Supporting Information

Aqueous synthesis of Mn-doped $CuInSe_2$ quantum dots to enhance the performance of quantum dot sensitized solar cells

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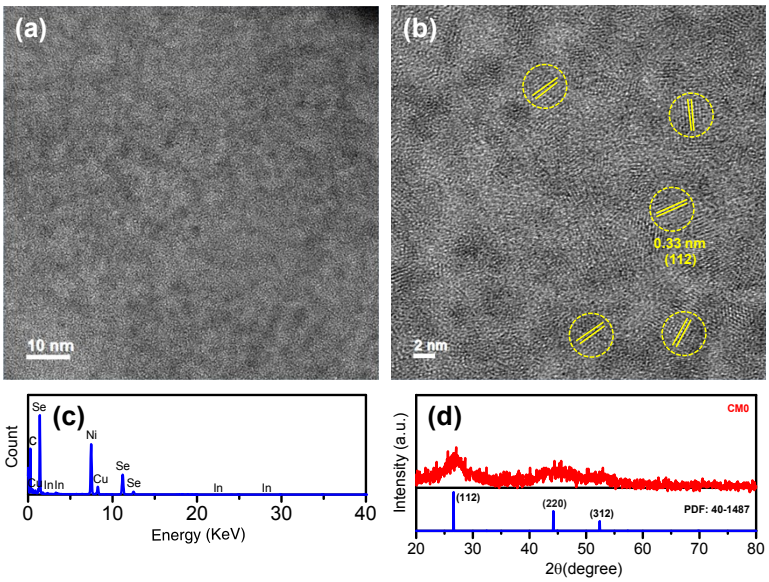

Figure S1. (a) Representative TEM image, (b) high-resolution TEM image, and (c) EDS analysis of CM0 QDs. The C and Ni signals in the spectrum come from the nickel TEM grid used in the measurements. (d) XRD pattern of CM0 QDs. The vertical lines are the reference XRD pattern of tetragonal CISe (JCPDS 40-1487).

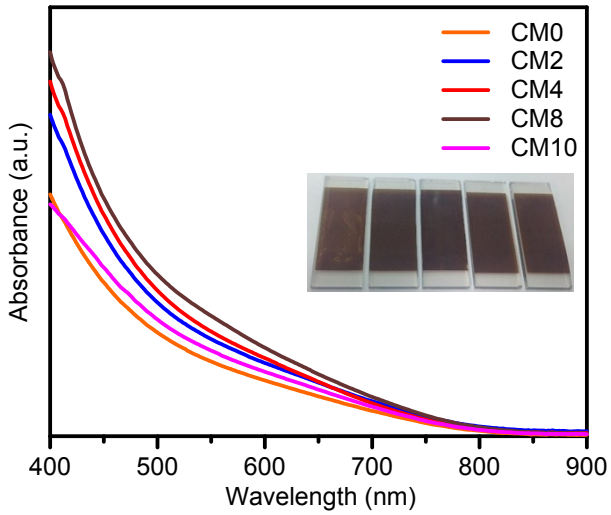

Figure S2. UV–Vis absorption spectra of CM0, CM2, CM4, CM8, and CM10 QDs sensitized on TiO_2 with respective to FTO glass. (The inset photographs, from left to right, indicate the CM0, CM2, CM4, CM8, and CM10 QDs sensitized-TiO_2 electrodes on the FTO glass substrate).

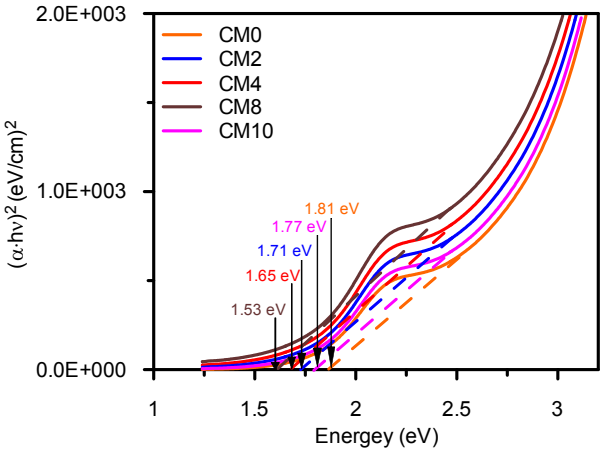

Figure S3. $(\alpha.h\nu)^2$ (eV^2) plot for the determination of band gap for CM0, CM2, CM4, CM8, and CM10 QDs.

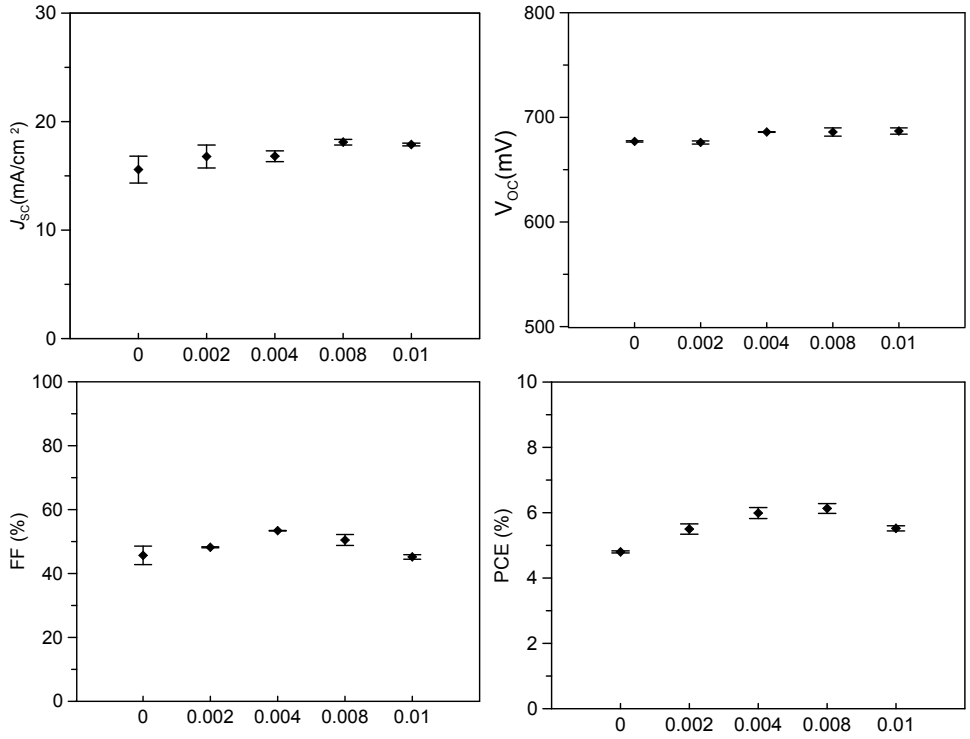

Figure S4. Summary of photovoltaic performance of CM0, CM2, CM4, CM8, and CM10 QDs. Error bars represent the mean standard deviation of five independent experiments.

Table S1. ICP elemental analyses of cations for the samples CM0, CM2, CM4, CM8, and CM10 QDs.

Samples	Mn (mM/mL)	Cu (mM/mL)	In (mM/mL)
CM0	0.0000	4.705	24.547
CM2	0.0003	5.090	25.460
CM4	0.0027	5.040	25.540
CM8	0.0043	4.720	23.560
CM10	0.0066	4.660	23.880