Vitamin C Derived Carbon dots: inhibit amyloid aggregation and scavenge reactive oxygen species.

Tiange Fan [a], Xiuyun Cao[a], *Chao Wang* [a], *Xu Shao* [a], *Xin Wang* [a*], *Ping Guan* [a*], *Xiaoling Hu* [a*]

[a] *Department of Chemistry, School of Chemistry and Chemical Engineering, Northwestern Polytechnical University, 127 Youyi Road, Xi'an 710072, China*

E-mail: xinwang@nwpu.edu.cn (Xin Wang)

E-mail: guanping1113@nwpu.edu.cn (Ping Guan)

E-mail: huxl@nwpu.edu.cn (Xiaoling Hu)

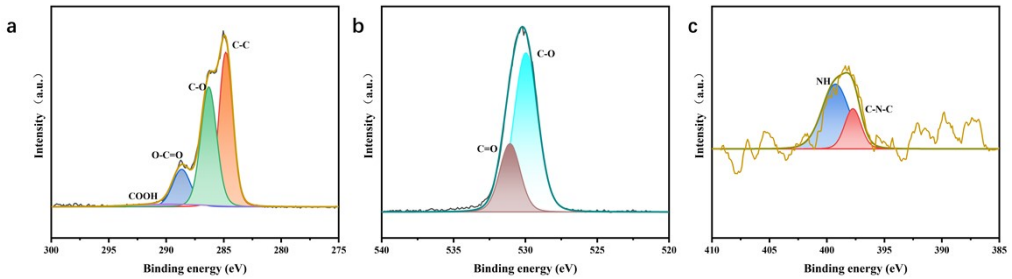

Figure S1 XPS high-resolution C1s (a), O 1s (b), (c) N 1s of CACDs.

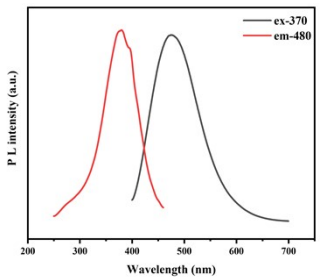

Figure S2 Two-dimensional excitation-emission spectra of ACDs

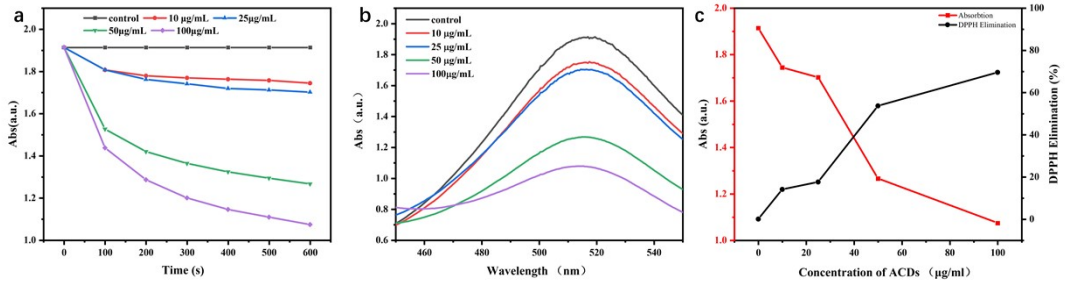

Figure S3. (a) The kinetic curves of DPPH reduction at different ACDs concentrations. (b) The absorption spectrums of DPPH after 10 min of the reaction with different concentrations of ACDS. (c) The ACDs concentration-dependent elimination efficiencies of DPPH.

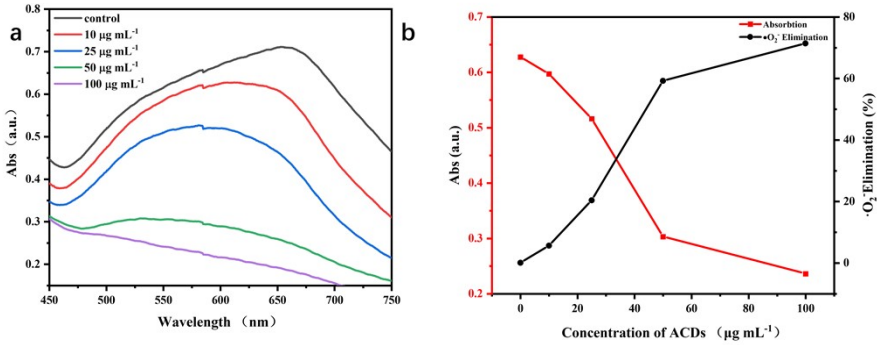

Figure S4. (a) The UV-absorption spectrums of NBT after 10 min of the reaction with $\bullet O_2^-$ at different concentrations of ACDs (b) The ACDs concentration-dependent elimination efficiencies of $\bullet O_2^-$.

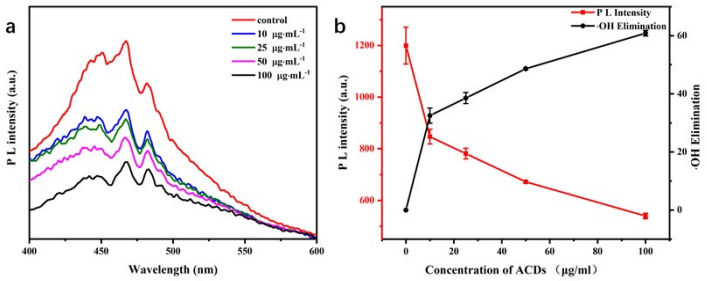

Figure S5 (a) The fluorescence spectrums of coumarin the reaction with •OH at different concentrations of ACDs (b) The ACDs concentration-dependent elimination efficiencies of •OH.

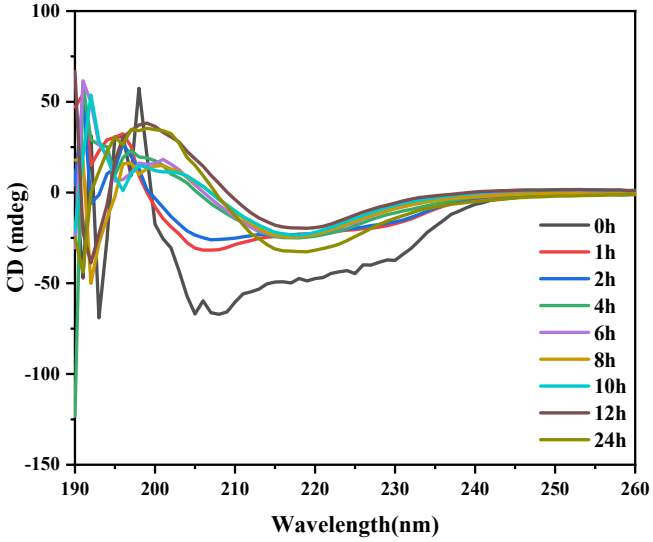

Figure S6 CD spectrum of lysozyme protein culture.

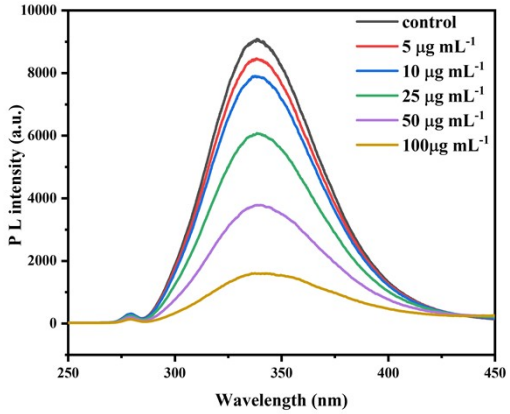

Figure S7 BSA fluorescence spectra of different concentrations of CACDs.