

Supporting Information

Flexible and High Color Rendering Electroluminescent Device via Self-Adsorptive Carbon Quantum Dots

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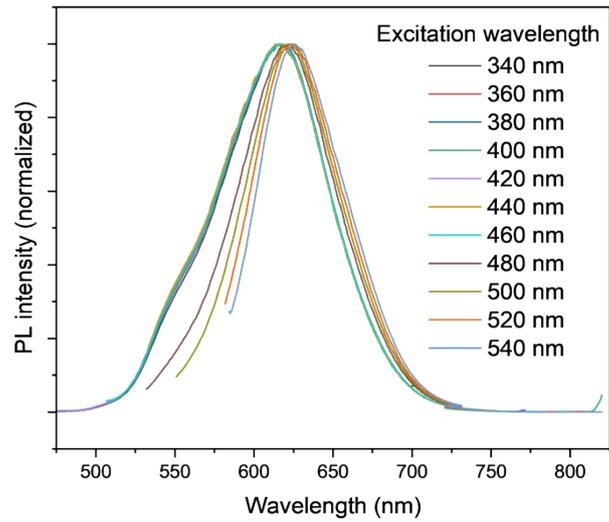


Figure S1. The excitation-dependent PL spectra of CQDs.

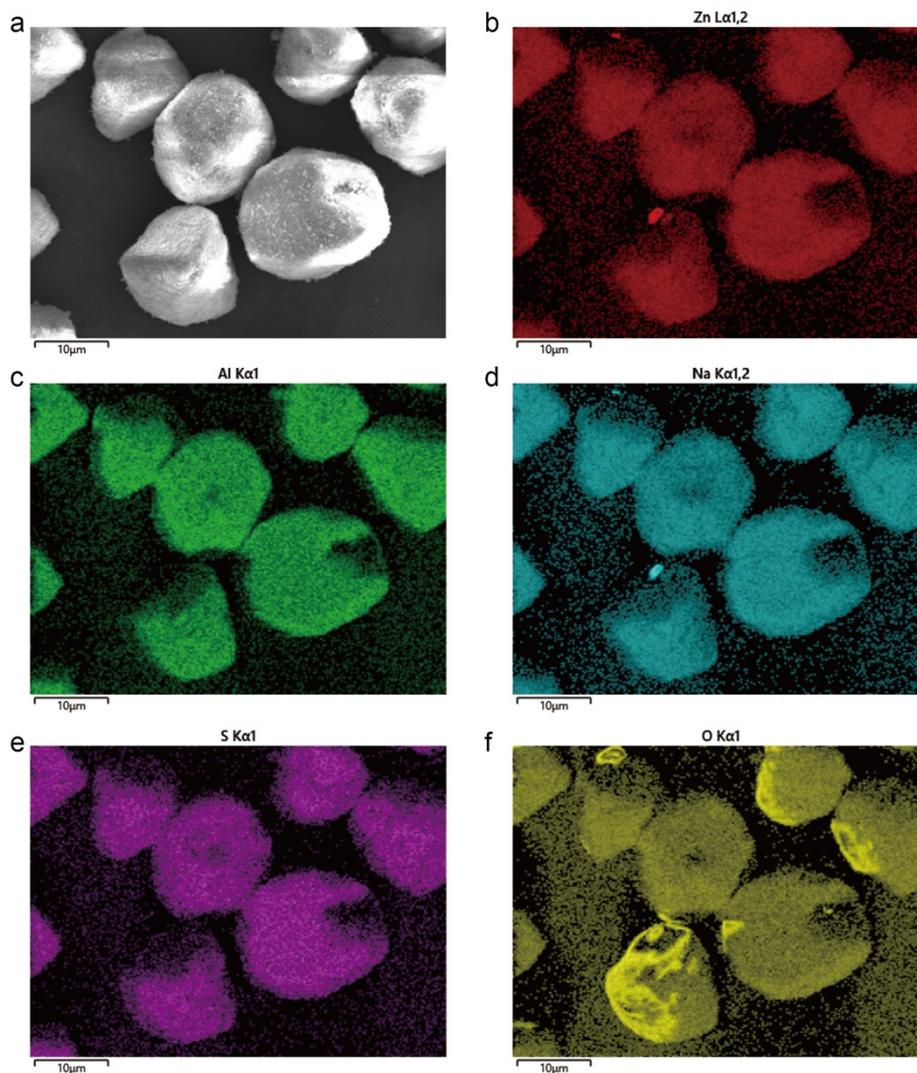


Figure S2. Scanning electron microscope (SEM) characterization of ZnS-Al₂O₃-CQDs composite particles. (a) The secondary electron images of morphology. (b-f) The corresponding elemental mapping.

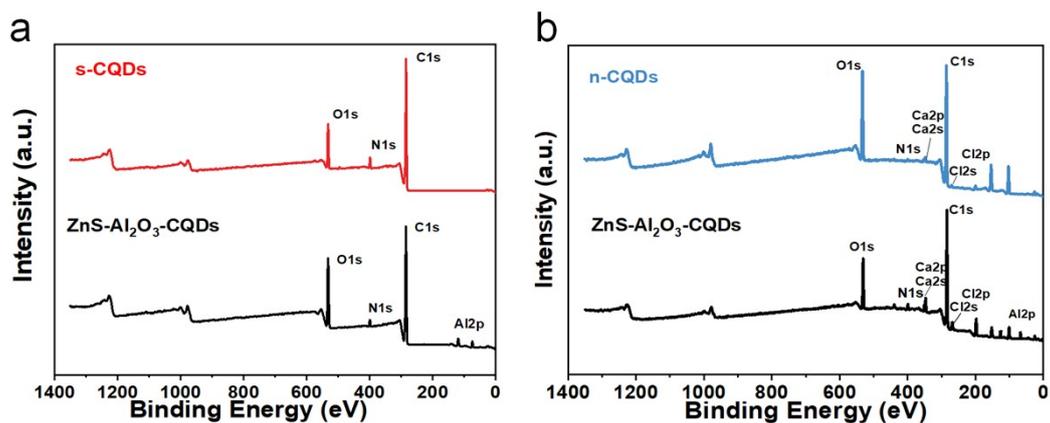


Figure S3. The full spectra of XPS for (a) s-CQDs and (b) n-CQDs and their composite particles.

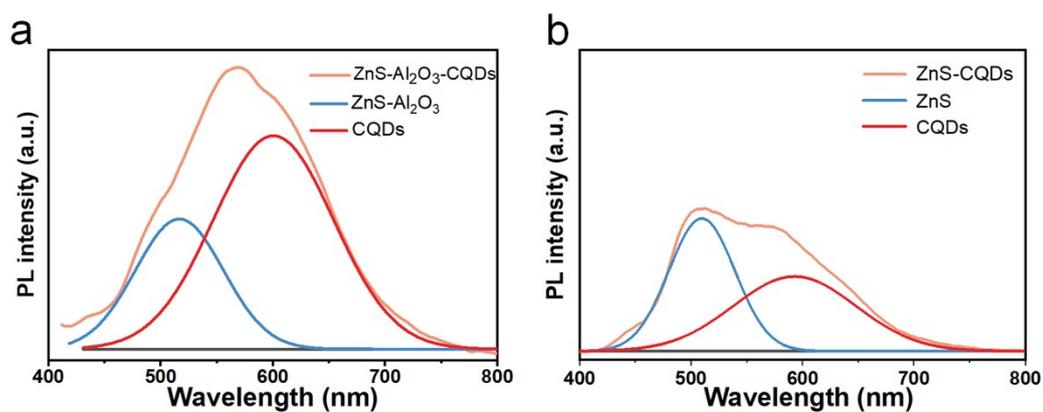


Figure S4. The electroluminescence spectra and the peak-differentiating for (a) ZnS-Al₂O₃-CQDs and (b) ZnS- CQDs composite particles.

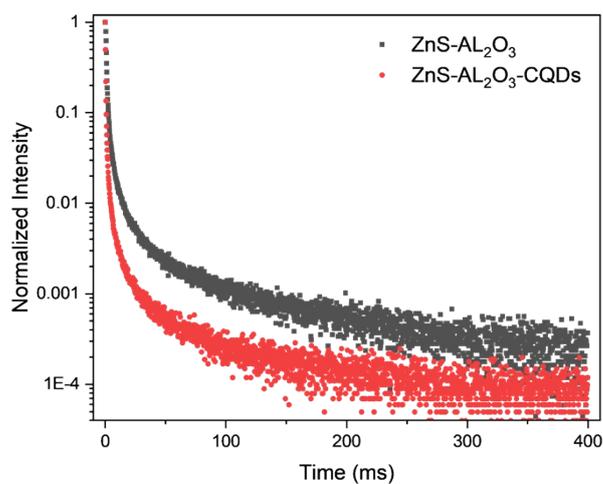


Figure S5. Photoluminescence decay curves of ZnS emission peak (510 nm). The t_1 lifetime of triple exponential decay fitting is 0.84 ms and 0.24 ms before and after CQDs adsorption, indicating the energy transfer from ZnS particles to CQDs is dominated by FRET.

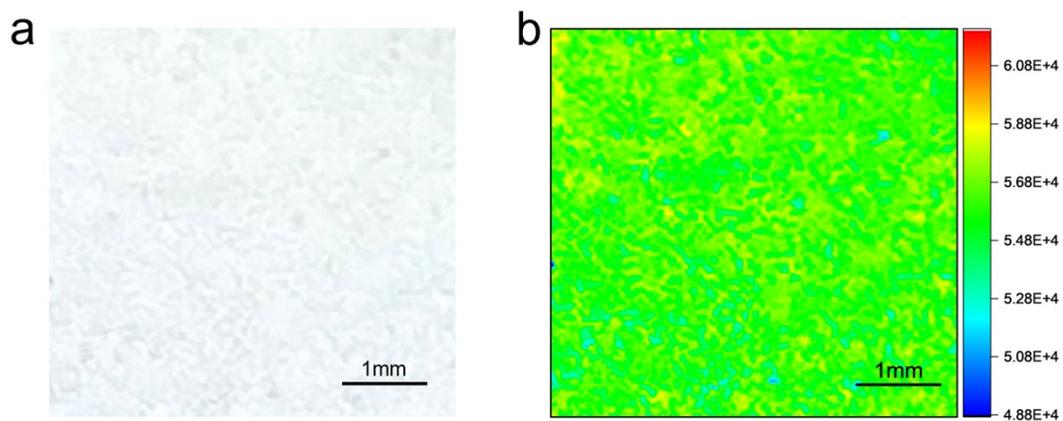


Figure S6. (a) Photo and (b) contour plot image of luminescence uniformity for EL device. The coefficient of variation is calculated as 0.016.