

## Electronic Supplementary Information (ESI)

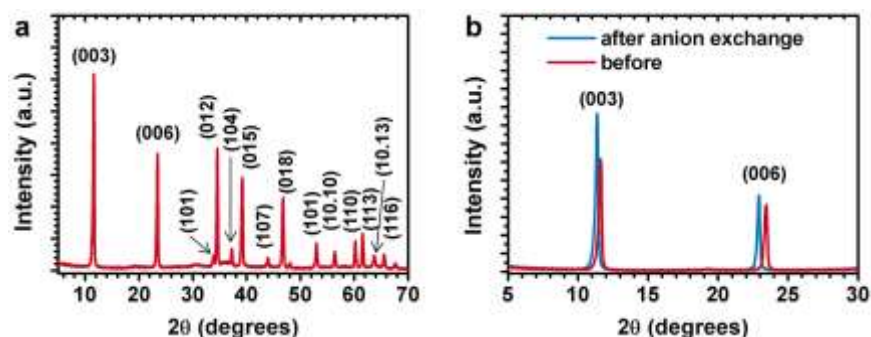
### Quantum dot-layered double hydroxide composites for near-infrared emitting codes

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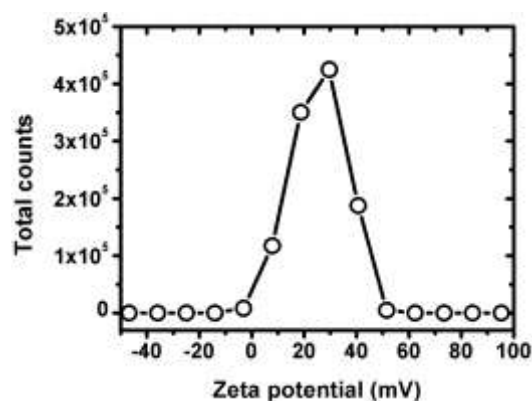
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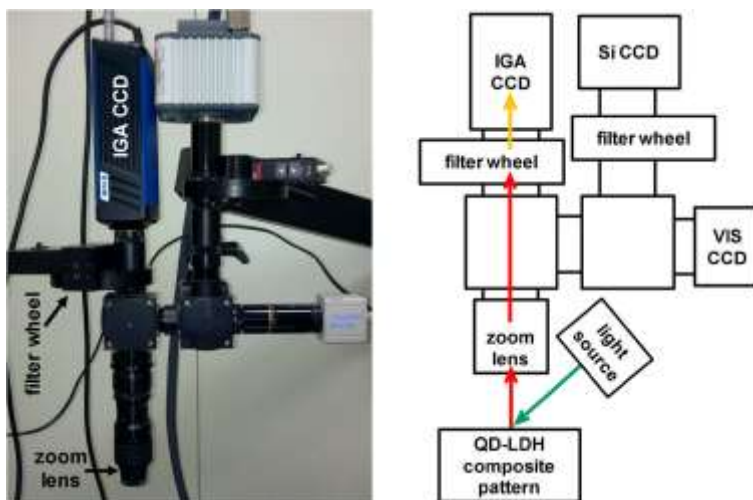
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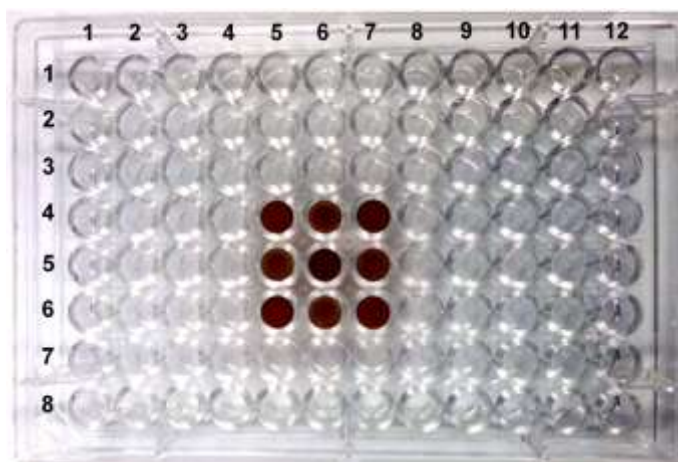
**Figure S1.** (a) XRD pattern of layered double hydroxide (LDH) powders synthesized by the hydrothermal method. (b) XRD patterns of the LDH powders before and after intercalated-anion exchange.



**Figure S2.** Zeta potential measurement performed on an exfoliated layered double hydroxide-dispersed solution.



**Figure S3.** Photograph and schematic diagram of the experimental setup for NIR fluorescence imaging of a QD-LDH composite film sample.



**Figure S4.** Photograph of PbS/CdS quantum dot-layered double hydroxide composite films [(4,6), (5,5), (5,7) and (6,6): Composite I, (4,5), (4,7), (5,6), (6,5) and (6,7): Composite II] on the 96-well plate under room light.