## **Supporting Information**

## Synthesis of PbS/PbI<sub>2</sub> Nanocomposites in Mixed Solvent and Their Composition-Dependent Electrogenerated Chemiluminescence Performance

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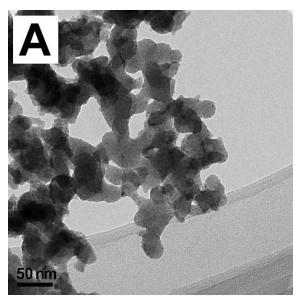
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Table S1. Different volume ratios of acetone to water used to synthesize samples

$V_{acetone}$ : $V_{water}$	$V_{acetone}(mL)$	$V_{TAA}(mL) \\$	$C_{TAA}(M)$	$V_{\text{NaOH}}(\text{mL})$	$C_{\text{NaOH}}(M)$
2:1	8	3	0.05	1	0.625
5:1	10	1.5	0.1	0.5	1.25
1:1	6	5	0.03	1	0.625



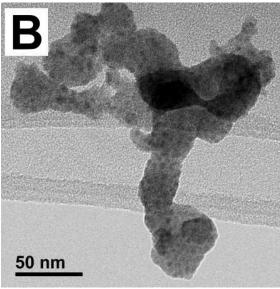
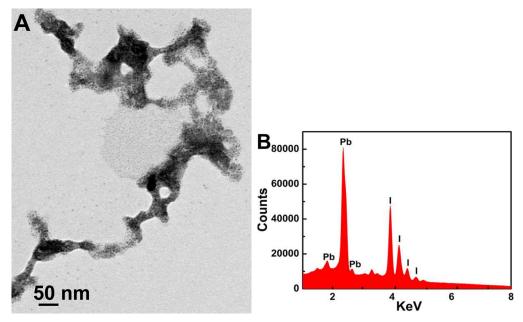
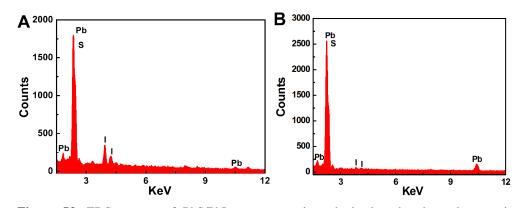


Figure S1. Lower (A) and higher (B) magnification TEM images of the PbS/PbI<sub>2</sub> nanocomposites.



**Figure S2**. TEM image (A) and EDS spectrum (B) of  $PbI_2$  formed at the earlier stage by the addition of water to an acetone solution of  $K[PbI_3]$ /tartaric acid.



**Figure S3.** EDS spectra of  $PbS/PbI_2$  nanocomposites obtained under the volume ratios of acetone/water: 5:1(A) and 1:1 (B) and keeping the other conditions constant, respectively.