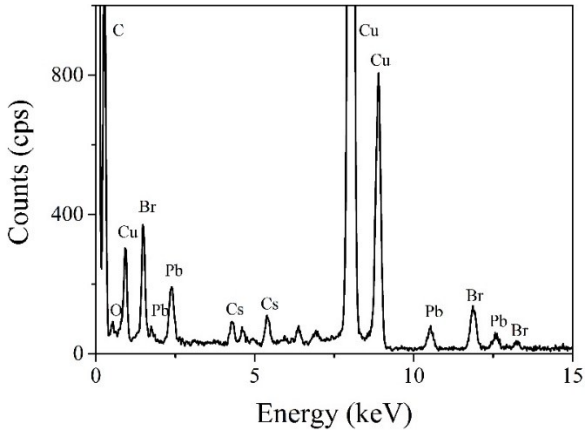

Fig. S2 EDX pattern of as-prepared $CsPbBr_3$ NCs

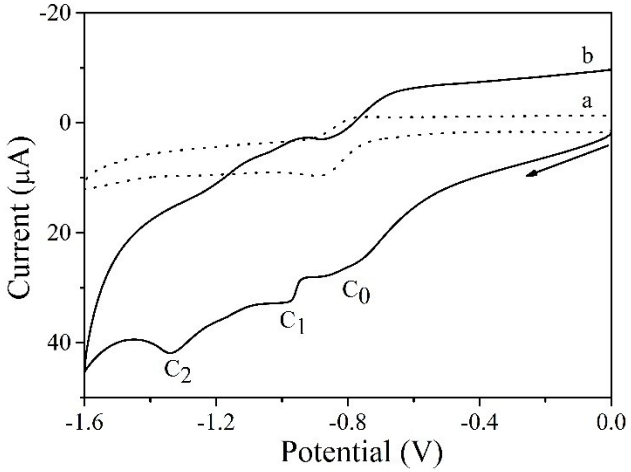

Fig. S3 Cathodic CV profiles of (a, dotted line) bare GCE and (b, solid line) $CsPbBr_3$ NCs|GCE in air-saturate dichloromethane containing 0.1 M $TBAPF_6$ at 50 mV/s.

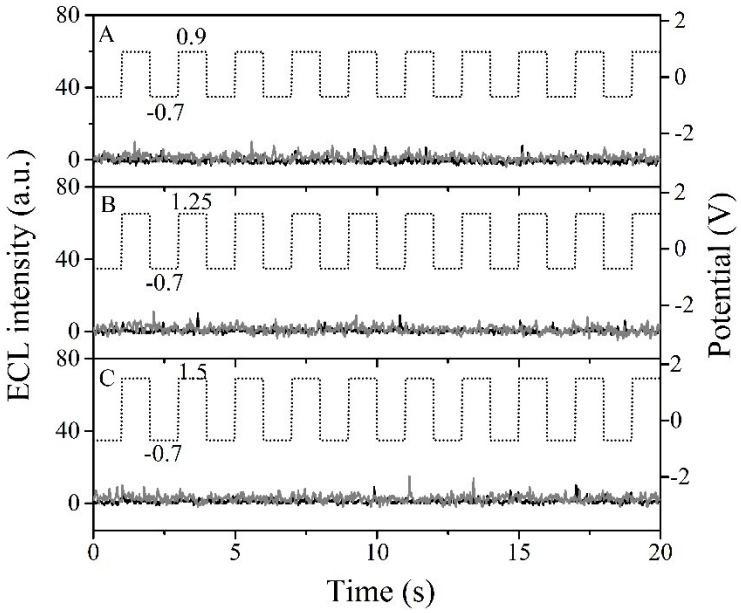

Fig. S4 ECL transients of bare GCE (black line) and $CsPbBr_3$ NCs|GCE (gray line) by stepping the potential between (A) -0.7 and +0.9 V, (B) -0.7 and +1.25 V and (C) -0.7 and +1.5 V at 1 Hz for 20 s in air-free dichloromethane containing 0.10 M TBAPF6. Dotted line indicate the applied potential steps.

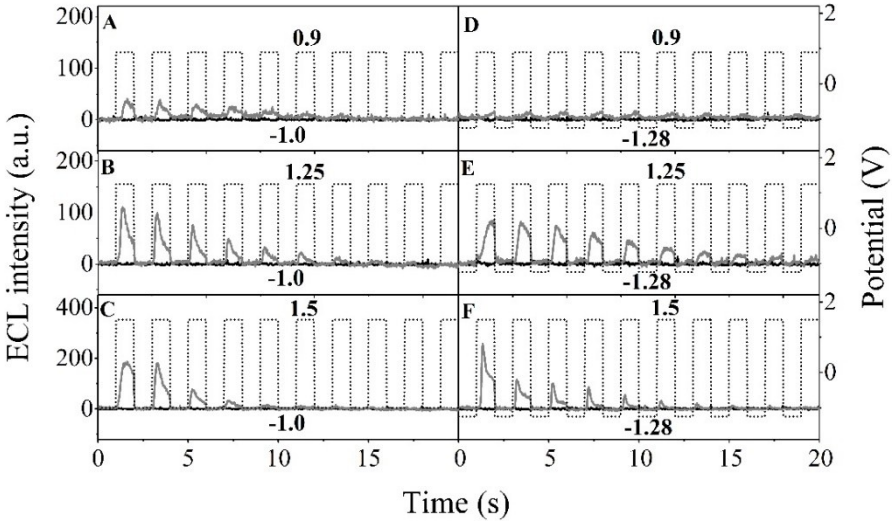

Fig. S5 Electron injecting initialed ECL transients of bare GCE (black line) and $CsPbBr_3$ NCs|GCE (gray line) by stepping the potential between (A) -1.0 and +0.9 V, (B) -1.0 and +1.25 V, (C) -1.0 and +1.5 V, (D) -1.28 and +0.9 V, (E) -1.28 and +1.25 V, and (F) -1.28 and +1.5 V at 1 Hz for 20 s in air-free dichloromethane containing 0.10 M $TBAPF_6$. Dotted line indicate the applied potential steps.

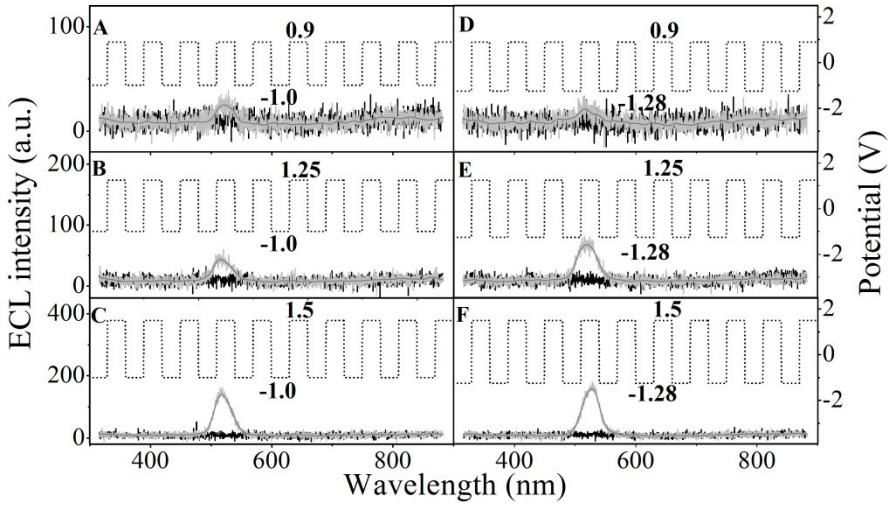

Fig. S6 Spectra of the electron injecting initialed transient ECL of bare GCE (black line) and $CsPbBr_3$ NCs|GCE (gray line) by stepping the potential between (A) -1.0 and +0.9 V, (B) -1.0 and +1.25 V, (C) -1.0 and +1.5 V, (D) -1.28 and +0.9 V, (E) -1.28 and +1.25 V, and (F) -1.28 and +1.5 V at 1 Hz for 20 s in air-free dichloromethane containing 0.10 M $TBAPF_6$. The exposure time for CCD was 20 s, exactly equal to that used for ECL transients; dotted line indicate the applied potential steps, gray line indicate the smoothed red line.