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Supplementary Materials

A Novel and Cost-Effective $CsVO_3$ Quantum Dots for Optoelectronic and Display Applications

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Characterizations

The morphology of the $CsVO_3$ QDs and $CsVO_3$ nanosheets self-assembled microflower-like particles were examined using field-emission scanning electron microscopy (FE-SEM) (Hitachi-SU8010, Japan) and field-emission transmission electron microscopy (FE-TEM: JEM-2100F/JEOL) measurements. The X-ray diffraction (XRD) patterns of $CsVO_3$ microflower-like particles were measured using X'Pert Pro multipurpose X-ray diffractometer (PANalytical) with ceramic Cu target (CuKα= 1.5406 Å), X-ray generator of 3kW 60kV/60mA, and scan speed of 1 deg/sec. The energy dispersive X-ray spectrometer attached to the FE-SEM instrument (PANalytical, Holland) was used to verify the elemental composition of $CsVO_3$ QDs and microflower-like particles. The photoluminescence emission spectrum of $CsVO_3$ microflower-like particles was measured using a Photon Technology International (PTI, USA) fluorimeter with a xenon arc lamp power of 60 W. The absorption spectra of $CsVO_3$ QDs were recorded on a V-770 UV-vis spectrophotometer (JASCO International Co. Ltd., Japan).

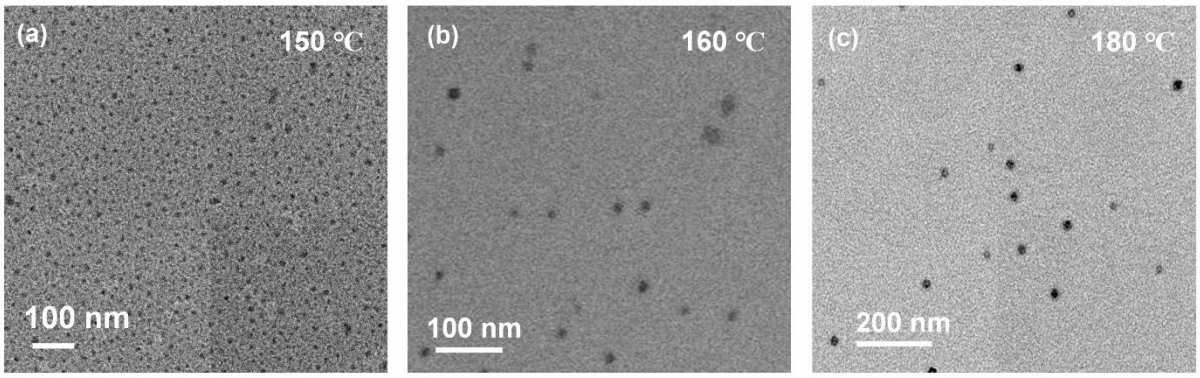

Figure S1. (**a**–**c**) FE-TEM images of the $CsVO_3$ QDs synthesized at 150 °C, 160 °C, and 180 °C, respectively.

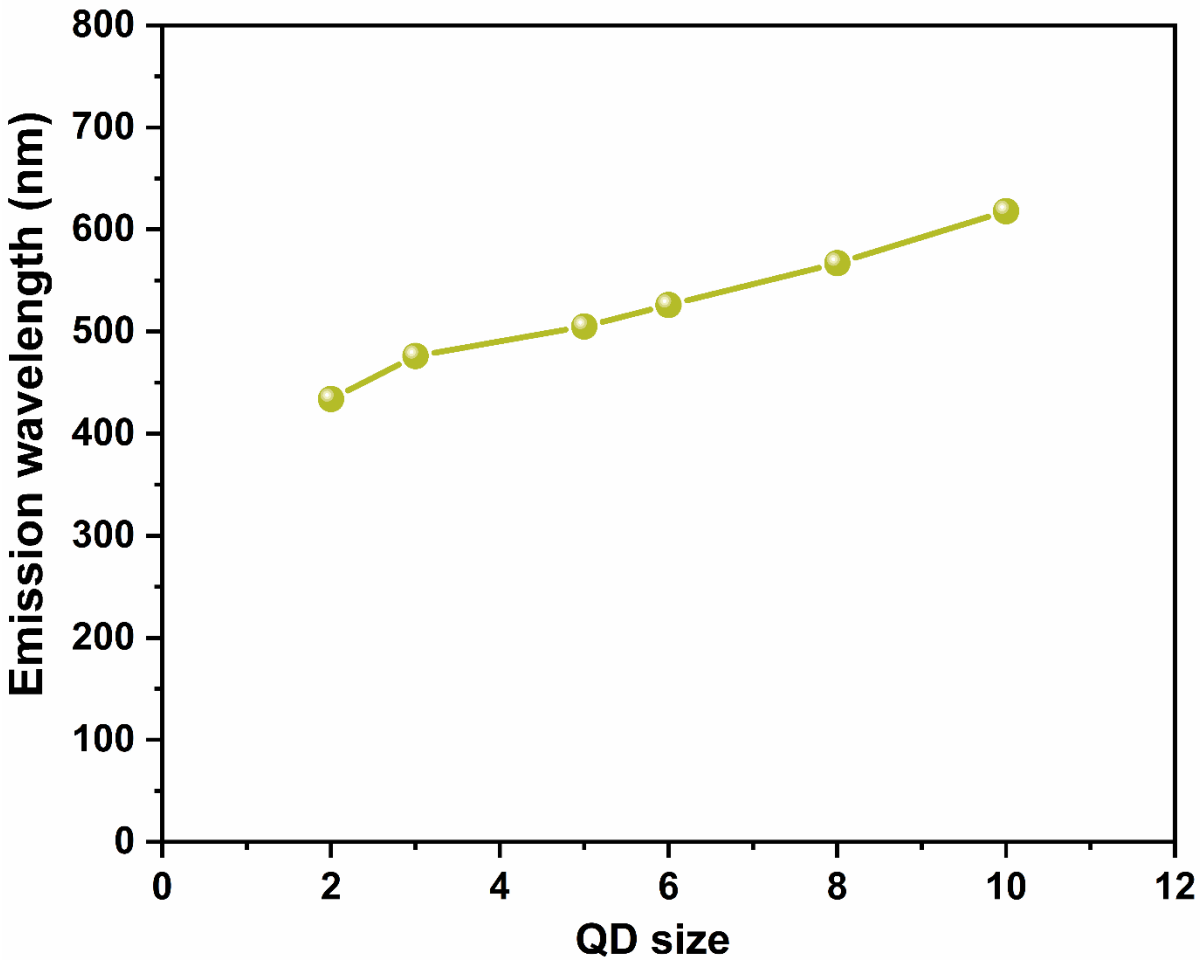

Figure S2. Emission wavelength versus CsVO3 QDs size.