Electronic Supplementary Material (ESI) for Biomaterials Science.

Supplumentary Information

Development of Controlled-Release Drug Delivery System by Encapsulated Oxaliplatin into SPIO/MWNT Nanoparticle for Effective Colon Cancer Therapy and Magnetic Resonance Imaging

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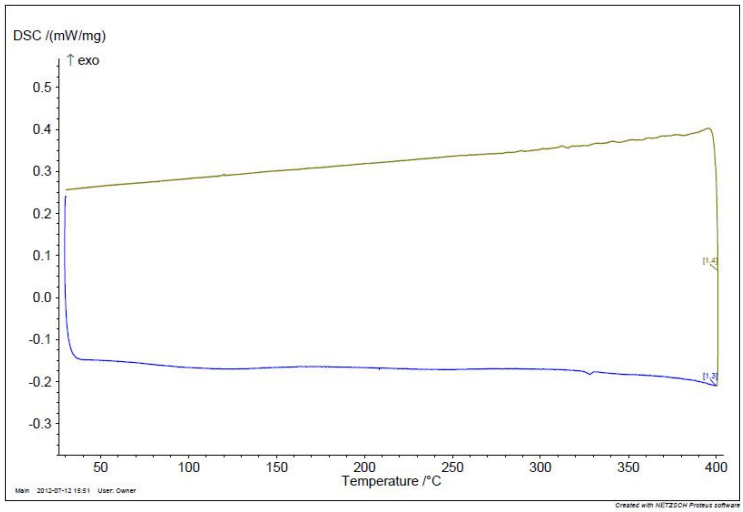

Figure. S1. Differential scanning calorimeter (DSC) data of MagMWNT5 after annealing treatment in helium atmosphere at 400°C for 30 min.

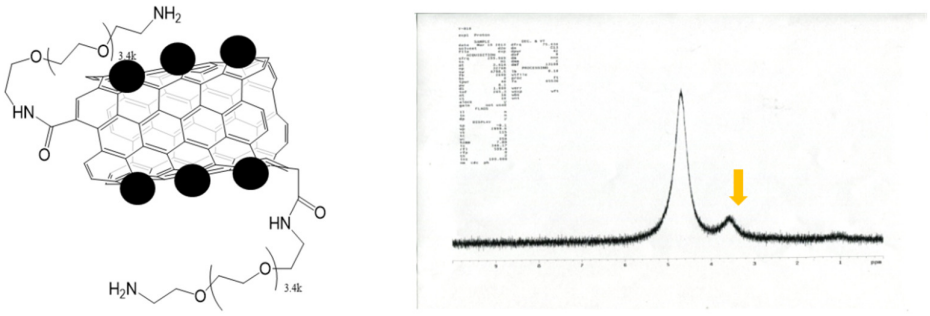

Figure. S2. ^{1}H-NMR spectrum of MagMWNT-PEG 6. The arrow indicates the characteristic peak of PEG at approximately 3.5 ppm.

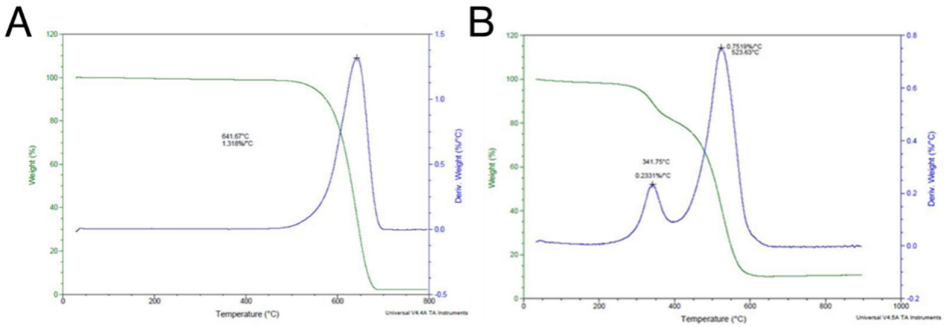

Figure. S3. TGA data of (A) S-MWNT 3 and (B) MagMWNT-PEG6, under sufficient oxidation; the oxidation reaction is as follows: $2Fe_3O_4 + ½\ O_2 \rightarrow\ 3(\alpha\text{-}Fe_2O_3)$.

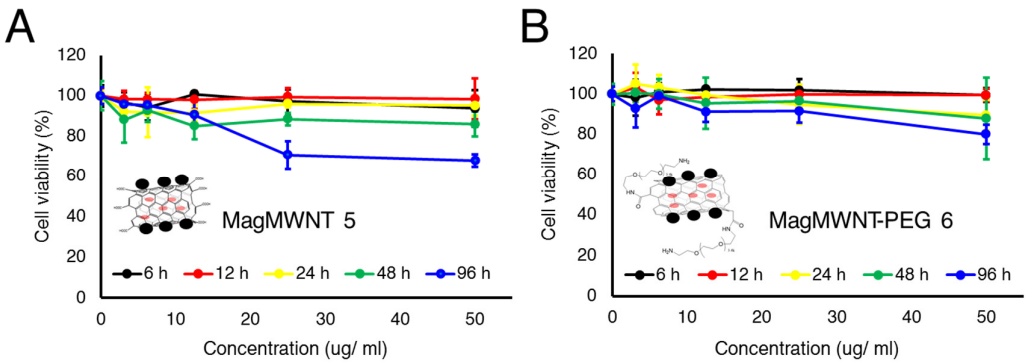

Figure. S4. Cell viability of HCT116 cells treated with (A) MagMWNT 5 and (B) MagMWNT-PEG 6 at different concentrations for 6, 12, 24, 48, and 96 h.

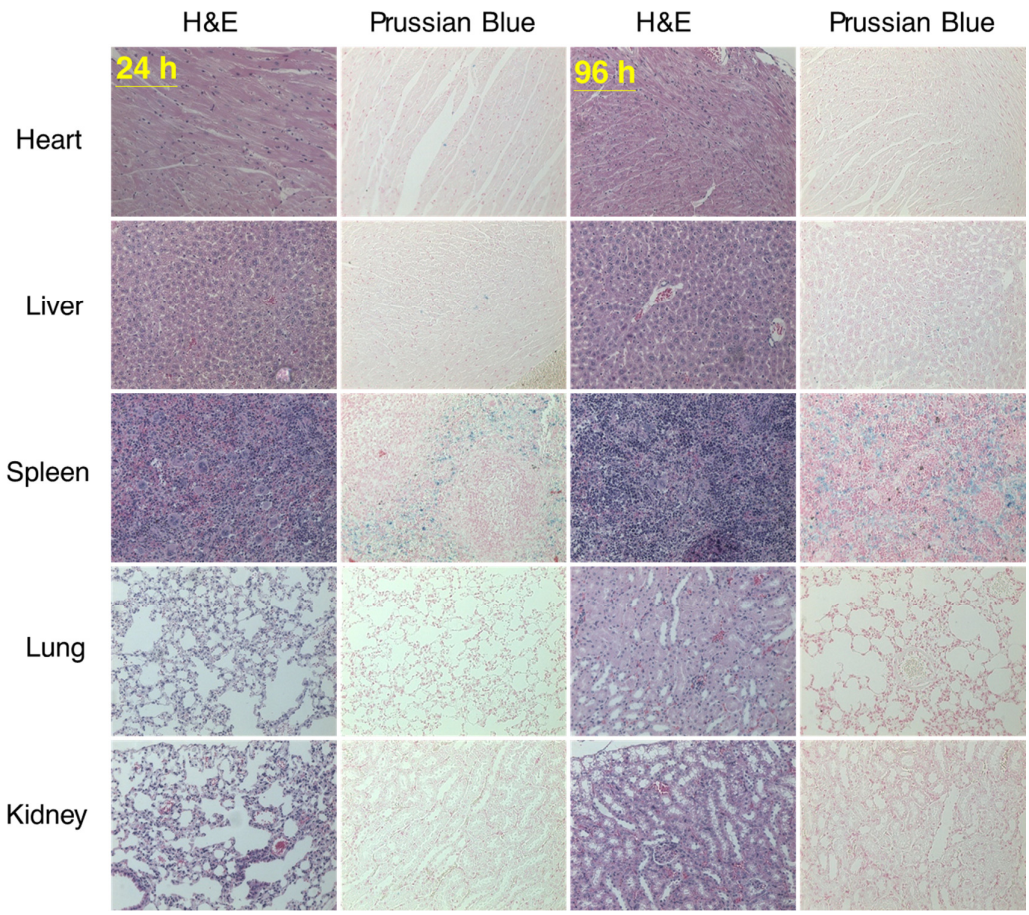

Figure. S5. H&E and Prussian blue staining of primary organs at 24 and 96 h after IV injection with Oxa/MagMWNT-PEG 7 (10 mg/kg). Prussian blue staining revealed numerous nanoparticles accumulated in the spleen.