Supporting Information

Influence of Lecithin Additive on the Performance of All-inorganic Perovskite Light-Emitting Diodes

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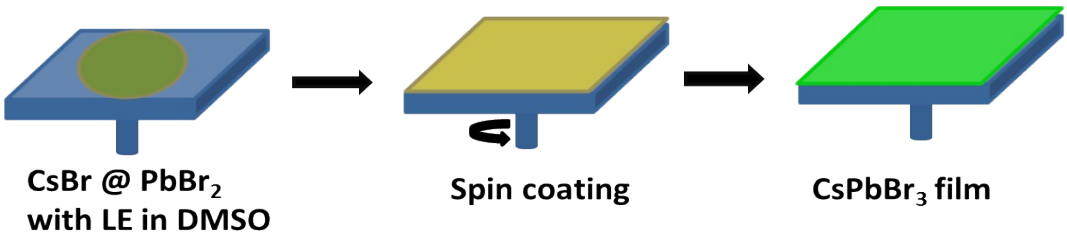
Fig. S1. Schematic illustration of the fabrication process involving spin-coating followed by thermal annealing at 90℃.

Fig. S2. The average crystal sizes of $CsPbBr_3$ films doped with 0 wt%-LE, 1 wt%-LE, 3 wt%-LE, and 5 wt%-LE. They are 200, 153, 67, and 37 nm, respectively.

Fig. S3. a) Tyndall effect of $CsPbBr_3$ –LE precursor solution. A clear light path was observed in the $CsPbBr_3$–LE precursor solution, while deionized water did not show this effect. b) UV-visible spectroscopy measurement of the $CsPbBr_3$ precursor solutions without or with the different weight ratios of LE.

Fig. S4. AFM images for perovskite films with different LE:$CsPbBr_3$ weight ratios (0 wt%, 1 wt%, 3 wt%, 5 wt%).

Figure S5. a) Commission Internationale del'Eclairage (CIE) coordinates of the PeLEDs based on CsPbBr3-5 wt% LE. b) EL spectrum of the said device operated at a driving voltage of 5 V.



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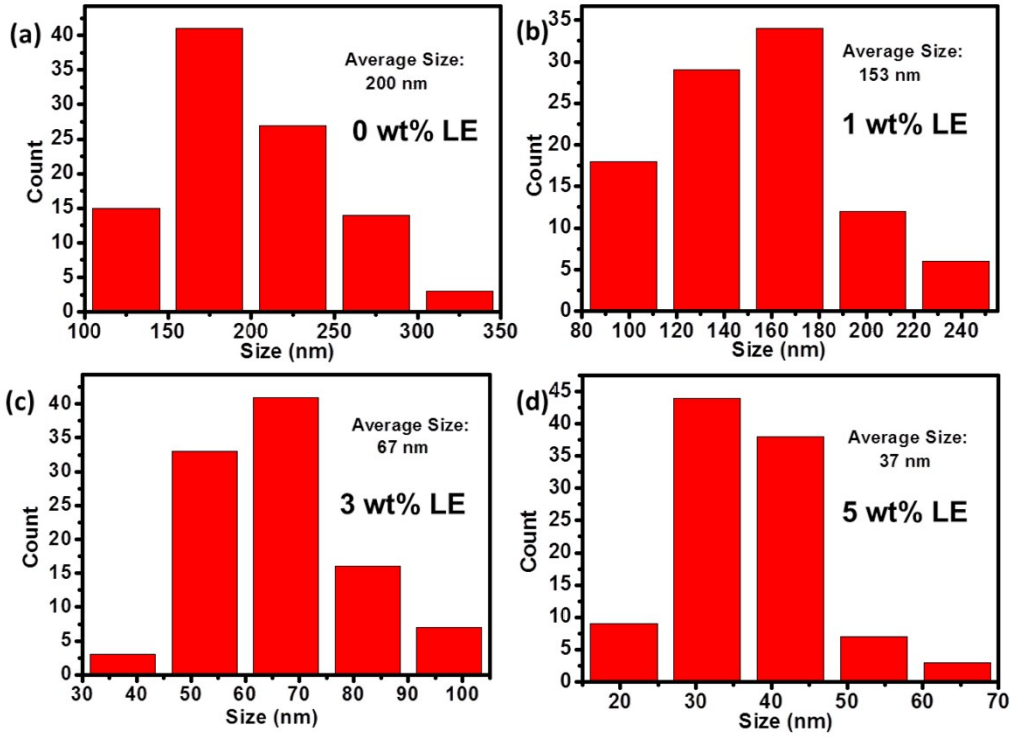

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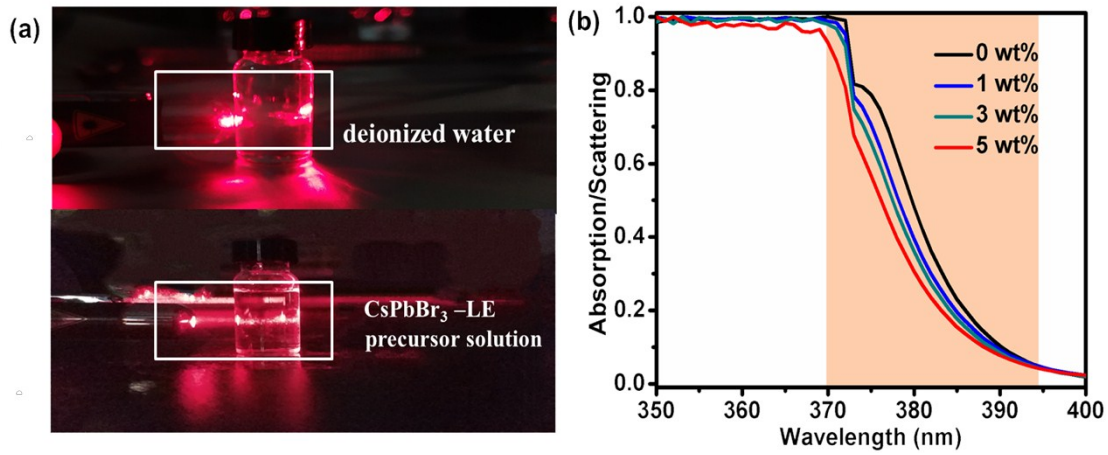

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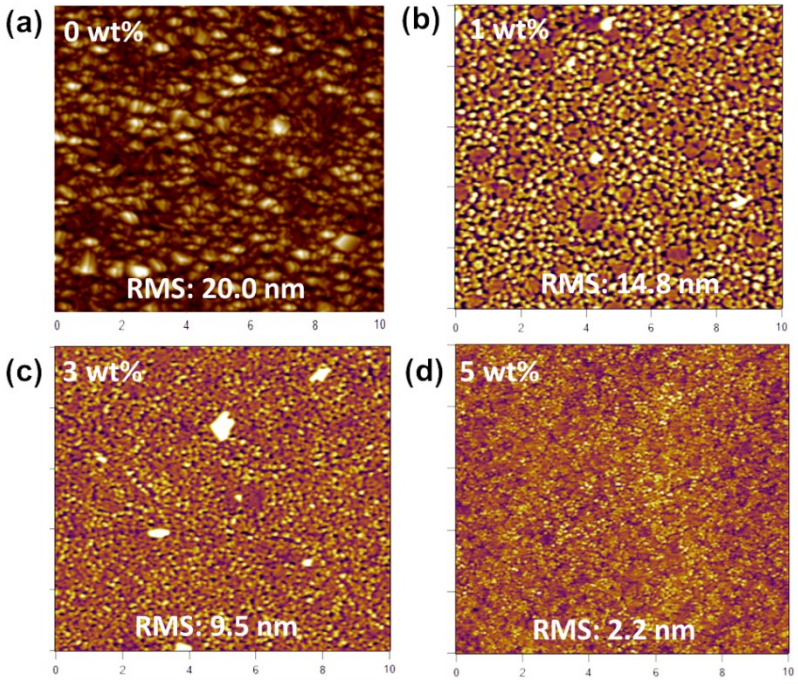

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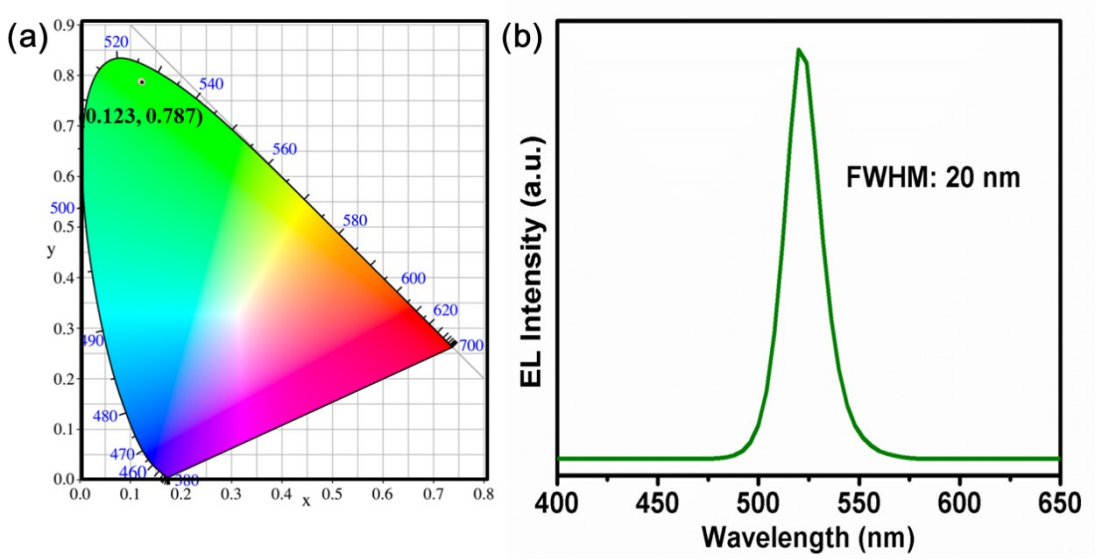

Fig. S5. (a) Commission Internationale del'Eclairage (CIE) coordinates of the PeLEDs based on $CsPbBr_3$-5 wt% LE. (b) EL spectrum of the said device operated at a driving voltage of 5 V.