Supporting Information (SI†)

ZnO nanorods decorated with metal sulfides as stable and efficient counter electrode materials for high-efficiency quantum dot-sensitized solar cells

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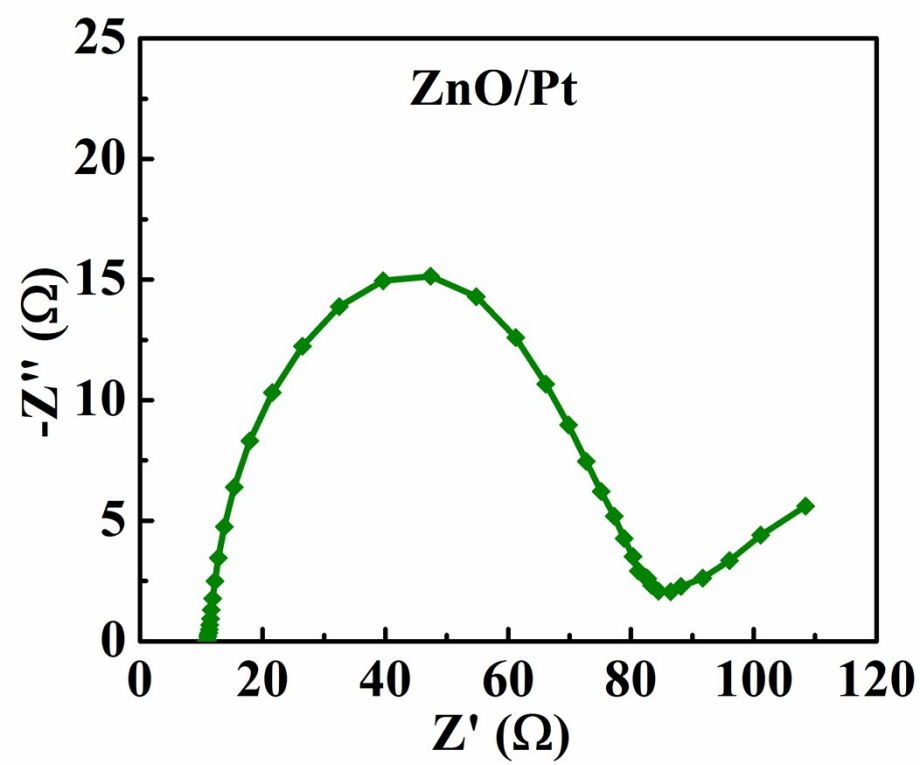

Fig. S1 Nyquist plots of symmetric cells based on ZnO/Pt CE.

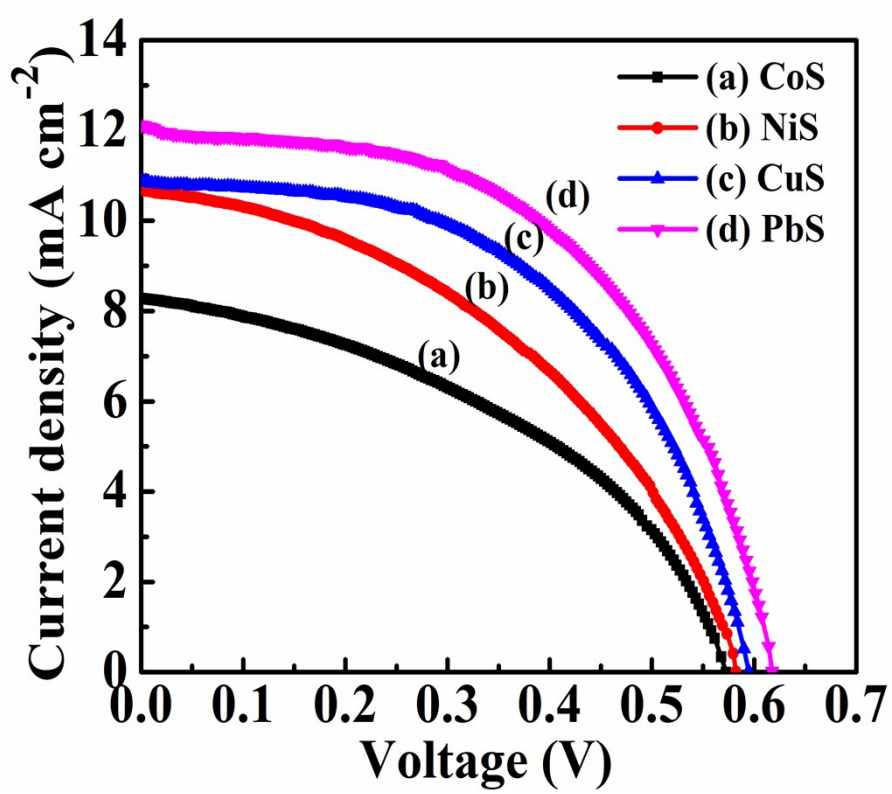

Fig. S2 J–V curves for the QDSSCs assembled using the bare metal sulfide CEs under simulated solar illumination at 100 mW cm^{-2}.

Table S1 Photovoltaic parameters of the QDSSCs based on the bare metal sulfide counter electrodes (CoS, NiS, CuS and PbS) in the presence of polysulfide electrolyte.

CE	V_{OC} (V)	J_{SC} (mA cm^{-2})	FF	η%
CoS	0.572	8.27	0.430	2.04
NiS	0.582	10.67	0.432	2.68
CuS	0.594	10.87	0.525	3.40
PbS	0.617	12.11	0.529	3.96

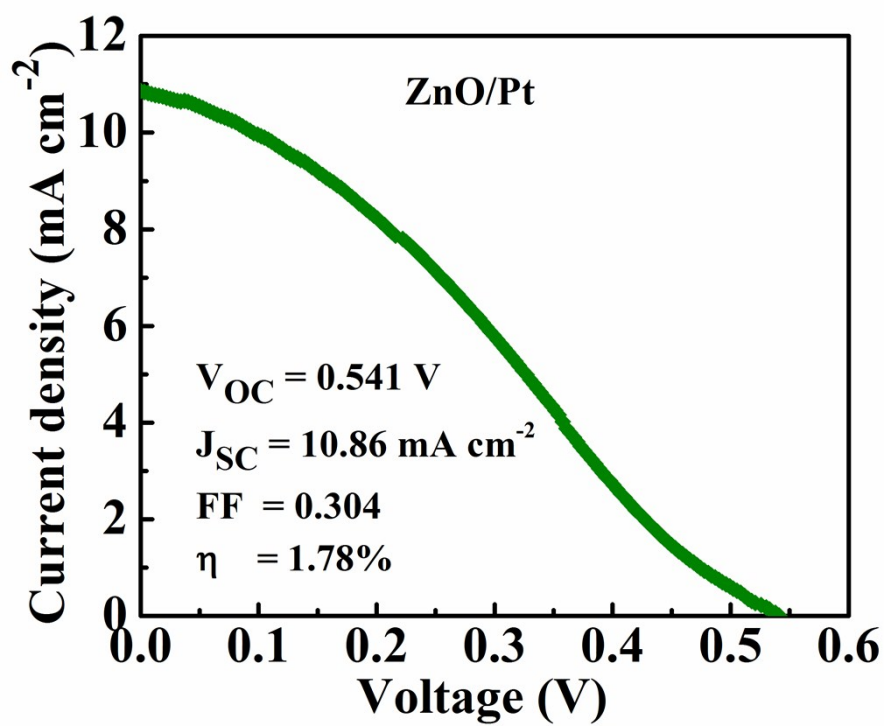

Fig. S3 J–V curve for the QDSSCs assembled using the ZnO/Pt CE under simulated solar illumination at 100 mW cm^{-2}.

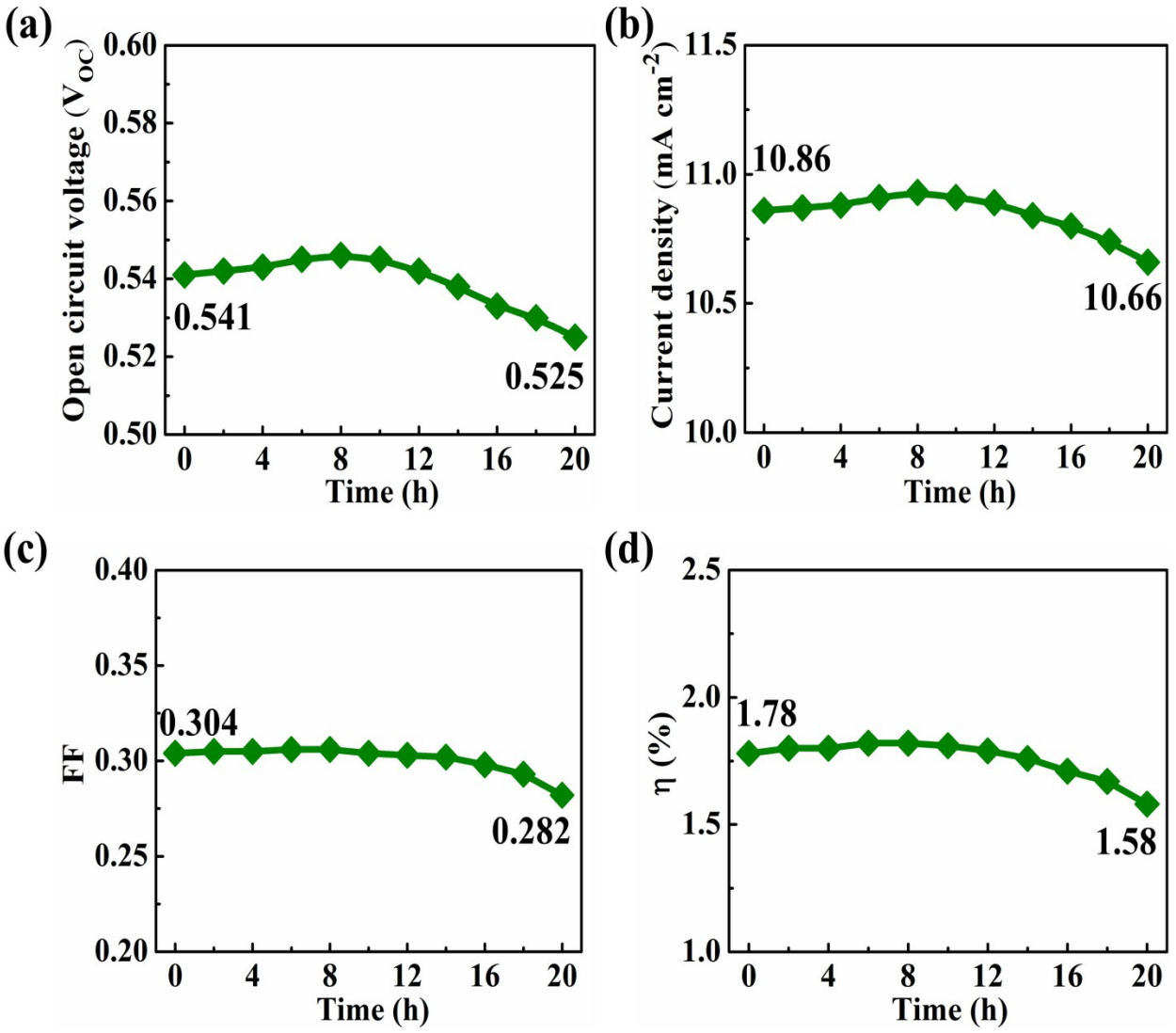

Fig. S4 Comparison of photostability parameters, Voc (a), Jsc (b), FF (c), PCE (d), for the ZnO/Pt CE in QDSSCs under continuous illumination of 100 mW cm^{-2}, in the course of 20 h.