

## Supporting Information

### Non-blinking, highly luminescent, pH- and heavy metal ion-stable organic nanodots for bio-imaging

Fei-Fei An, <sup>†</sup> Jun Ye, <sup>†</sup> Yin-Long Yang, <sup>c</sup> Cai-Jun Zheng, <sup>a</sup> Xiu-Juan Zhang, <sup>\*c</sup>

Zhuang Liu, <sup>c</sup> Chun-Sing Lee, <sup>b</sup> Xiao-Hong Zhang<sup>\*a</sup>

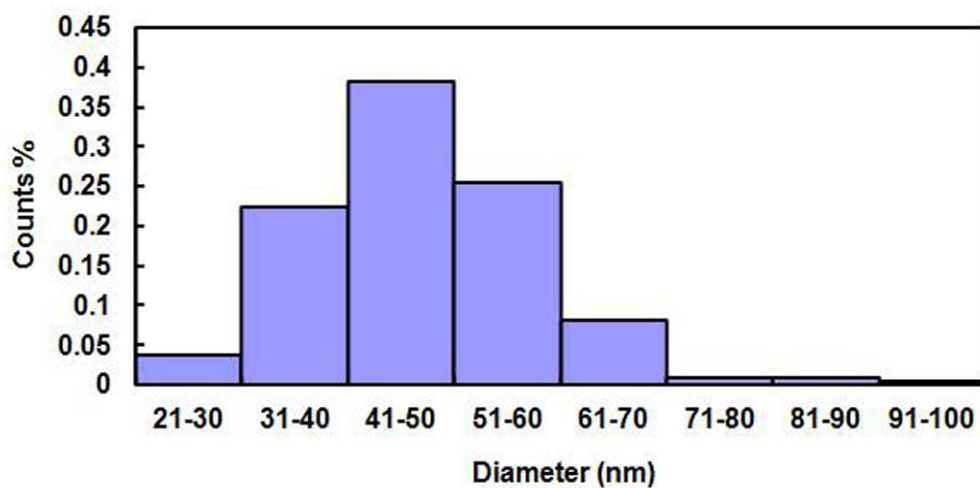
<sup>a</sup> Nano-organic Photoelectronic Laboratory and Key Laboratory of Photochemical Conversion and Optoelectronic Materials, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190 (P.R. China).

<sup>b</sup> Center of Super-Diamond and Advanced Films (COSDAF) & Department of Physics and Materials Sciences, City University of Hong Kong, Hong Kong SAR (P.R. China).

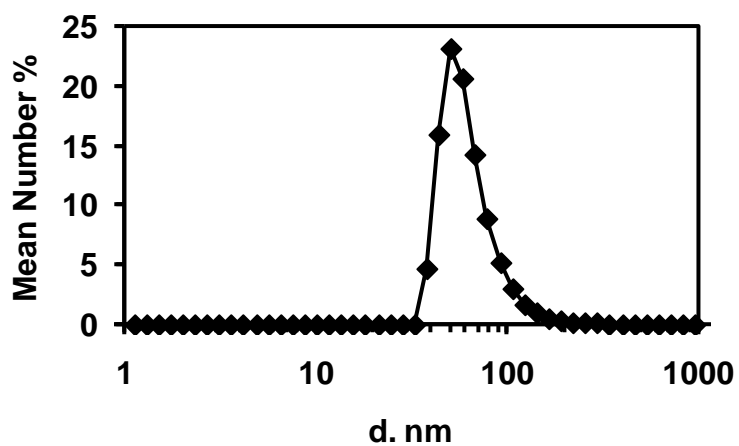
<sup>c</sup> Functional Nano & Soft Materials Laboratory (FUNSOM) and Jiangsu Key Laboratory for Carbon-Based Functional Materials & Devices, Soochow University, Suzhou, Jiangsu 215123 (P. R. China).

<sup>†</sup> Joint first authors, contributed equally to this work.

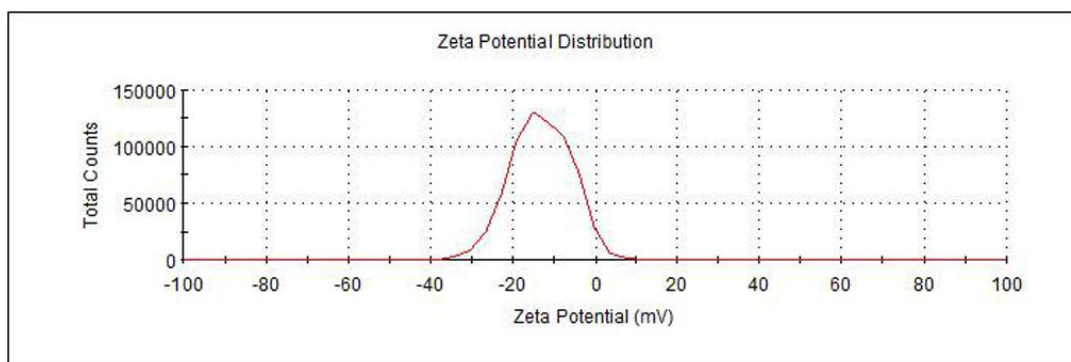
**\* Corresponding authors:** Prof. Xiao-Hong Zhang, Nano-organic Photoelectronic Laboratory and Key Laboratory of Photochemical Conversion and Optoelectronic Materials, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China; Tel: +86-10-82543510, Fax: +86-10-64879375, E-mail: [xhzhang@mail.ipc.ac.cn](mailto:xhzhang@mail.ipc.ac.cn); Prof. Xiu-Juan Zhang, Functional Nano & Soft Materials Laboratory (FUNSOM) and Jiangsu Key Laboratory for Carbon-Based Functional Materials & Devices, Soochow University, Suzhou, Jiangsu 215123 (P. R. China), E-mail: [xjzhang@suda.edu.cn](mailto:xjzhang@suda.edu.cn)



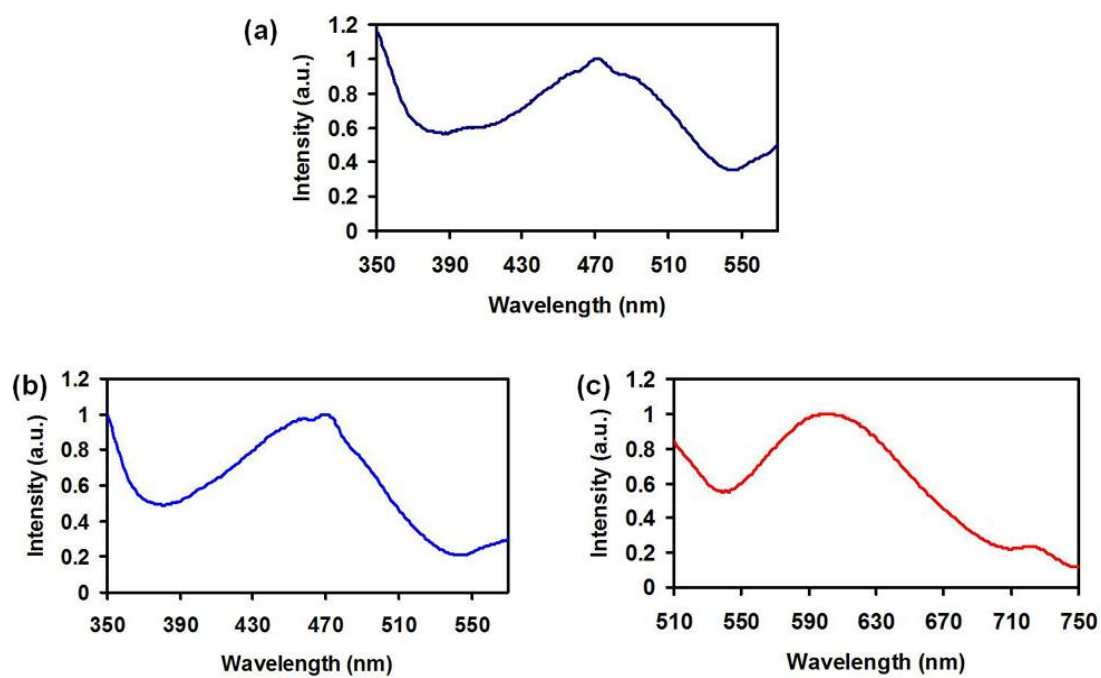
**Supporting Figure 1** Diameter statistics of 236 Sdots particles from the SEM pictures.



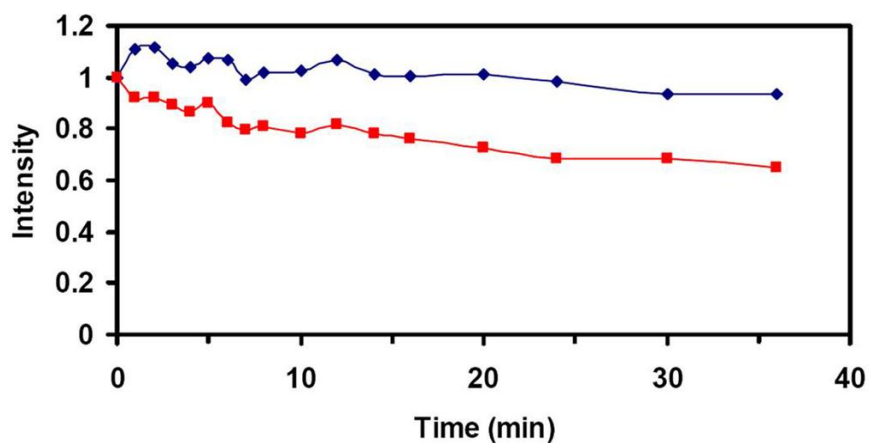
**Supporting Figure 2** Hydrodynamic diameter of Sdots.



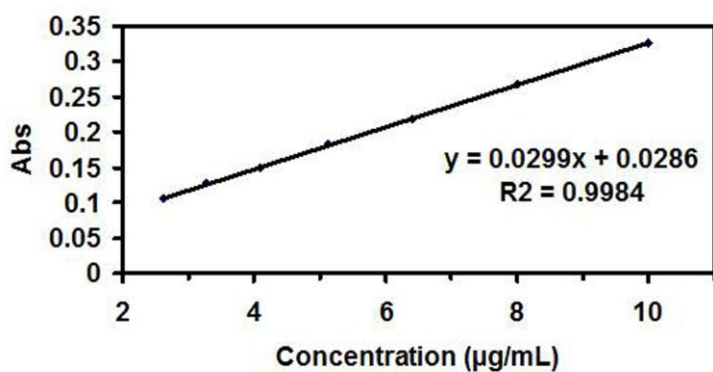
**Supporting Figure 3** Zeta potential of Sdots



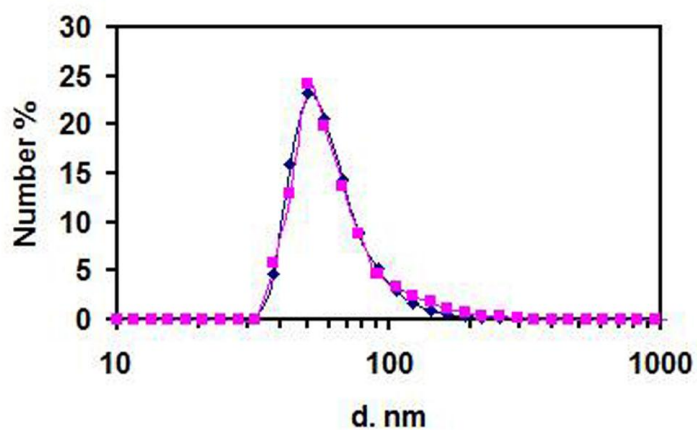
**Supporting Figure 4** a) Excitation spectrum of Sdots with the emission peak of 598 nm. b) Excitation spectrum of Spiro-BTA solution in THF with the emission peak of 600 nm. c) Fluorescence emission spectrum of Spiro-BTA solution in THF.



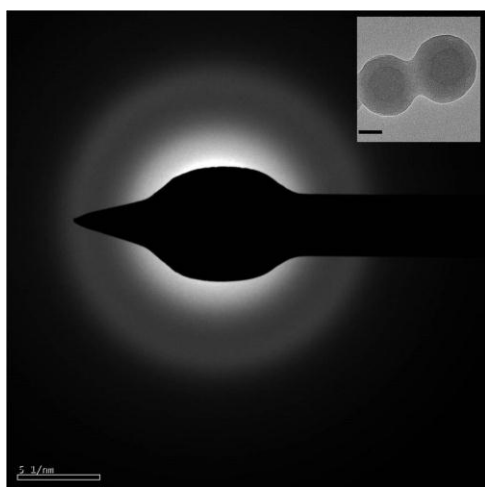
**Supporting Figure 5** Relative fluorescence intensity of Sdots and commercialized CdTe QDs after exposing to UV irradiation. Sdots (blue), CdTe QDs (red).



**Supporting Figure 6** Standard absorption curve of the Sdots in water at 468 nm wavelength.

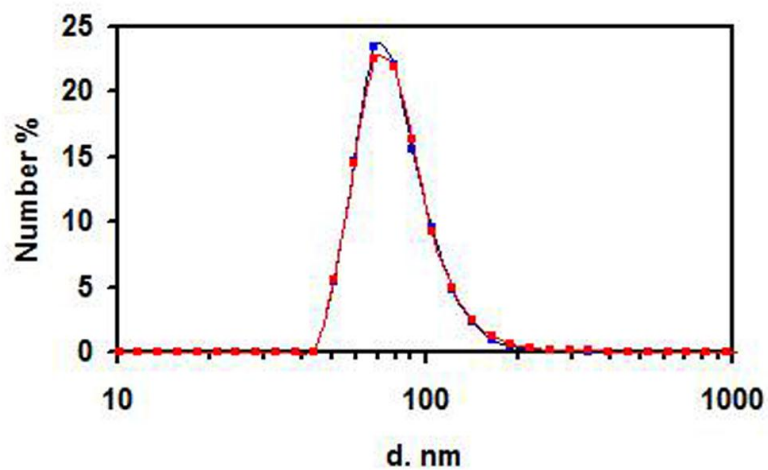


**Supporting Figure 7** DLS of Sdots in PBS. blue - 0h; purple - 2h.



**Supporting Figure 8** A typical selected area electron diffraction pattern of Sdots.

Scale bar for inset picture is 20 nm



**Supporting Figure 9** DLS of surfactant coated Sdots in PBS. blue - 0h; red - 2h.