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Supplementary Information

Preparing CdS QDs in sodium alginate gel: realizing water-solubility and stimuli-responsiveness of QDs in an integrative way

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26 **Contents:**

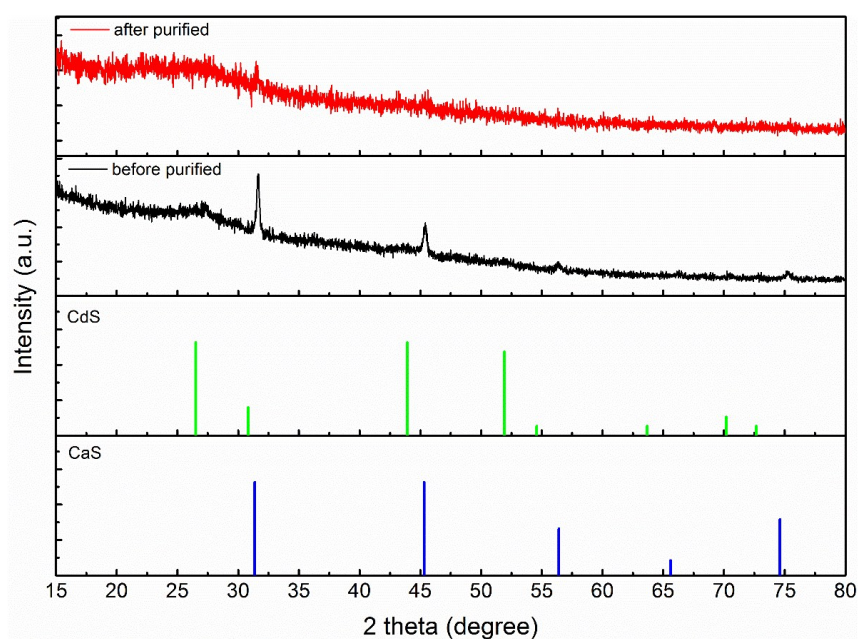
27 S1. XRD patterns of the original and purified CdS-SA product.

28 S2. PL spectra of CdS-SA solution with Ba²⁺, Ni²⁺, Al³⁺, Mg²⁺, Ca²⁺,
29 and Zn²⁺ added.

30 S3. TEM image of the CdS-SA solution with Fe³⁺, Ba²⁺ and Ni²⁺
31 added.

32 S4. PL spectra of 0.2 wt% CdS-SA QDs in different mediums (PBS;
33 DMEM + 10% FBS).

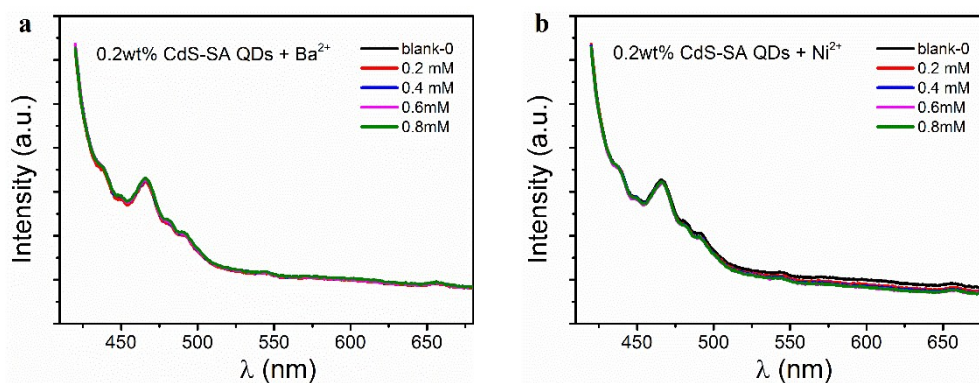
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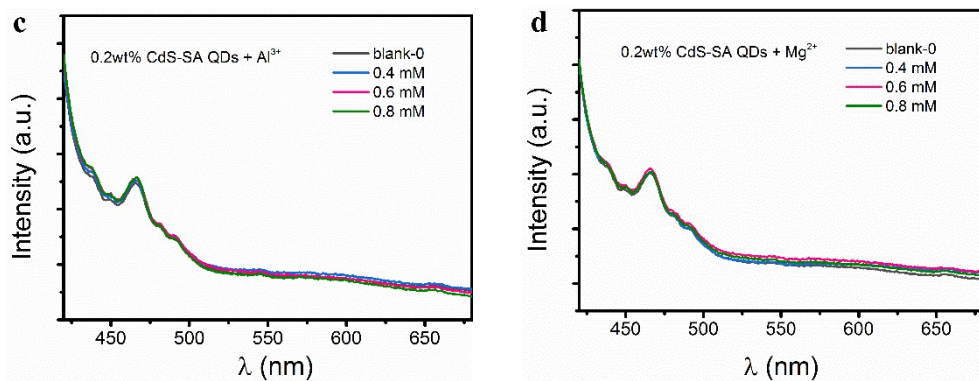
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36 Fig. S1 XRD patterns of the original and purified CdS-SA product.

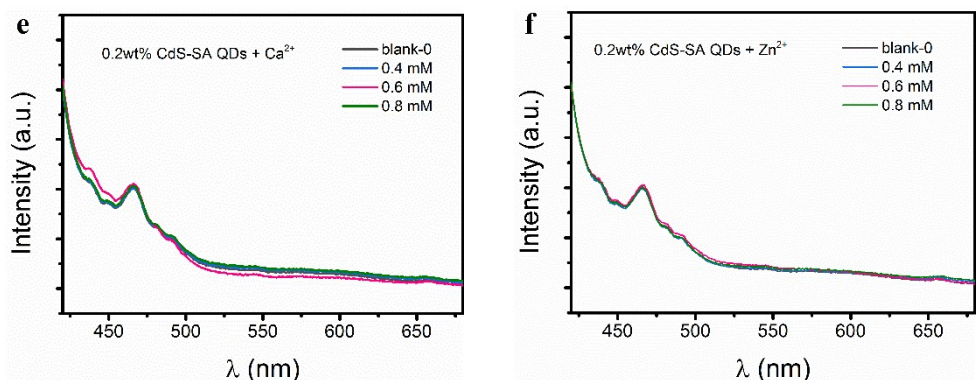
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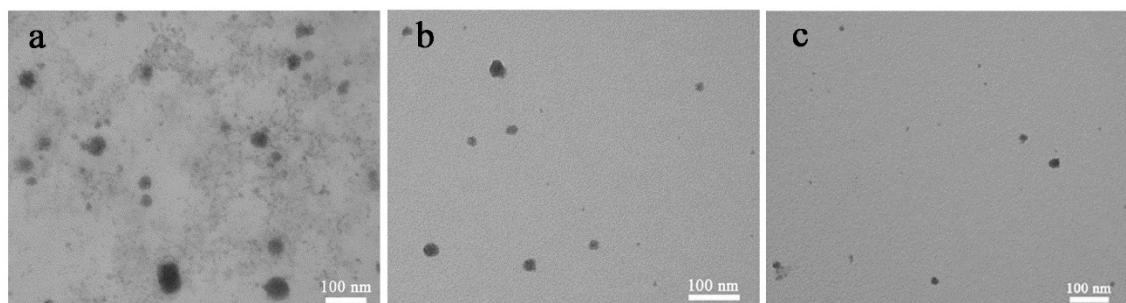


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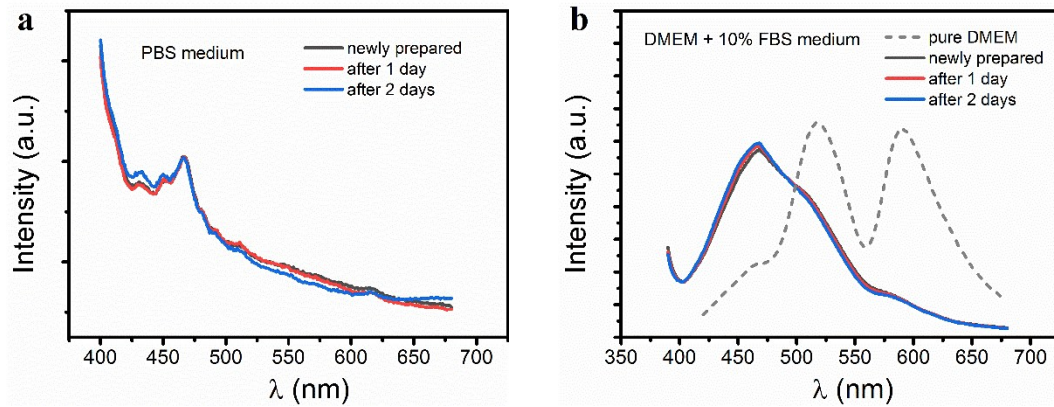


40 Fig. S2 Fluorescence spectra (excited at 400 nm) of 0.2 wt% CdS-SA solutions with
 41 addition of (a-f) BaCl_2 , NiCl_2 , AlCl_3 , $\text{Ca}(\text{CH}_3\text{COO})_2$, $\text{Mg}(\text{CH}_3\text{COO})_2$, $\text{Zn}(\text{CH}_3\text{COO})_2$
 42 in different concentration.

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44 Fig. S3 TEM images of the 0.2 wt% CdS-SA solution with different ions added at the
 45 concentration of 0.4 mM. (a-c, Fe^{3+} , Ba^{2+} , Ni^{2+}).



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47 Fig. S4 Fluorescence spectra of 0.2 wt% CdS-SA QDs in different mediums (a, PBS;

48 b, DMEM + 10% FBS) measured after different time.