

## Electronic Supplementary Information

### Constructing luminescent particle/MOF composites by employing polyvinylpyrrolidone-modified organic crystals as seeds

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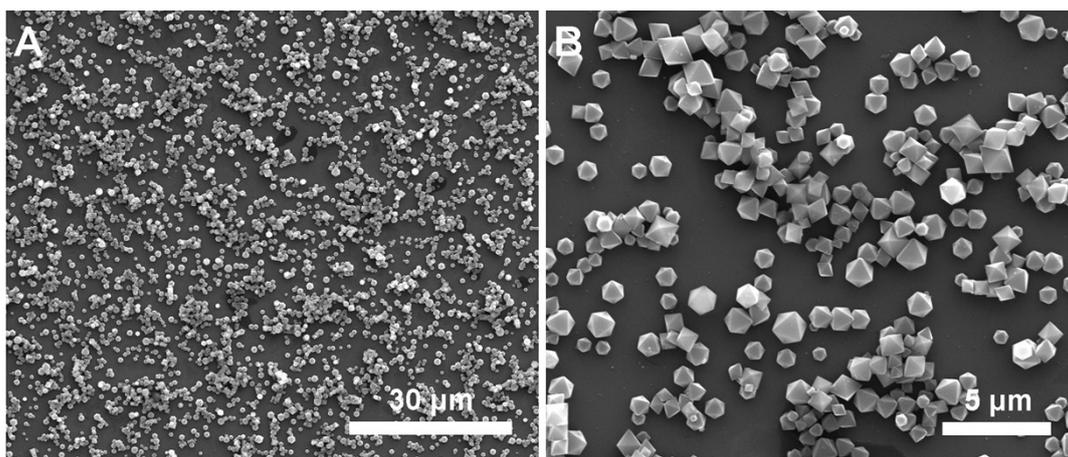
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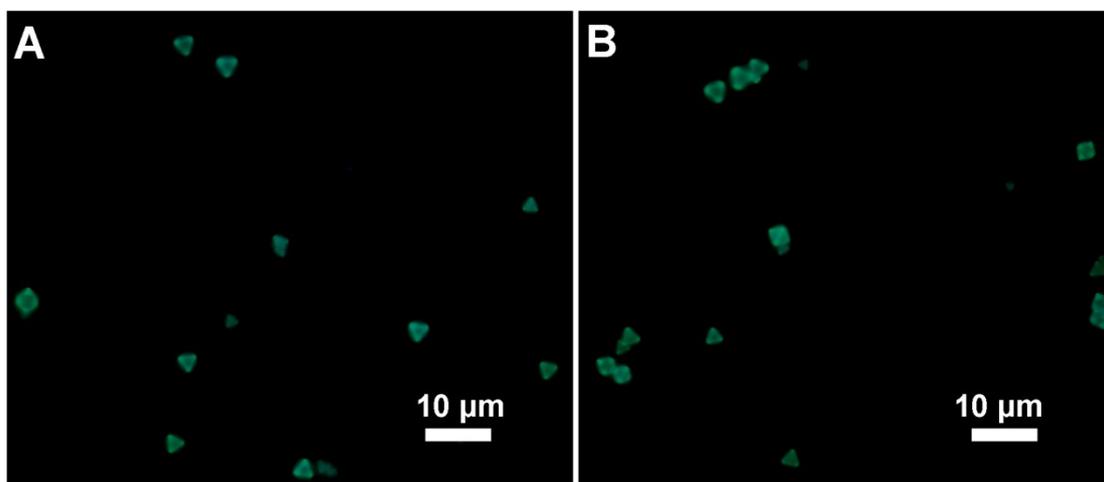
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**Fig. S1** SEM images of octahedral Znq<sub>2</sub> microcrystals in the absence of PVP.



**Fig. S2** Fluorescence microscopy images of octahedral Znq<sub>2</sub> microcrystals deposited on the surface of a quartz substrate. The as-prepared samples were excited by nonfocused UV light (330-380 nm).

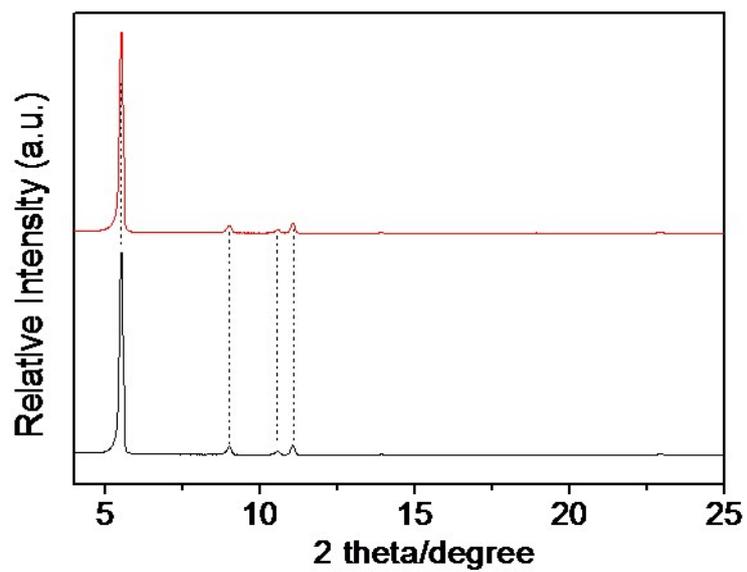


Fig. S3 XRD patterns of  $\text{Znq}_2$  microcrystals obtained in the absence (black curve) and presence (red curve) of PVP.

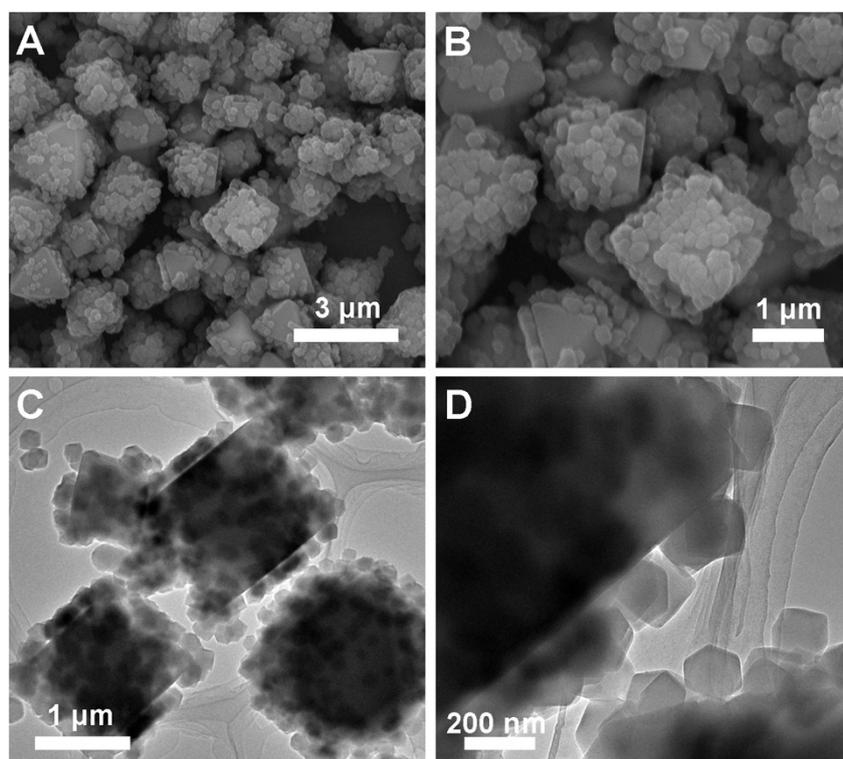
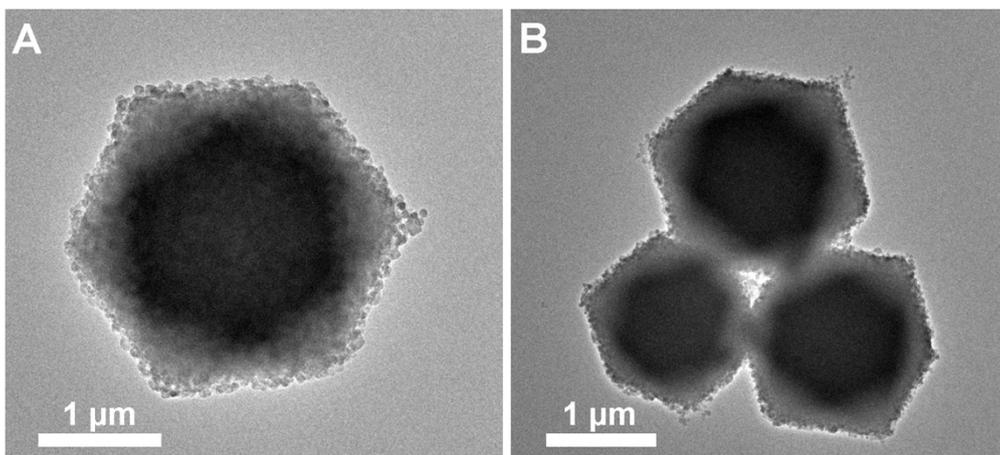
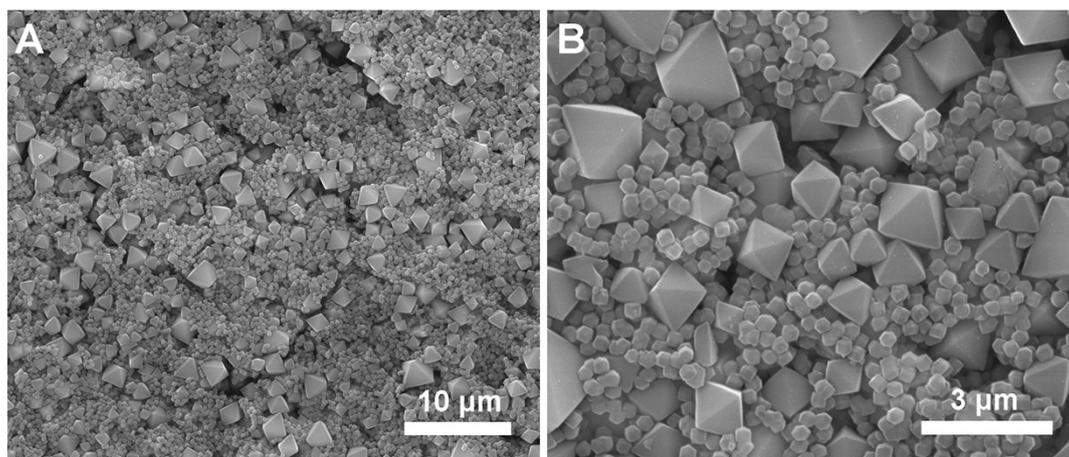


Fig. S4 (A, B) SEM images of partial encapsulation of ZIF-8 particles on the  $\text{Znq}_2$  surfaces without stirring. (C, D)

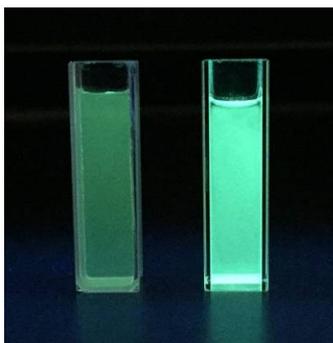
The corresponding TEM images of partial encapsulation of ZIF-8 particles on the  $\text{Znq}_2$  surfaces.



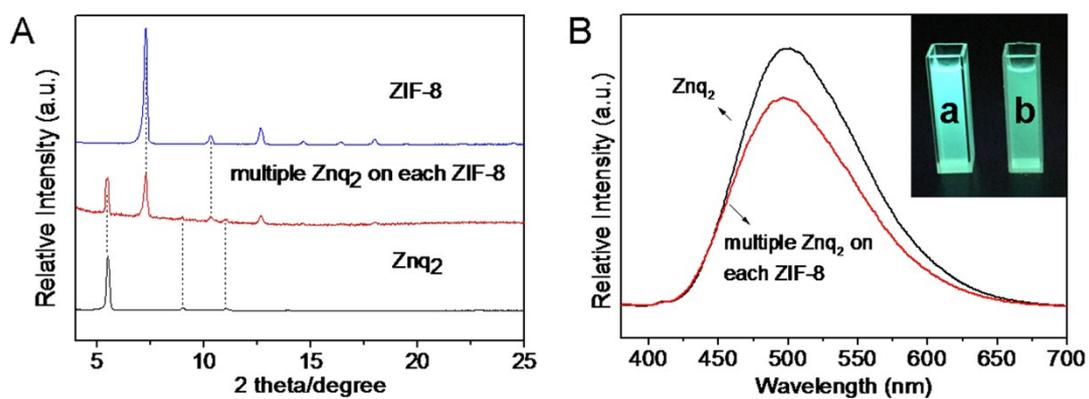
**Fig. S5** TEM image of tightly packed  $\text{Znq}_2@ZIF-8$  core-shell structures.



**Fig. S6** SEM image of homogeneous nucleation of ZIF-8 particles by applying  $\text{Znq}_2$  microcrystals as seeds in the absence of PVP.



**Fig. S7** The photographs of (left) pure  $\text{Znq}_2$  microcrystals and (right)  $\text{Znq}_2$ @ZIF-8 core-shell structures dispersed in water under UV light.



**Fig. S8** (A) XRD patterns of  $\text{Znq}_2$  nanocrystals, rhombic dodecahedral ZIF-8 and multiple  $\text{Znq}_2$  on each ZIF-8. (B) Photoluminescence (PL) spectra of  $\text{Znq}_2$  nanocrystals (black curve) and multiple  $\text{Znq}_2$  on each ZIF-8 (red curve). The excitation wavelength is 365 nm. The inset shows the photographs of (a)  $\text{Znq}_2$  nanocrystals and (b) multiple  $\text{Znq}_2$  on each ZIF-8 dispersed in methanol under UV light.