Electronic Supplementary Material (ESI) for RSC Advances.

One-Step Preparation of Carbon Dot-Grafted Trisodium Citrate Dihydrate for Tunable Photoluminescence and White Light-Emitting Diodes

Jiangling He,‡ Youling He,‡ Yonghao Chen, Bingfu Lei,* Haoran Zhang, Jianle Zhuang, Mingtao Zheng, Yingliang Liu*

Guangdong Provincial Engineering Technology Research Center for Optical Agriculture, College of Materials and Energy, South China Agricultural University, Guangzhou 510642, China

Email: tleibf@scau.edu.cn; tliuyl@scau.edu.cn

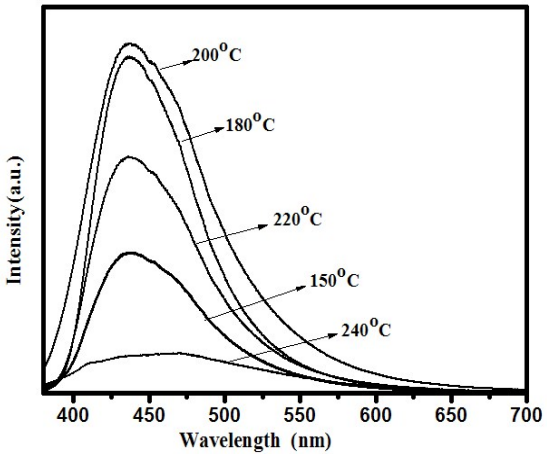

Figure S1. Emission spectra of the corresponding reaction system at different reaction temperature.

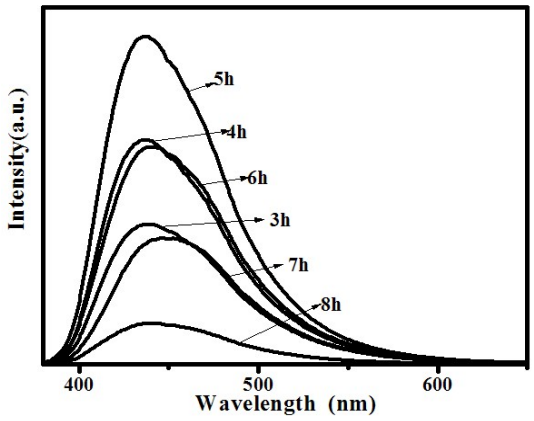

Figure S2. Emission spectra of the corresponding reaction system at different reaction time.

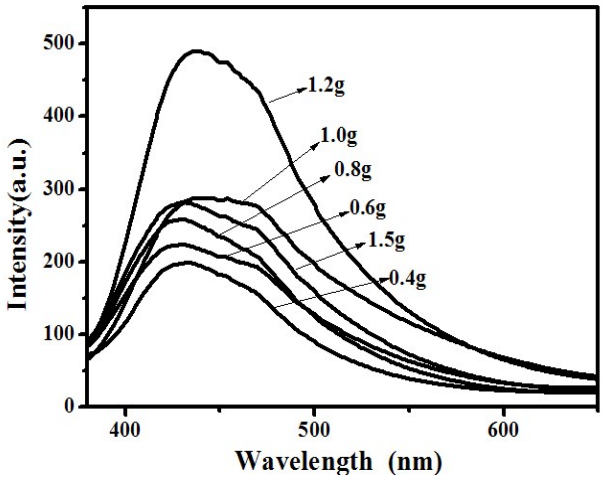

Figure S3. Emission spectra of the corresponding reaction system with various amounts of reactant.

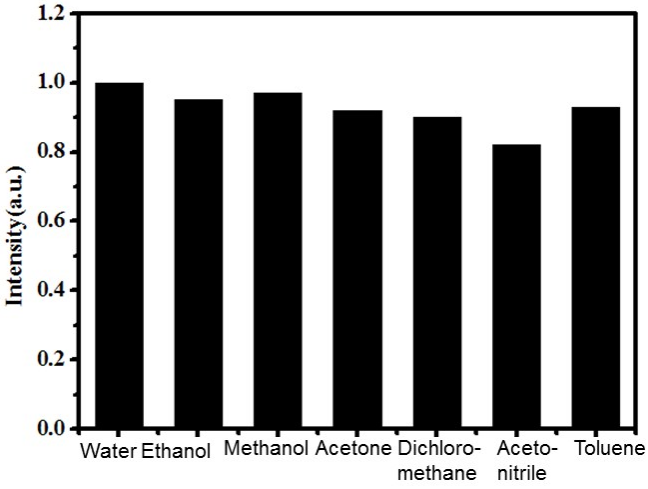

Figure S4. Effect of solvent on the fluorescence intensity of as-prepared CDs/SC.

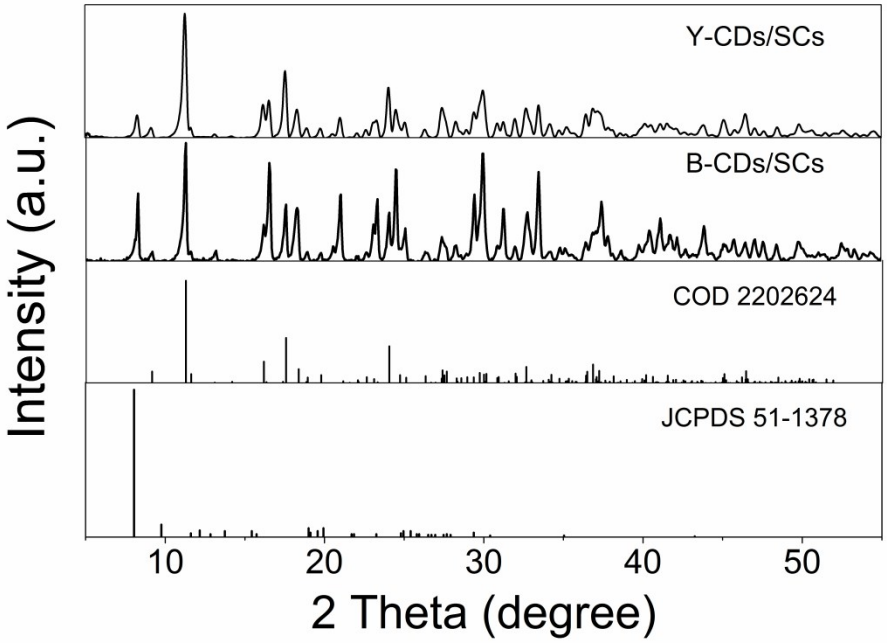

Figure S5. The XRD patterns of B-CDs/SC and Y-CDs/SC, and the standard card given for comparison.

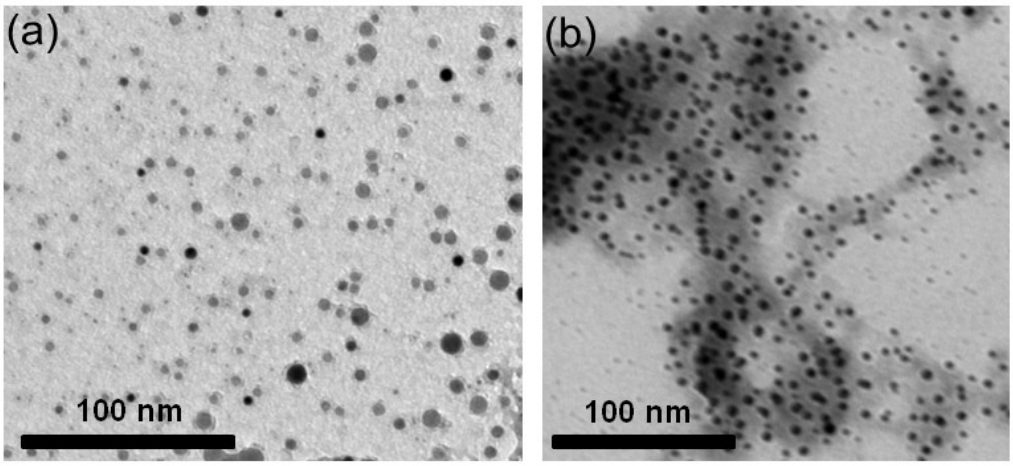

Figure S6. (a) and (b) TEM images of CDs extracted from B-CDs/SC and Y-CDs/SC, respectively.

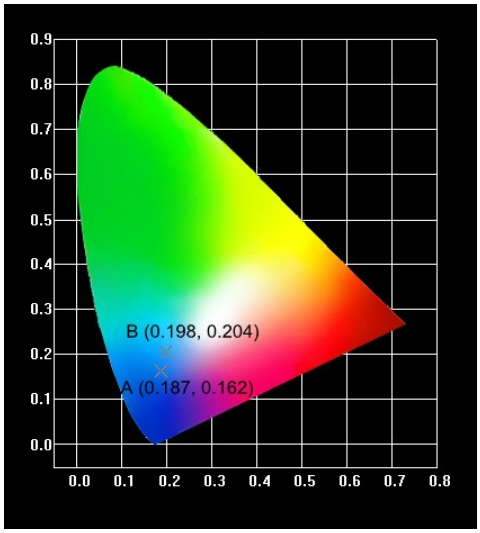

Figure S7. A and B represent CIE coordinates of dialyzed solutions of B-CDs/SC, and Y-CDs/SC under UV light (360 nm), respectively.

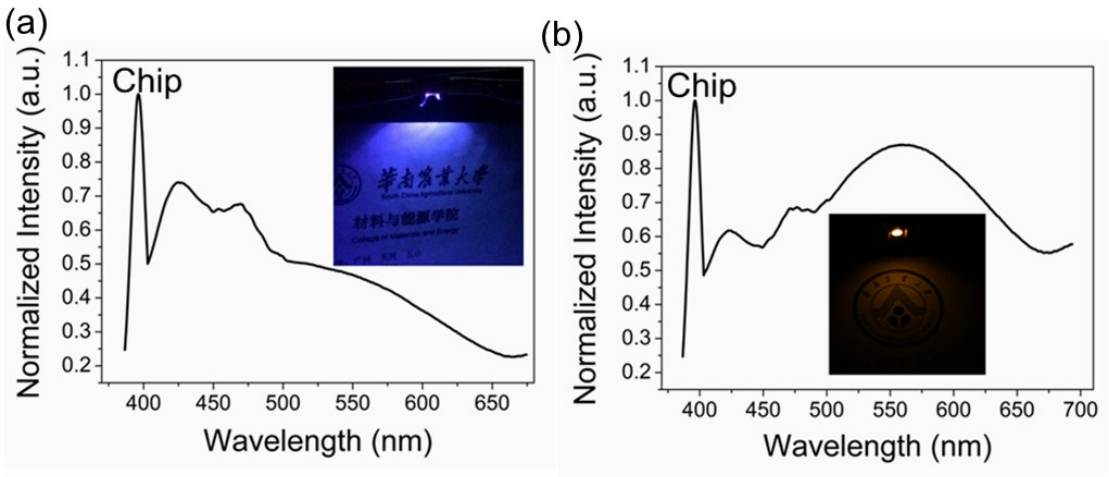

Figure S8. (a) Electroluminescence spectrum of the (B-CDs/SC and Y-CDs/SC)-based (mass ratio: 4.187) LEDs. Inset: Optical image of the corresponding LEDs at the current of 50 mA and voltage of 3.0 V. (b) Electroluminescence spectrum of the (B-CDs/SC and Y-CDs/SC)-based (mass ratio: 1.000) LEDs. Inset: Optical image of the corresponding LEDs at the current of 20 mA and voltage of 1.5 V.