Electronic Supplementary Information (ESI)

CdTe based quantum dot sensitized solar cells with efficiency exceeding 7% directly from quantum dots prepared in aqueous media

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**Table S1** Detail parameters for 5 QDSCs in parallel corresponding to differently sized CdTe QD sensitizers

<table>
<thead>
<tr>
<th>QDs</th>
<th>( J_{sc} ) (mA·cm(^{-2}))</th>
<th>( V_{oc} ) (V)</th>
<th>FF (%)</th>
<th>PCE (%)</th>
<th>PCE (%)(^a)</th>
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</thead>
<tbody>
<tr>
<td>QD(_{554})</td>
<td>0.627</td>
<td>9.63</td>
<td>0.678</td>
<td>4.09</td>
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<tr>
<td></td>
<td>0.622</td>
<td>9.48</td>
<td>0.673</td>
<td>3.97</td>
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<tr>
<td></td>
<td>0.632</td>
<td>9.58</td>
<td>0.683</td>
<td>4.14</td>
<td>4.04 ± 0.09</td>
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<tr>
<td></td>
<td>0.626</td>
<td>9.40</td>
<td>0.668</td>
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<td>9.78</td>
<td>0.665</td>
<td>4.08</td>
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<td>0.608</td>
<td>11.85</td>
<td>0.667</td>
<td>4.81</td>
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<tr>
<td></td>
<td>0.615</td>
<td>11.53</td>
<td>0.676</td>
<td>4.79</td>
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<td>QD(_{608})</td>
<td>0.601</td>
<td>11.97</td>
<td>0.683</td>
<td>4.91</td>
<td>4.87 ± 0.07</td>
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<td>0.612</td>
<td>12.05</td>
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<td>0.610</td>
<td>11.77</td>
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<td>4.93</td>
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<td>0.582</td>
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<td>0.598</td>
<td>11.92</td>
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Fig. S1 Nyquist curves under different bias voltages for CdTe (a), CdTe/CdS (b) and CdTe/CdSeS (c) QDSC devices.
Fig. S2 Cell efficiency normalized to the initial efficiency for CdTe, CdTe/CdS and CdTe/CdSeS cells under continuous 1 sun illumination.
Table S2 Photovoltaic parameters for 5 QDSCs in parallel corresponding to 4 cycles of CdS SILAR and 2-8 cycles of CdSeS SILAR

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<th>QDs</th>
<th>$J_{sc}$ (mA·cm$^{-2}$)</th>
<th>$V_{oc}$ (V)</th>
<th>FF (%)</th>
<th>PCE (%)</th>
<th>PCE (%)$^a$</th>
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<td>0.610</td>
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<td>0.645</td>
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