## **Electronic Supplementary Information**

## Highly Stable Perovskite Nanogels as Inks for Multicolor

## **Luminescent Authentication Applications**

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**Figure S1.** The HRTEM images  $(a_1, b_1, c_1)$  and their size distribution  $(a_2, b_2, c_2)$  of PQD-B, PQD-G and PQD-R, respectively.



**Figure S2.** The luminescence spectra of PQD-G/PS (a) and PQD-G (b) before and after irradiation (365-nm light) for 240 h.



**Figure S3.** XRD patterns of PQDs with their mixture (a) and PQDs/PS films with their mixture films (b). The wide weak peak around 20° can be ascribed to the PS film.



Figure S4. TEM images of CsPbBr<sub>3</sub> QDs dispersed in as-polymerized PS.



**Figure S5.** Fluorescent letters and flower modeled with different PQD/PS ( $\lambda_{ex} = 365$  nm).