

Supporting Information

Biomaterial Nano-Theranostic agent for Magnetic Resonance Image Guided, Augmented Radiofrequency Ablation of Liver Tumor

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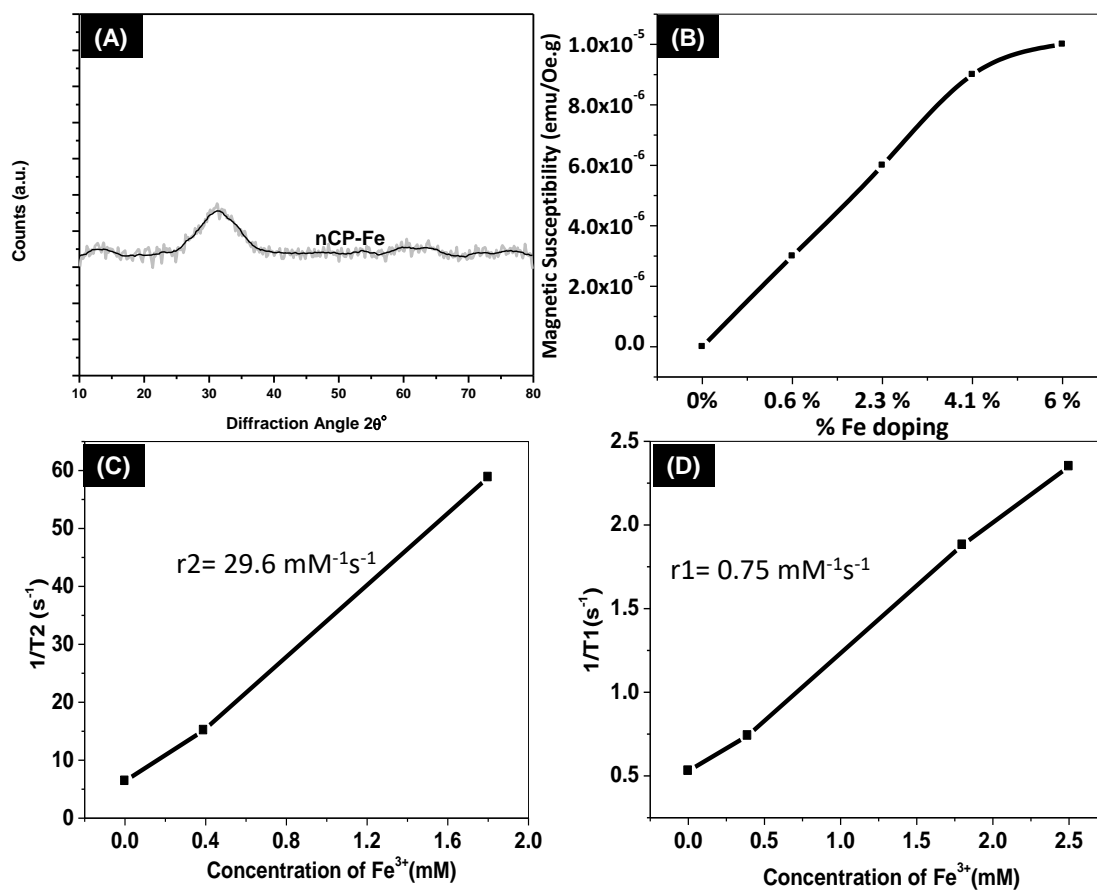


Figure S1. (A) XRD of nCP:Fe (B) Magnetic susceptibility data of different batches of nCP:Fe doped with varying concentration of Fe^{3+} (B) r_2 and (C) r_1 relaxivity plot of 4.1 at % Fe^{3+} doped nCP:Fe

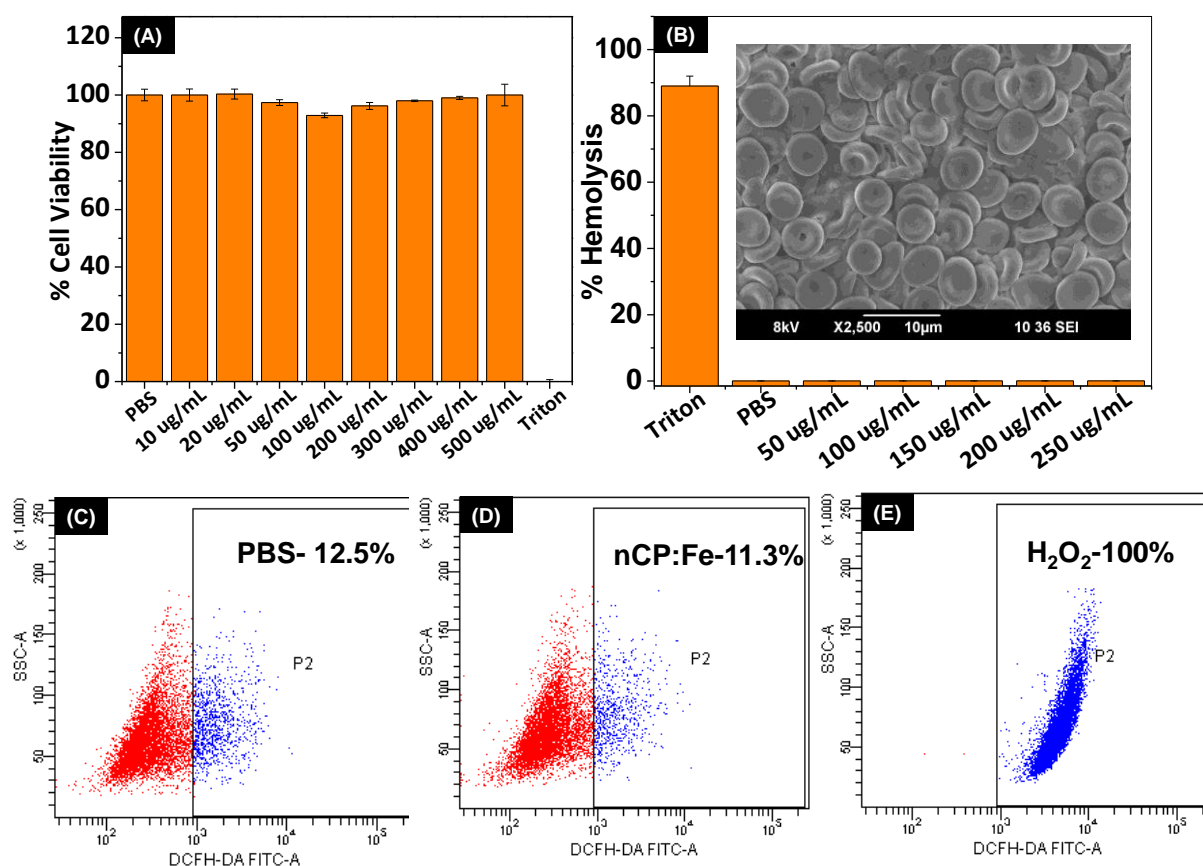


Figure S2. *In vitro* toxicity analysis of nCP:Fe. (A) Viability of PBMC after incubation with nCP:Fe for 48 hours (B) Hemolysis data after incubation of whole blood with nCP:Fe for 3 hours. Inset: SEM showing intact RBC membrane after nCP:Fe treatment. Flow cytometry based ROS analysis after treatment of N1S1 cells with (C) PBS (D) nCP:Fe and (E) H₂O₂.

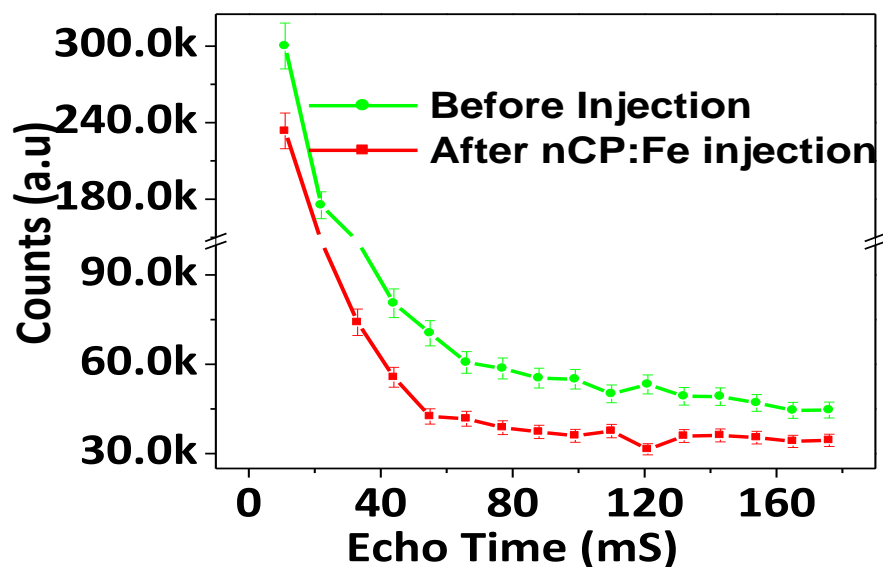


Figure S3. T2 mapping data averaging 3 ROI selected in the axial sections (as shown in Figure 2 C&D) before and 1 hour after nCP:Fe injection.

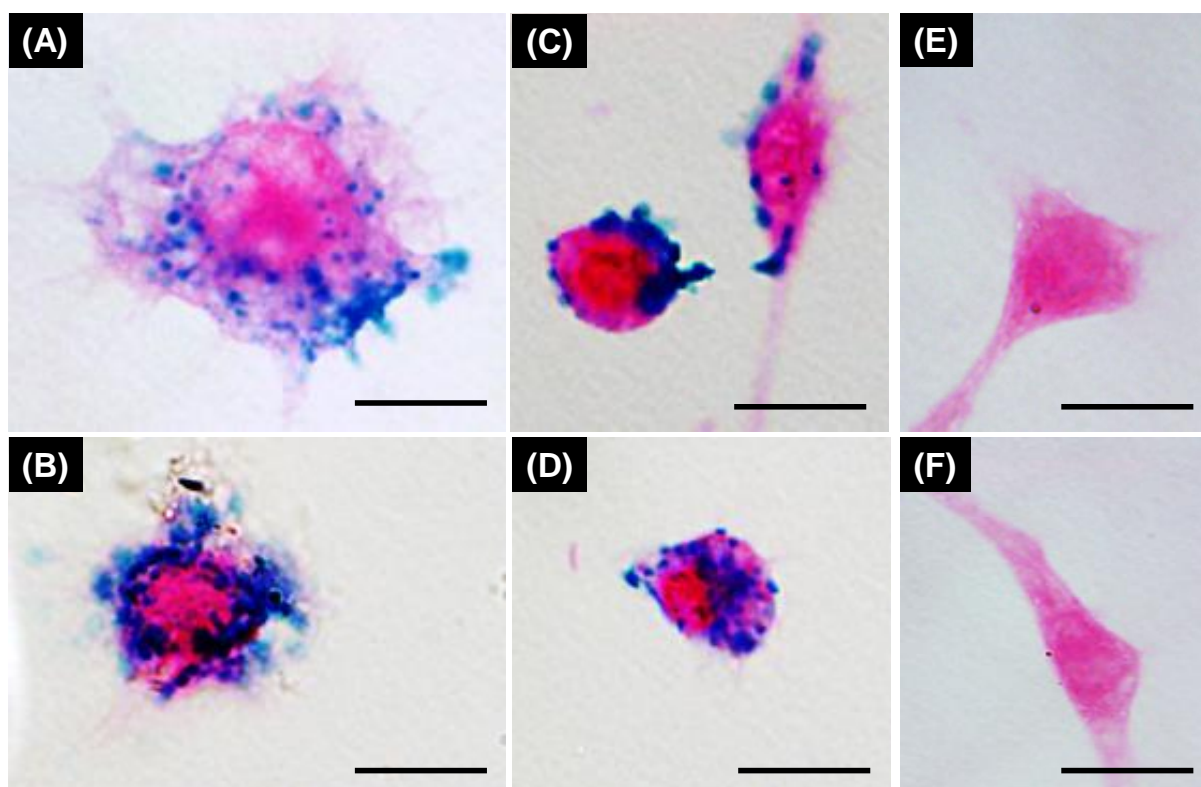


Figure S4: Prussian blue stained RAW 264.7 macrophages (A-D) after treatment with nCP:Fe for 12 hours (E,F) control cells without nanoparticle treatment. Bar represents 10 μm .

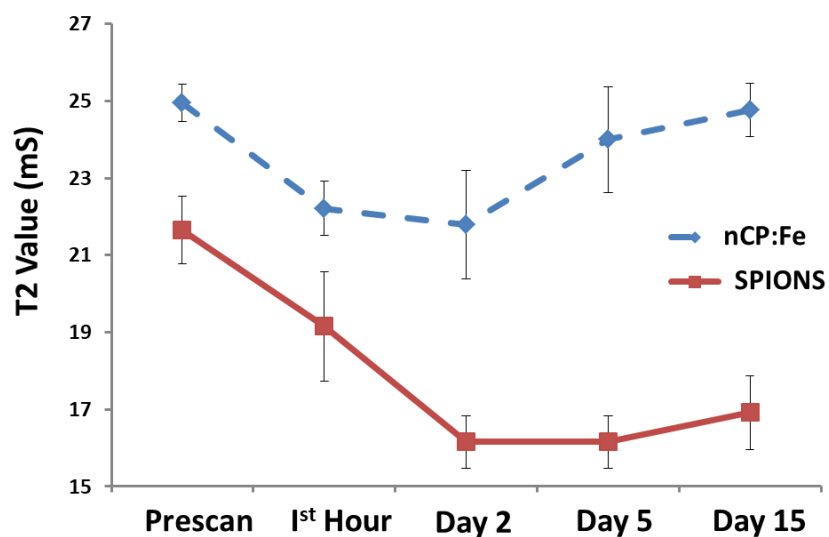


Figure S5: Comparison of T2 values in liver after intravenous injection of nCP:Fe vs SPIONS.

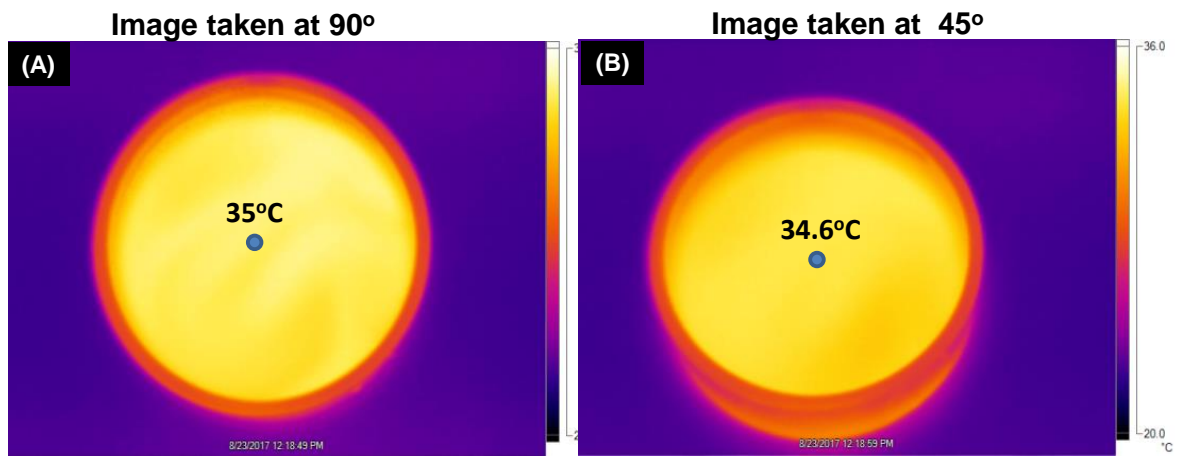


Figure S6: IR image and corresponding temperature of distilled water heated to 35°C.

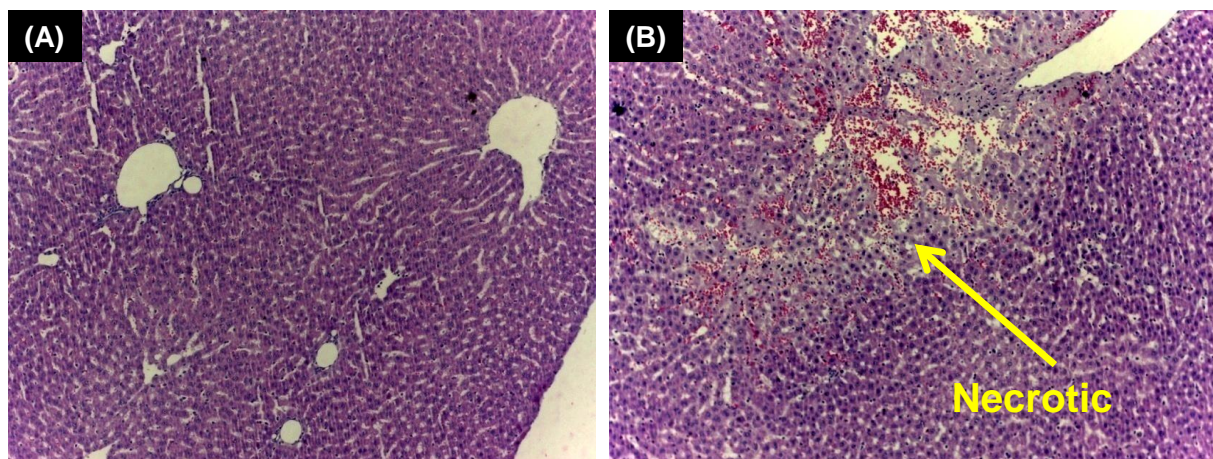


Figure S7. Histology sections of liver from animal injected with nCP:Fe (A) region not treated with RF (B) region exposed to RF showing necrosis