Supporting Information

Encapsulated Cd_3P_2 Quantum Dots Emitting from the Visible to the Near Infrared for Bio-labelling Applications

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1. Recipe for synthesis of PS@ QDs

Table S1 Recipe for two-stage copolymerization of styrene and DVB in ethanol

Materials	Amount	
	1st step	2nd step
PVP	0.010 g	0.00 g
Styrene	0.25 g	0.25 g
DVB	0.00 g	0.03 g
AIBN	0.0130 g	0.00 g
Ethanol	10.0 mL	0.00 mL

2. TEM and EDS mapping spectra of SiO_2@QDs nano-beads

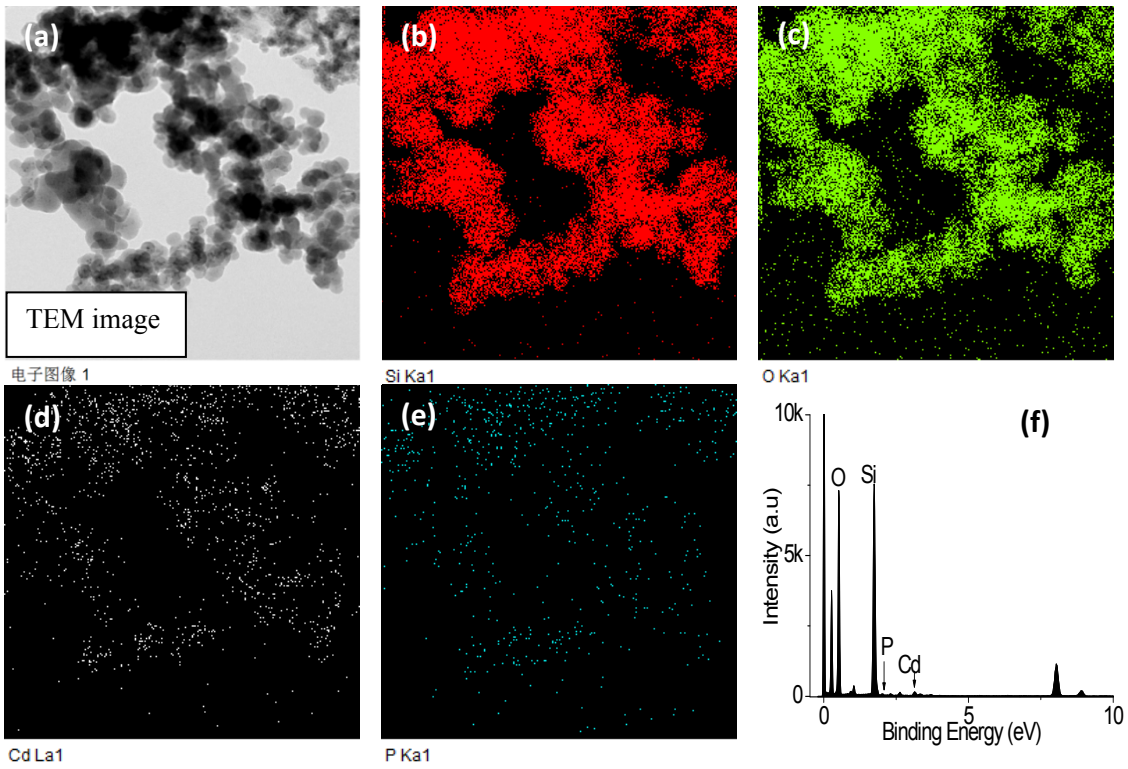

Fig. S1 TEM image (a) of SiO_2@QDs nano-beads and the corresponding EDS mapping figures (b, c and d); (e) The EDS profile of a selected area in figure (a)

Table S2 Normalized elemental percentages of Si, O, Cd, and P presented in the fluorescent SiO_2@QDs obtained from EDS analysis.

Element	Weight percentage	Atomic percentage
Si K	41.85	30.08
O K	54.96	69.13
Cd L	2.85	0.56
P K	0.34	0.22
Total	100.00	

3. TEM and linked EDS mapping analysis of PS@QDs Micro-spheres

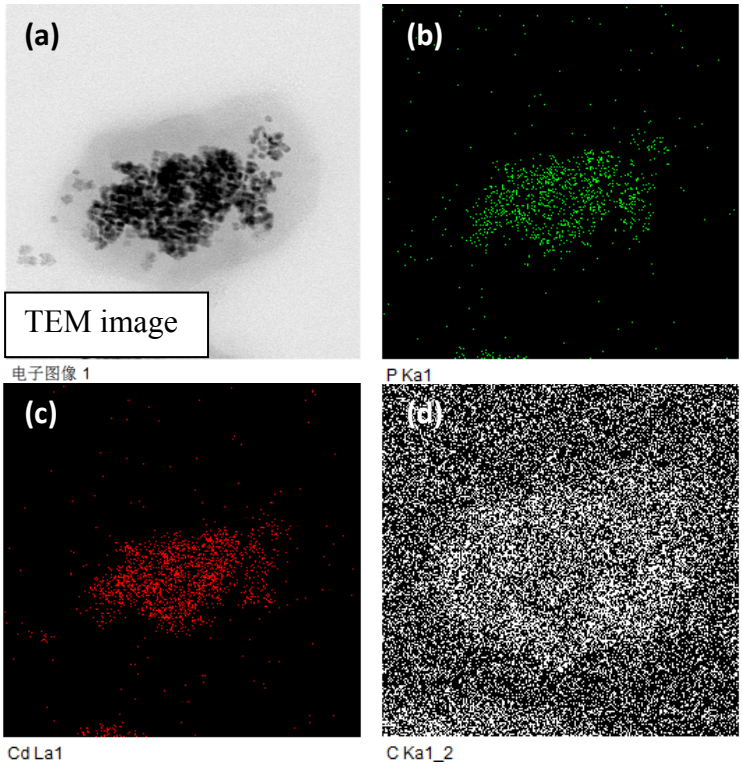

Fig. S2 TEM image (a) of PS@QDs and the corresponding EDS mapping figures of the elements P, Cd, and C (b, c and d).

Table S3 Normalized elemental percentages of C, Cd, and P presented in the fluorescent PS@QDs obtained from EDS analysis.

Element	Weight percentage	Atomic percentage
C K	90.55	98.35
Cd L	7.64	0.89
P K	1.81	0.76
Total	100.00	

4. Fluorescence images of LoVo cells incubated with neat Cd_3P_2 QDs

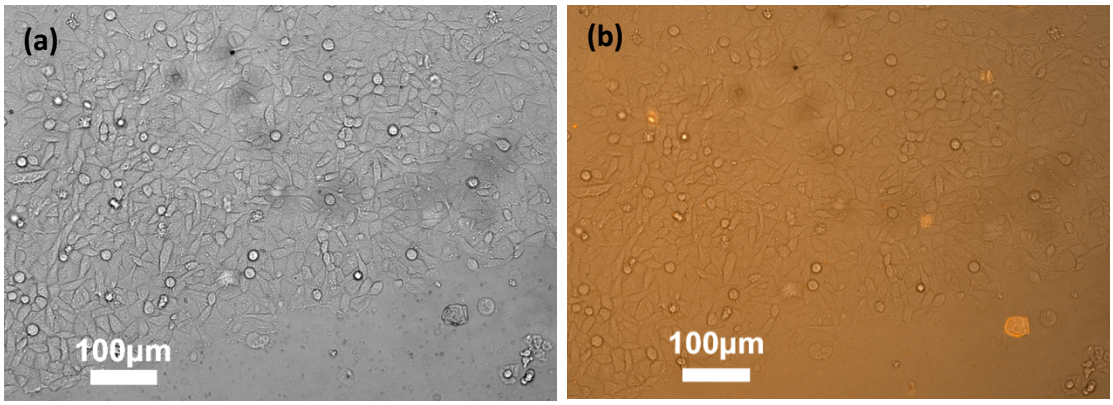

Fig. S3 Fluorescence (DIC images, left) and bright field images (right, taken under UV light) of LoVo cells obtained after incubation with neat Cd_3P_2 QDs for 6 hours.

References

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