Supplementary Information

Solution-processed solar-blind deep ultraviolet photodetectors based on strongly quantum confined ZnS quantum dots

Yong Xia,[1] Guangmei Zhai,[2] Zhi Zheng,[3] Linyuan Lian,[1] Huan Liu,[1] Daoli Zhang,[1] Jianbo Gao,[4] Tianyou Zhai,[3]* and Jianbing Zhang[1]*

[1]School of Optical and Electronic Information, Engineering Research Center for Functional Ceramics, Ministry of Education, Huazhong University of Science and Technology, 1037 Luoyu Road, Wuhan, Hubei 430074, China.

[2]Key Laboratory of Interface Science and Engineering in Advanced Materials of Ministry of Education of the P. R. China, Research Centre of Advanced Materials Science and Technology of Taiyuan University of Technology, Taiyuan, Shanxi 030024, China.

[3]School of Materials Science and Engineering, Huazhong University of Science and Technology, 1037 Luoyu Road, Wuhan, Hubei 430074, China.

[4]Department of Physics and Astronomy, University of Clemson, South Carolina 29634, United States

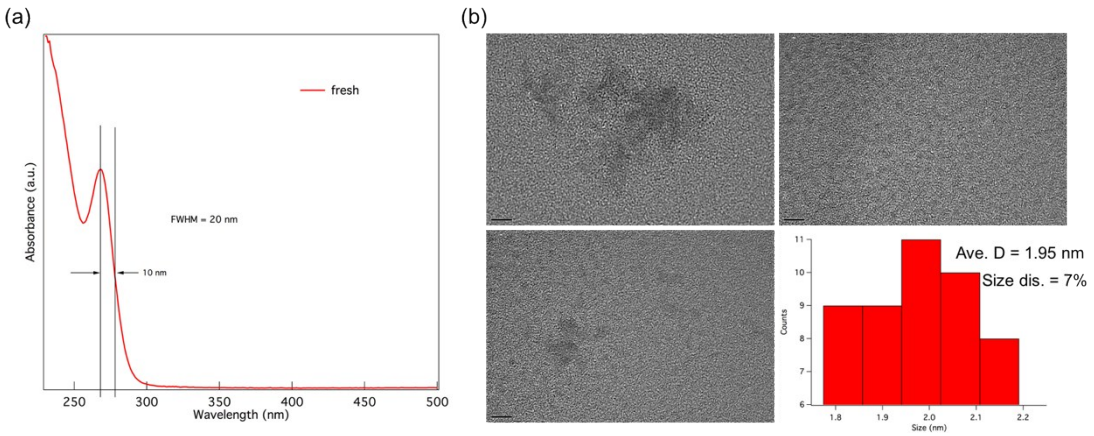

Figure S1. The determination of FWHM of the exciton peak and size statistic of the ZnS QDs.

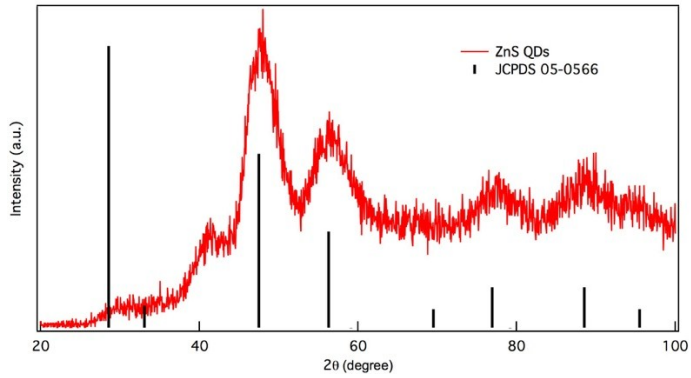

Figure S2. The XRD pattern of the ZnS QDs.

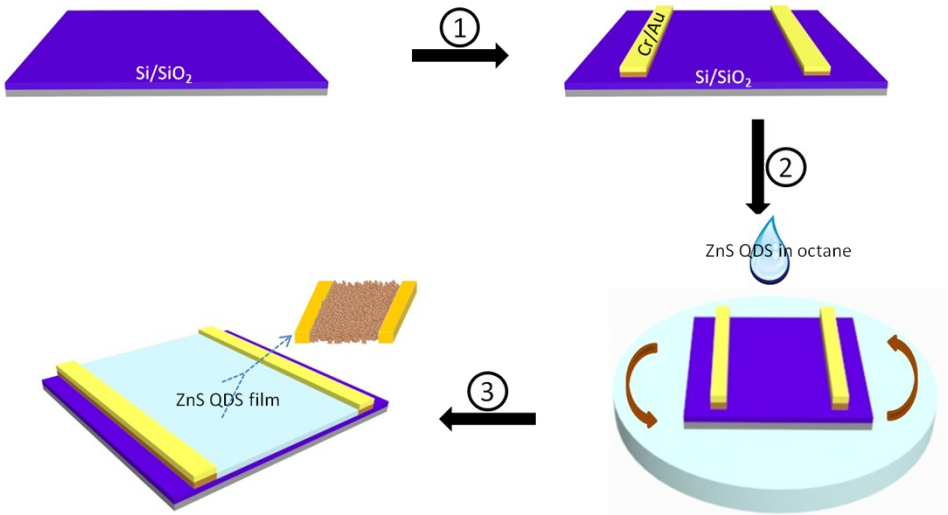

Figure S3. The schematic for the fabrication of the ZnS QD PDs

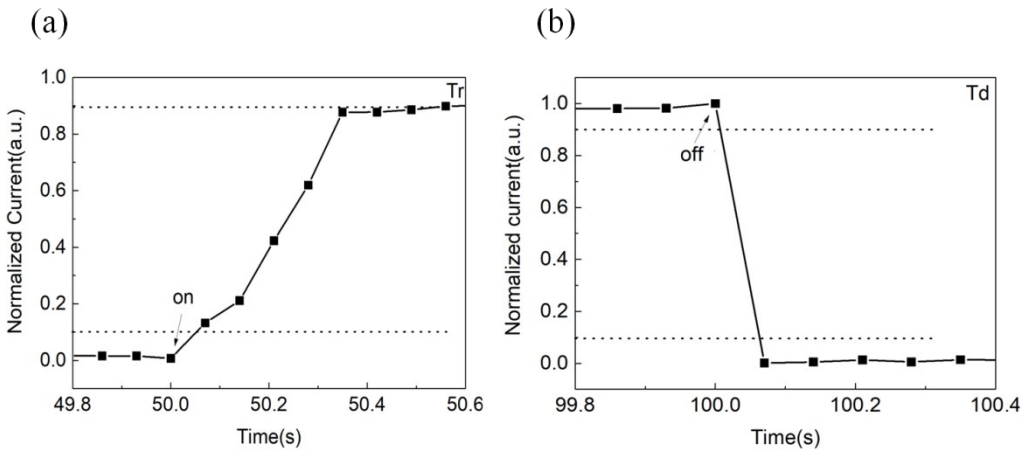

Figure S4. The determination of the Tr (a) and Td (b). Note, the time step of our measurement system is 0.07s.

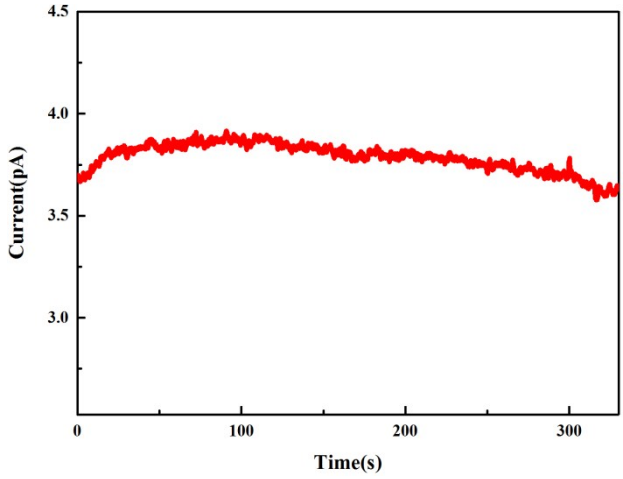

Figure S5. A photocurrent–time (Iph–T) plot under an applied voltage of 40 V and 254 nm UV-light illumination.