

Supporting Information:

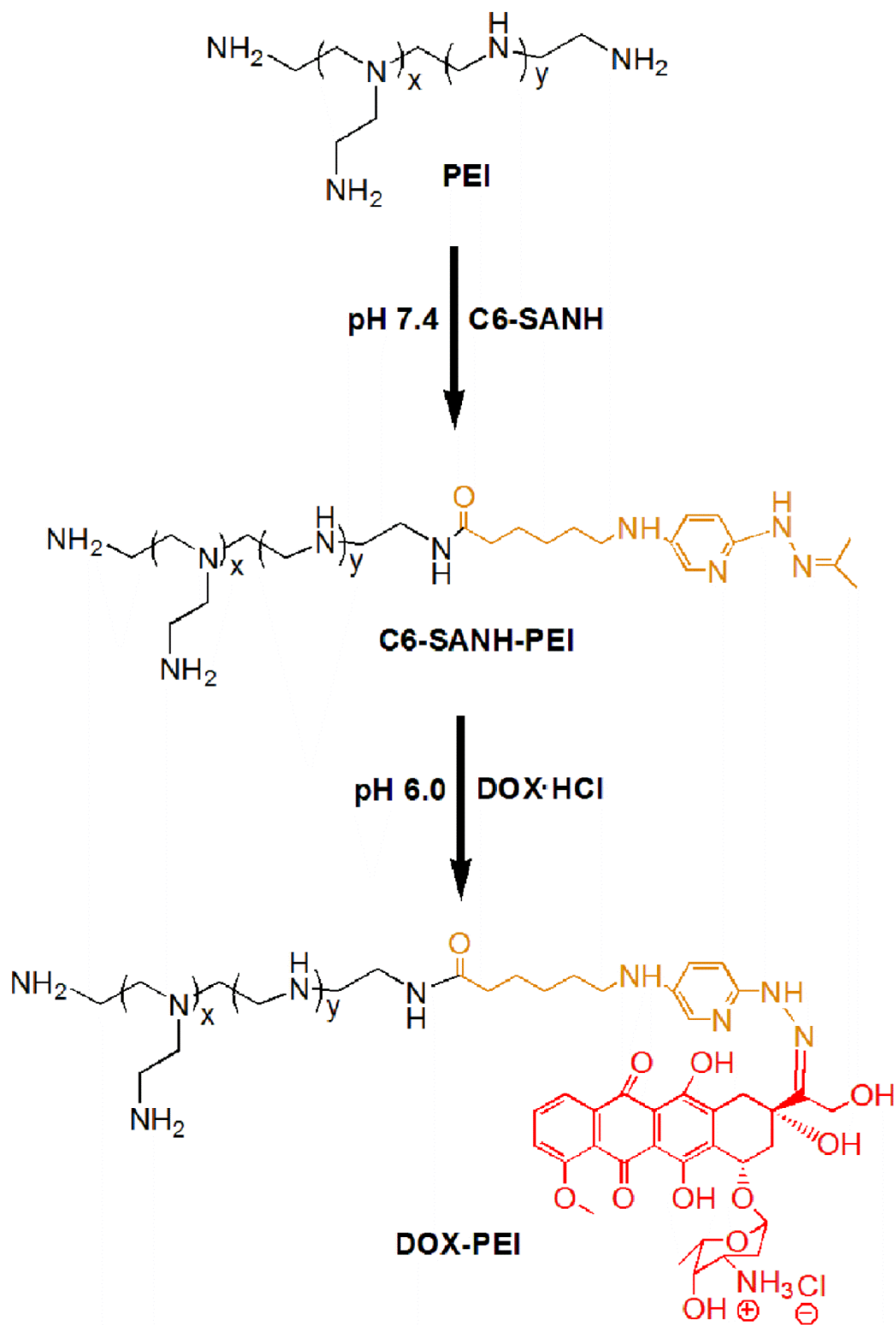
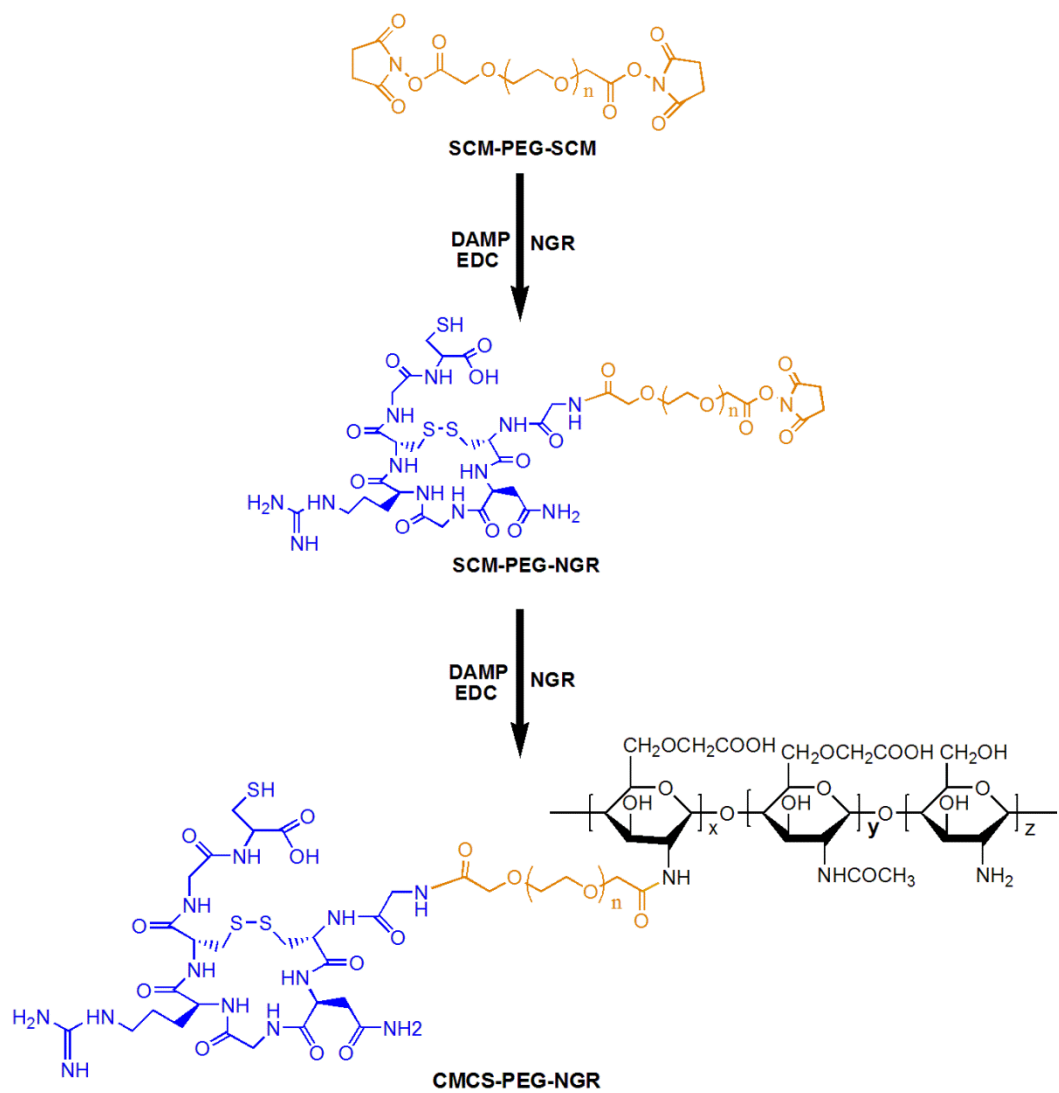


Fig. S1 Synthesis scheme of DP



**Fig. S2** Synthesis scheme of CPN

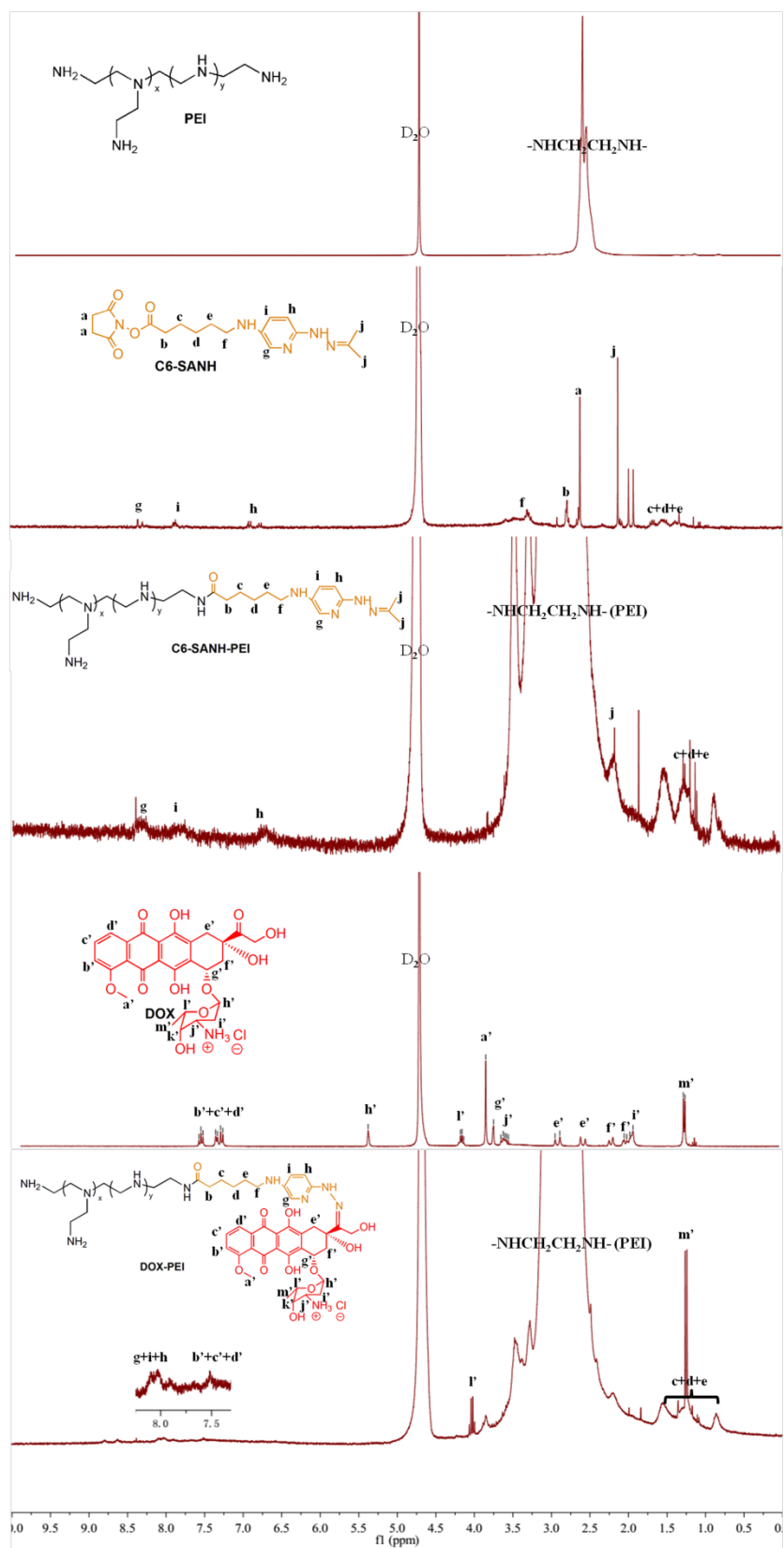


Fig. S3  $^1\text{H}$  NMR of PEI, C6-SANH, DOX, C6-SANH-PEI and DOX-PEI

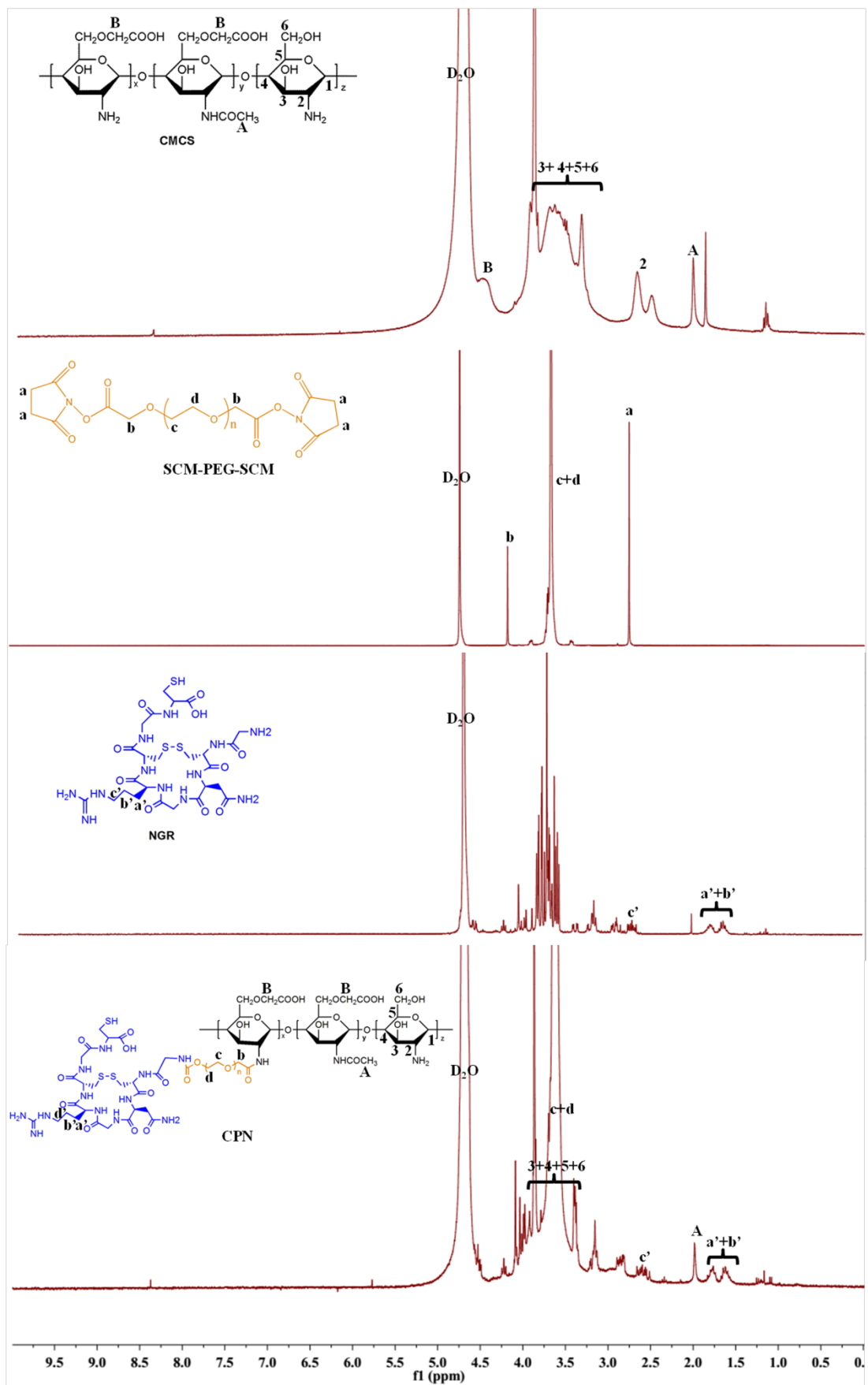
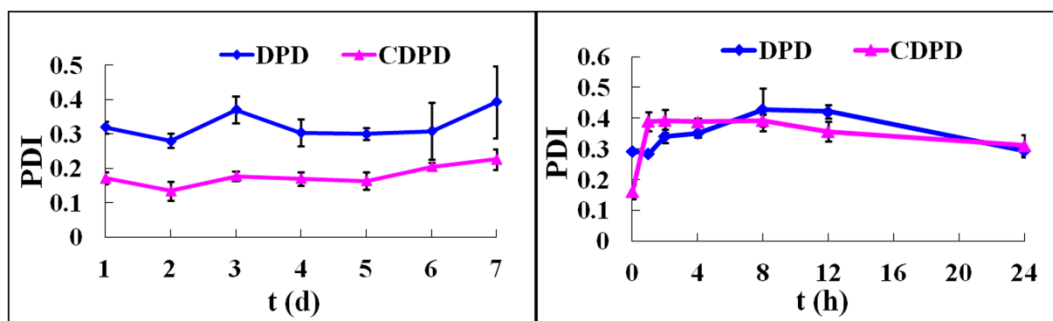


Fig. S4  $^1\text{H}$  NMR of CMCS, PEG, NGR and CPN



**Fig. S5** (A) The changes of PDI of DPD and CDPD in distilled water for 7 days, and DPD was more stable than CDPD obviously; (B) The changes of PDI of DPD and CDPD in DMEM with 10% FBS at 37°C for 24 h, and CDPD was more stable than DPD obviously.