Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Dextran–platinum(IV) conjugate as reduction-responsive carrier for triggered drug release

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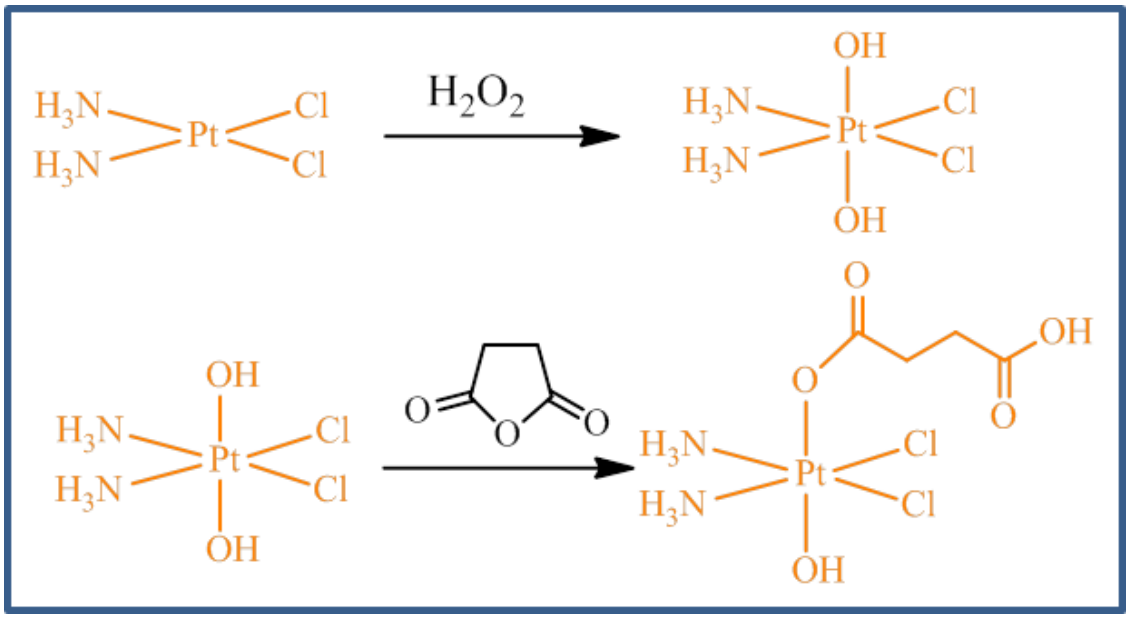
Synthesis of c,c,t-[$Pt(NH_3)_2Cl_2(OH)_2$]

Briefly, H_2O_2 (5 mL) was added to a suspension of cisplatin (1 g) in H_2O (5 mL), and the mixture was stirred at room temperature in dark for 4 h. Then the light yellow precipitate was collected and washed with water and acetone for several times, and dried (Scheme S1). ^{1}H NMR: (300 MHz, DMSO-d_6, 25 °C): 5.2-5.8 (6H, m, NH_3); IR: cm^{-1} 3463 (br, OH), 538 (sh, Pt-OH). ^{1}H NMR: (300 MHz, d_6-DMSO, 25 °C): δH 2.33-2.39 (4H, m, -OCH_2CH_2C-), 5.12-5.71 (6H, m, NH_3) (Fig. 2A, Fig. S1).



Scheme S1 Synthesis of c,c,t-[$Pt(NH_3)_2Cl_2(OH)_2$] and Pt(IV).

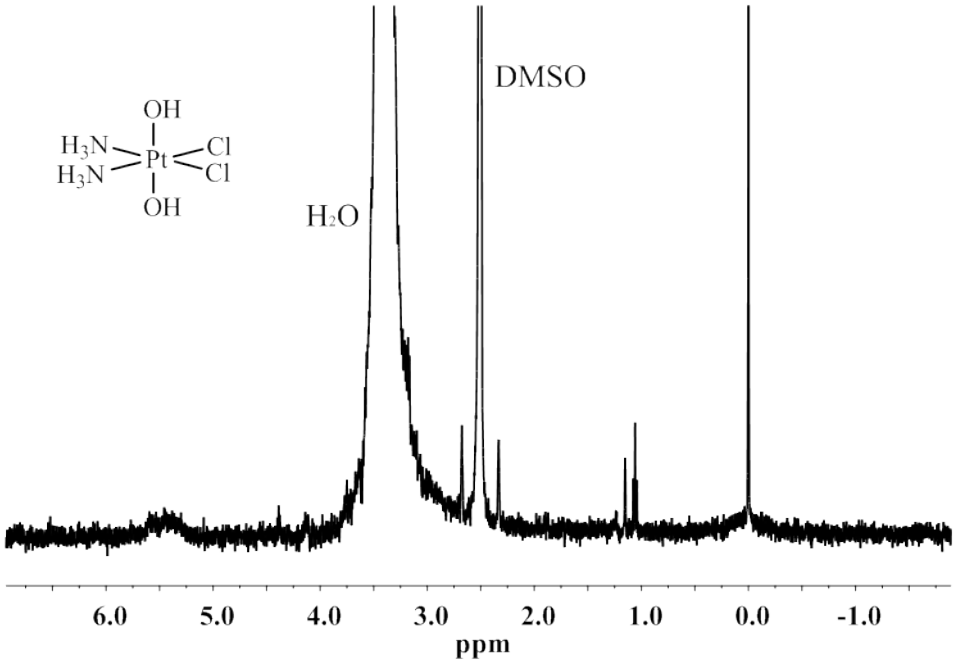


Fig. S1 The ^{1}H NMR spectra of c,c,t-$[Pt(NH_3)_2Cl_2(OH)_2]$.

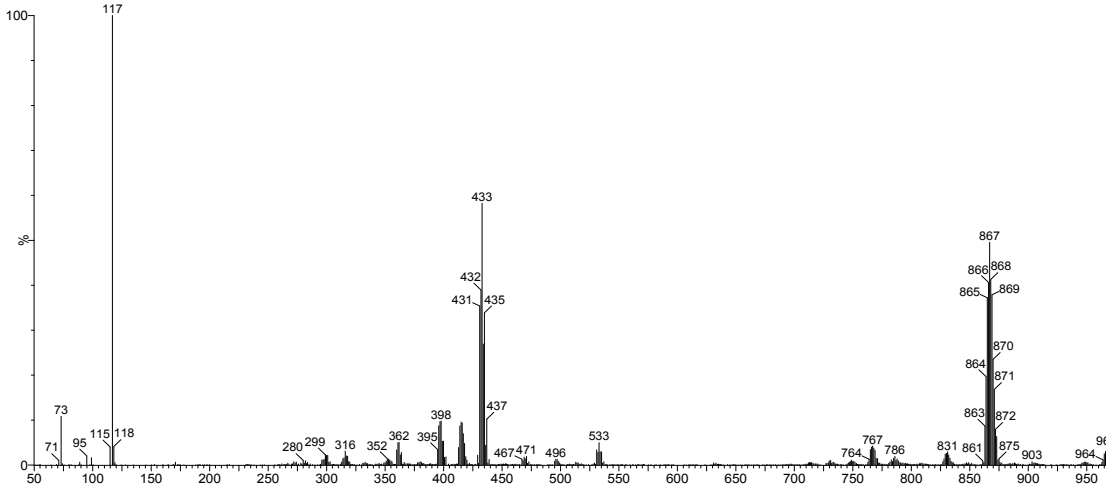


Fig. S2 ESI-MS spectrum of Pt(IV).

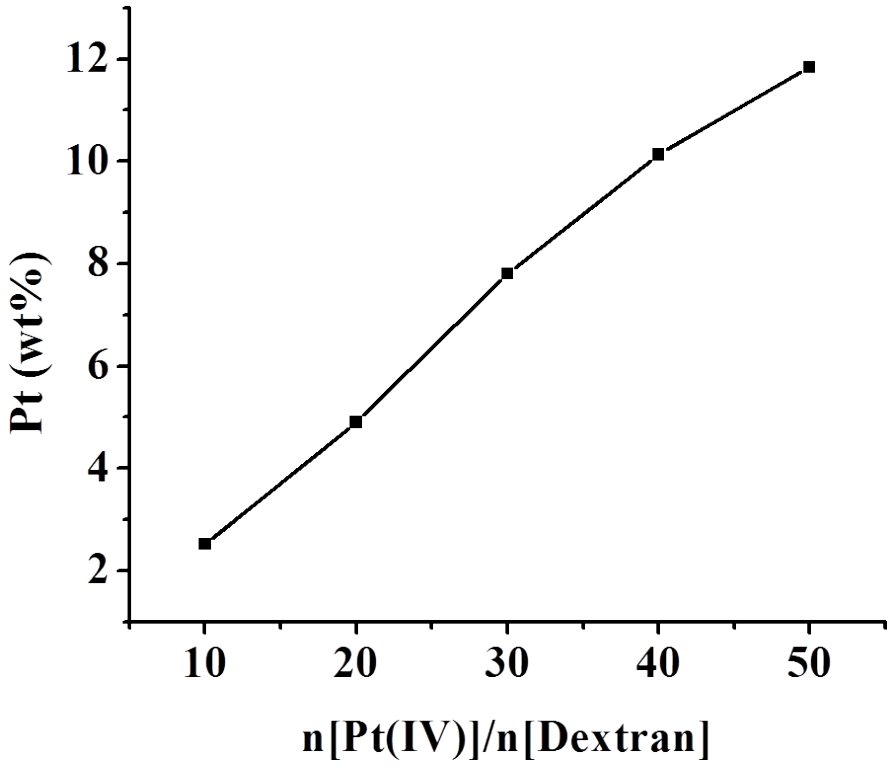


Fig. S3 Platinum content of the synthesized Dextran–Pt(IV) conjugate as a function of the molar ratio of Pt(IV) to dextran.

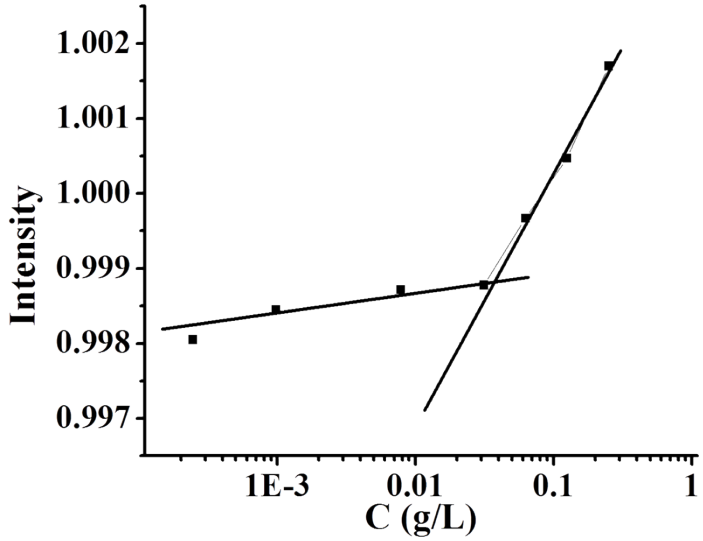


Fig. S4 Intensity of pyrene excitation spectra vs. the logarithm of the concentration of Dextran–Pt(IV) conjugate in water.

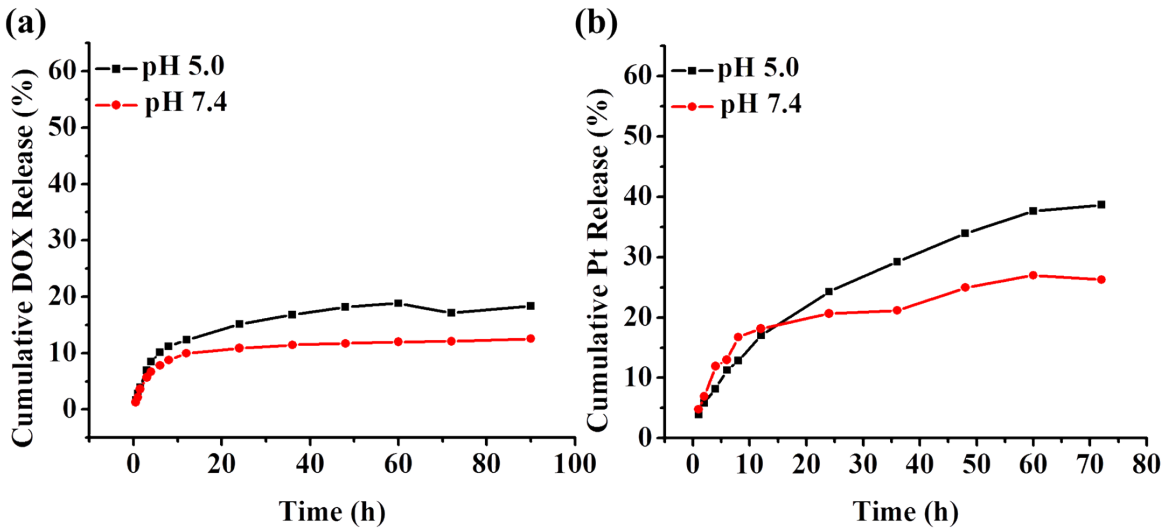


Fig. S5 *In vitro* drug release profiles of DOX-loaded Dextran–Pt(IV) in PBS (pH 7.4) and acetate buffer solution (pH 5.0): (a) DOX release profiles; (b) Pt release profiles.