## Supporting information

Doxorubicin-loaded fluorescent carbon dots with PEI passivation as a drug delivery system for cancer therapy

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Fig. s1 (a) Fluorescence spectra of CD-PEI-DOX solution with increasing concentrations of DOX at an excitation of 380 nm. (b) Optical images of the fluorescence of the CD-PEI-DOX solutions. The concentrations of DOX are 5–80 μg



Fig. s2 (a)Raman spectrum of CD-PEI. (b) Typical time-resolved fluorescence-decay curve of CD-PEI. (c) O 1s and (d) N1s spectra of CD-PEI.



Fig. s3 UV-Vis absorption spectra of DOX and CD-PEI-DOX.



Fig. s4 Viability of L02 and MHCC-97L cells in the MTS assay after incubation with CD-PEI for 24 h or 48 h.



Fig. s5 Wound-healing ability and quantification of wound healing in MHCC-97L cells after treatment with PBS, CD-PEI, CD-PEI-DOX, or free DOX for 48 h. Scale



Fig. s6 Wound-healing ability and quantification of wound healing in Hep3B cells after treatment with PBS, CD-PEI, CD-PEI-DOX, or free DOX for 48 h. Scale bar,  $100 \ \mu m$ .



Fig. s7 Hemolysis rate of CD-PEI-DOX and free DOX.



Fig. s8 Stability of CD-PEI-DOX in different solutions after incubation for 24 h.



Fig. s9 Fluorescence images of mice injected with PBS or CD-PEI in vivo and ex vivo.