

## Supporting Information

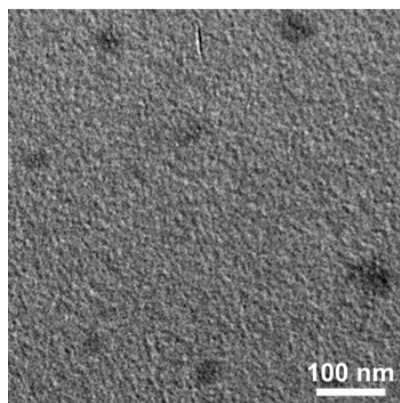
### **Acid-triggered size reduction of nanomedicines for enhancing tumor therapy efficacy**

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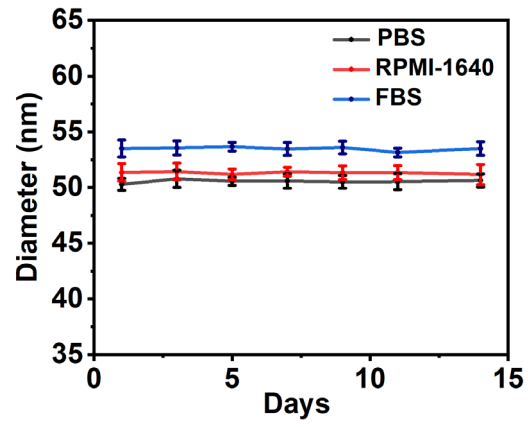
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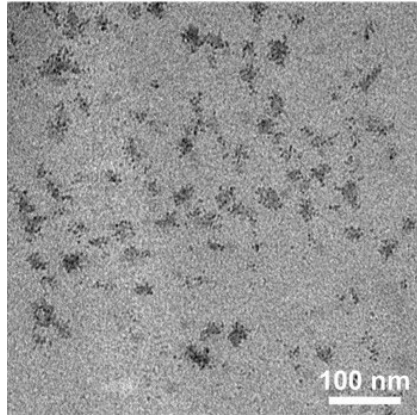
[wuwei@nju.edu.cn](mailto:wuwei@nju.edu.cn).



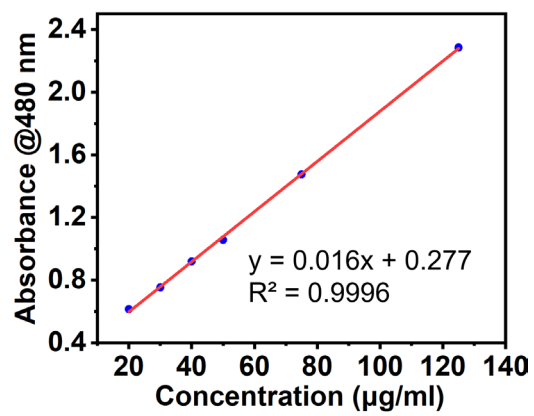
**Figure S1.** TEM image of UCD at pH 7.4.



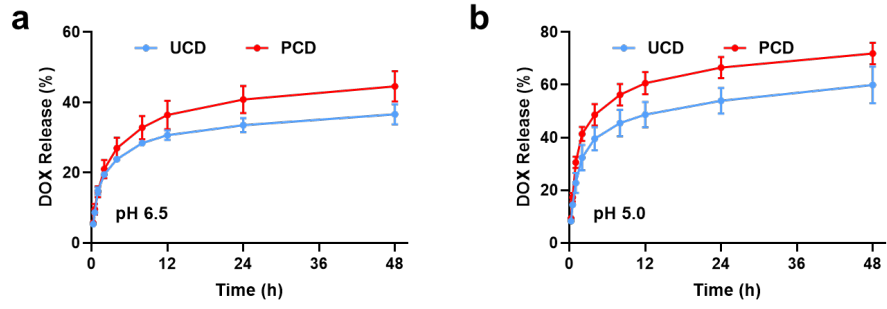
**Figure S2.** Size evolution of PCD in different media measured by DLS.



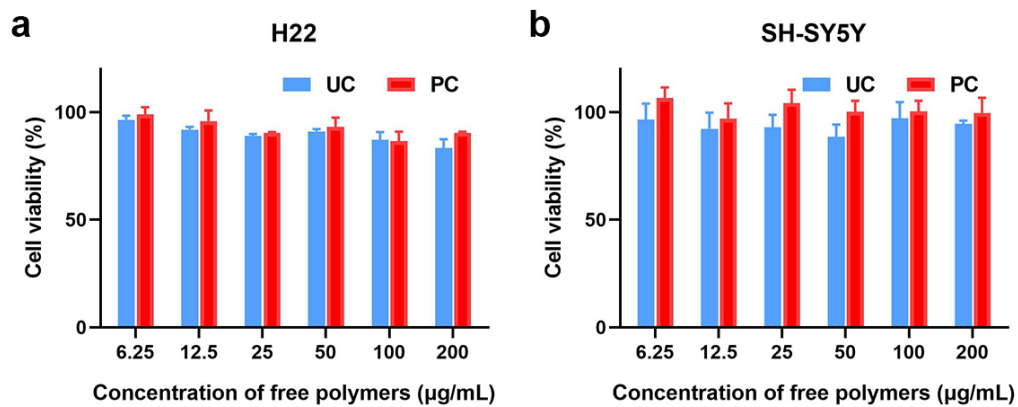
**Figure S3.** TEM image of PCD after incubation at pH 6.5 for 12 h.



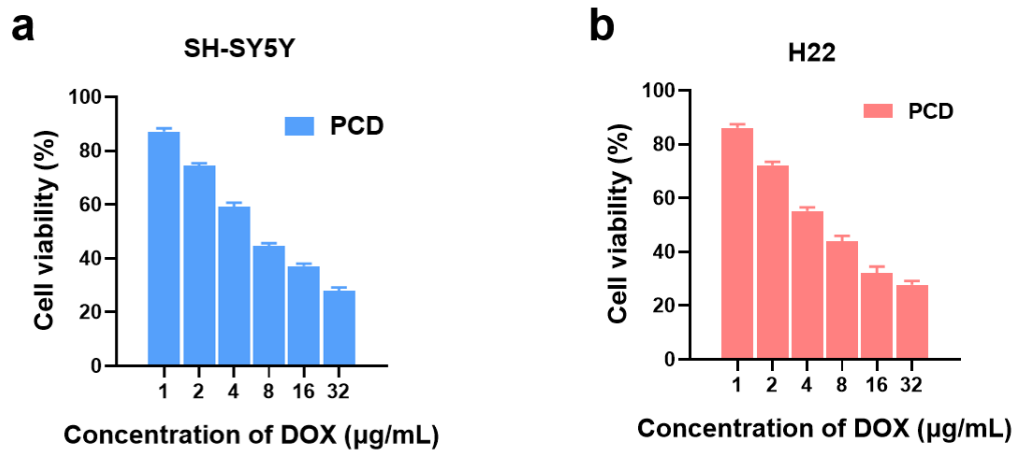
**Figure S4.** The 480 nm absorbance of DOX at different concentrations.



**Figure S5.** DOX release profiles of UCD and PCD at pH 6.5 (a), and 5.0 (b) (n=3, mean  $\pm$  SD).

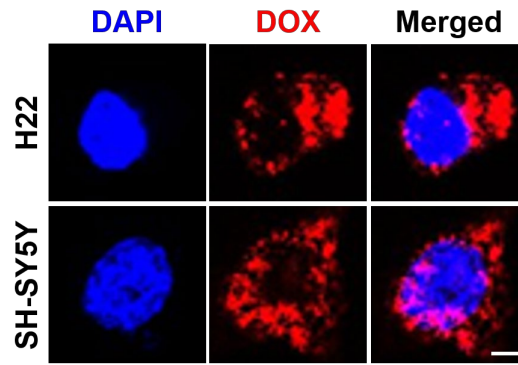


**Figure S6.** Cytotoxicity of PC and UC against H22 and SH-SY5Y cells.

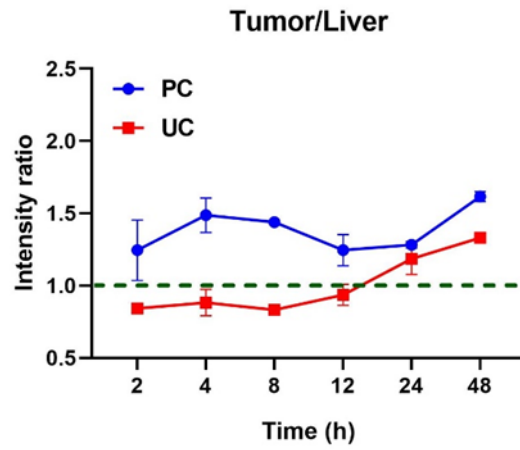


**Figure S7.** Cytotoxicity of PCD against SH-SY5Y (a) and H22 (b) cells at pH 6.5.





**Figure S8.** Enlarged views of the CLSM images in Figure 4d, f, scale bar = 4  $\mu\text{m}$ .



**Figure S9.** MFI ratio of tumor to liver at different time points after tail-vein injection of the NIR797-labeled UC and PC in H22 tumor-bearing mice (n=3, mean  $\pm$  SD).

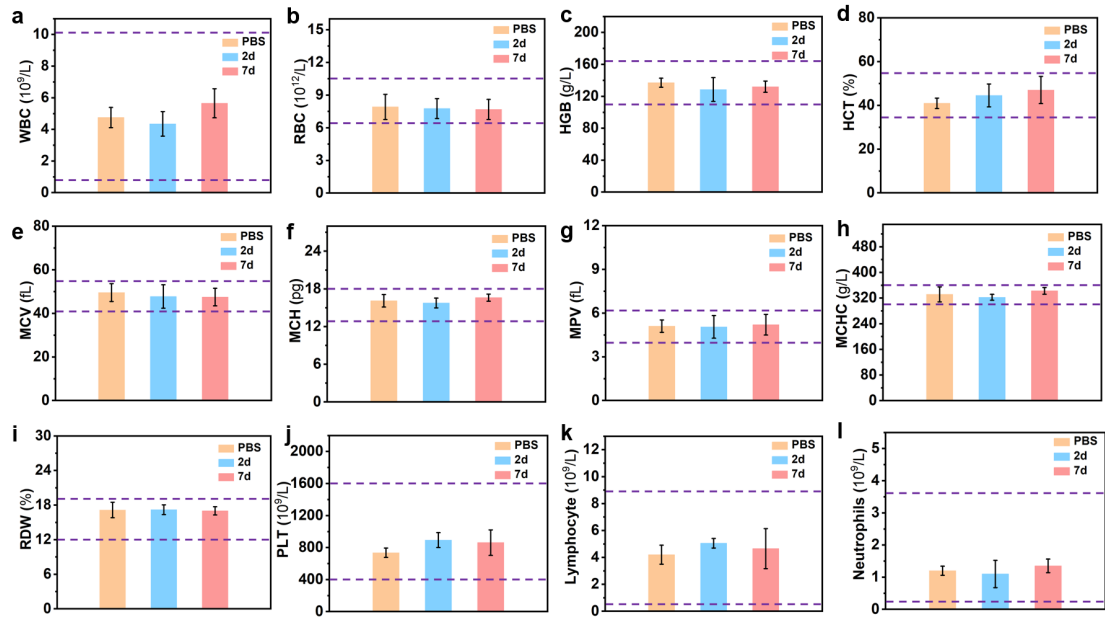
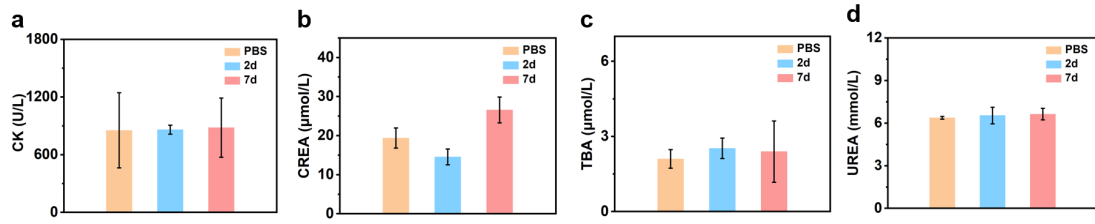


Figure S10. Blood routine indicators of the mice on the 2nd and 7th days after tail-vein injection of PCD (n=2, mean  $\pm$  SD).



**Figure S11.** Serum biochemical indicators of the mice on the 2nd and 7th days after tail-vein injection of PCD (n=2, mean  $\pm$  SD).