

## Electronic Supplementary Information

# Fabrication of light emitting diodes using photo- patternable quantum dot-acrylate resins

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## Synthesis of CdSe/ZnS red-emitting QDs

For white LED application, highly luminescent red-emitting CdSe/ZnS core/shell QDs were prepared by a previously reported method.<sup>1</sup> Briefly, CdO (2 mmol) and Zn(OAc)<sub>2</sub> (4 mmol) were mixed with OA (10 mL) in a 250 mL flask followed by degassing at 110 °C under vacuum until the vacuum level reached 100 mTorr. Then, 1-ODE (50 mL) was added to the mixture and it was further heated to 300 °C under inert atmosphere. When the temperature reached 300 °C, TOPSe, which was prepared by dissolving Se (0.4 mmol) in TOP (0.4 mL), was rapidly injected to the mixture. After 1 min, 1-DDT (0.6 mL) was added to the mixture at a rate of 1 mL/min. After 20 min, TOPS, which was prepared by dissolving S (4 mmol) in TOP (2 mL), was added, and the mixture was allowed to react for 10 min to passivate the QD core with ZnS shell. To complete the reaction, the temperature of the reactor was lowered to room temperature using a water bath. The obtained QDs were separated by adding chloroform and an excess amount of acetone, followed by centrifugation. These steps were repeated three times, and the QDs were dispersed in chloroform for further experiments.

## REFERENCE

1. C. Yoon, H. J. Kim, M. H. Kim, K. Shin, Y. J. Kim, K. Lee, *Nanotechnology*. 2017, **28**, 405203.