

1 Electronic Supplementary Information for

2 **Wavelength-resolved ratiometric photoelectrochemical**
3 **technique: design and sensing applications**

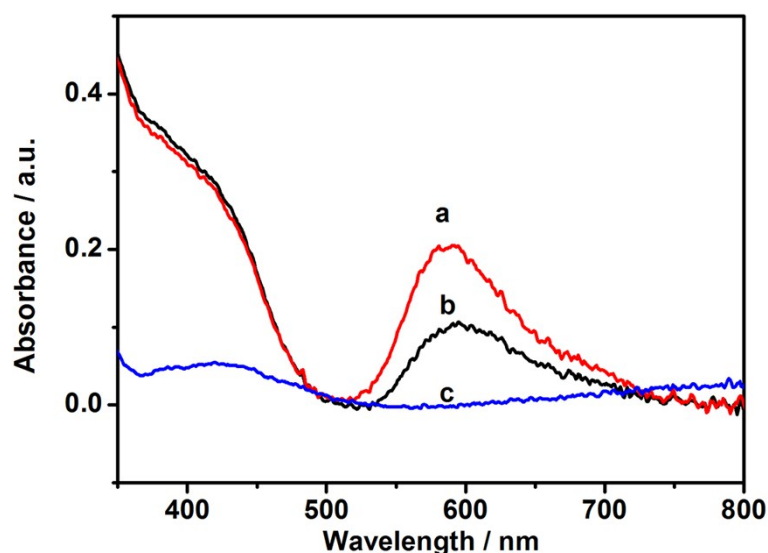
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10 **Supporting Figures**

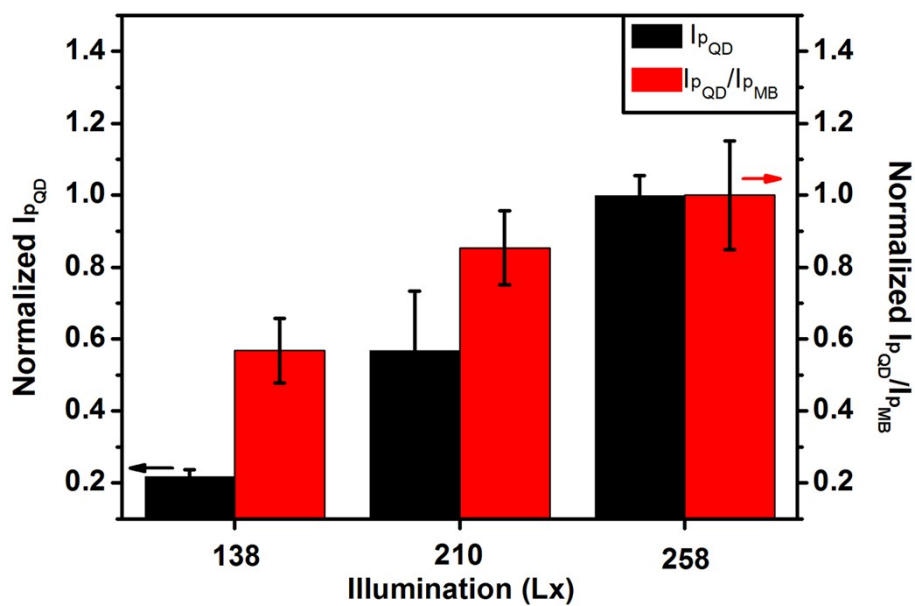
11 **Influence of Cu²⁺ on MB loading amount**



12

13 **Fig. S1** Absorption spectra of CdS modified ITO electrode incubation with Leuco-MB
14 in the presence of 0.1 mM (a) and 40 μ M (b) Cu²⁺, and ITO electrode (c).

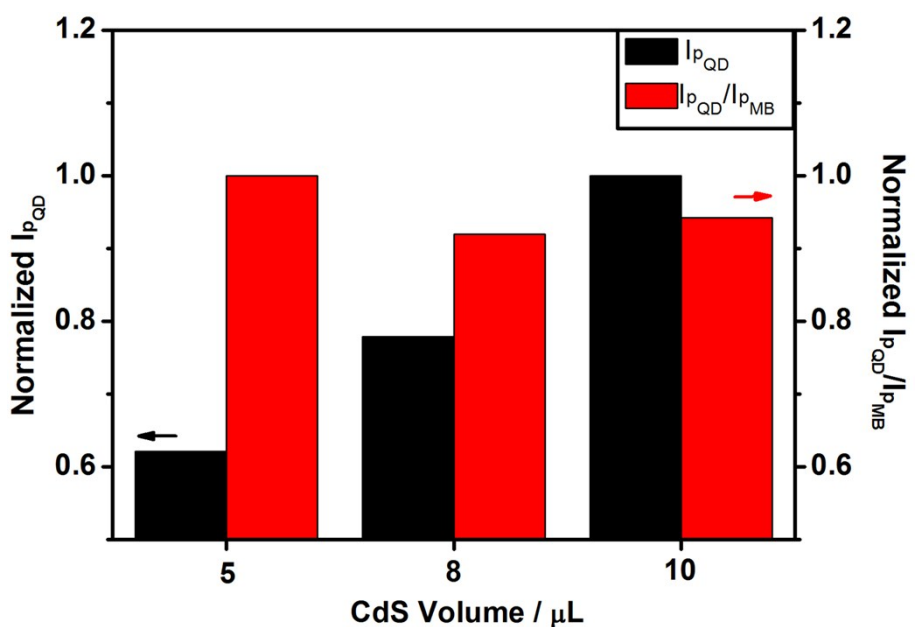
1 **Influence of illumination on photocurrent**



2

3 **Fig. S2** Normalized $I_{p_{QD}}$ and $I_{p_{QD}}/I_{p_{MB}}$ at 138 Lx, 210 Lx and 258 Lx illumination.

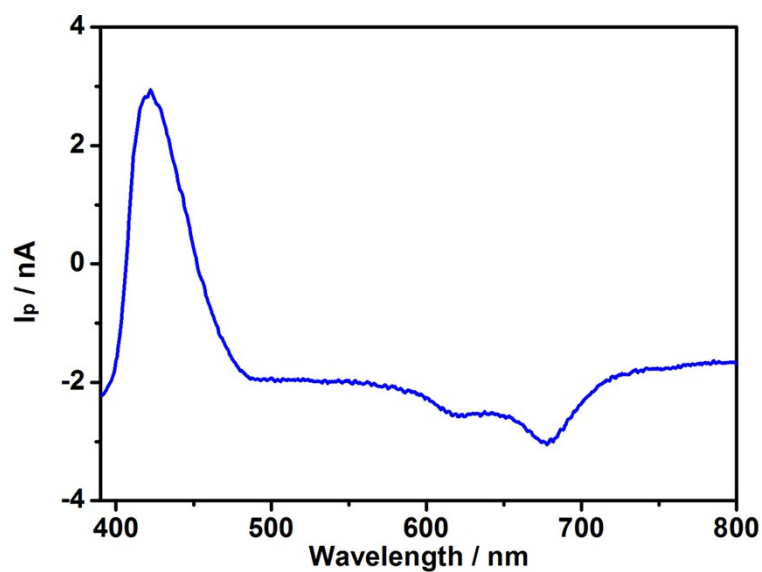
4 **Influence of CdS volume on photocurrent**



5

6 **Fig. S3** Normalized $I_{p_{QD}}$ and $I_{p_{QD}}/I_{p_{MB}}$ at the different CdS volume.

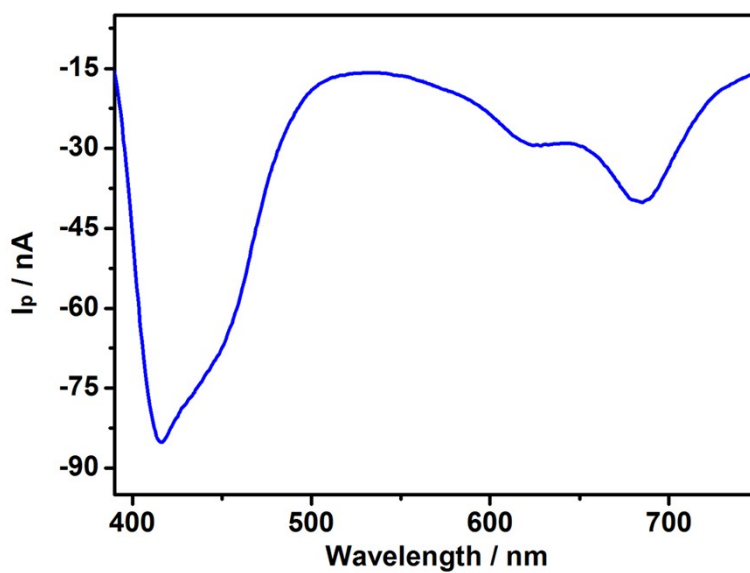
1 ***I*- λ curve of CdS/MgPc AC-PEC photoelectrode**



2

3 **Fig. S4** *I*- λ curve of CdS/MgPc AC-PEC photoelectrode at 0 V in pH 5.0 PBS.

4 ***I*- λ curve of CdTe/MgPc DC-PEC photoelectrode**



5

6 **Fig. S5** *I*- λ curve of CdTe/MgPc DC-PEC photoelectrode at -0.2 V in pH 5.0 PBS.