Electronic Supplementary Material (ESI) for RSC Advances.


# Multimodal Theranostic Nanomaterials Derived from Phthalocyanine-based Organic Salt

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## Supporting Information

FITR spectra

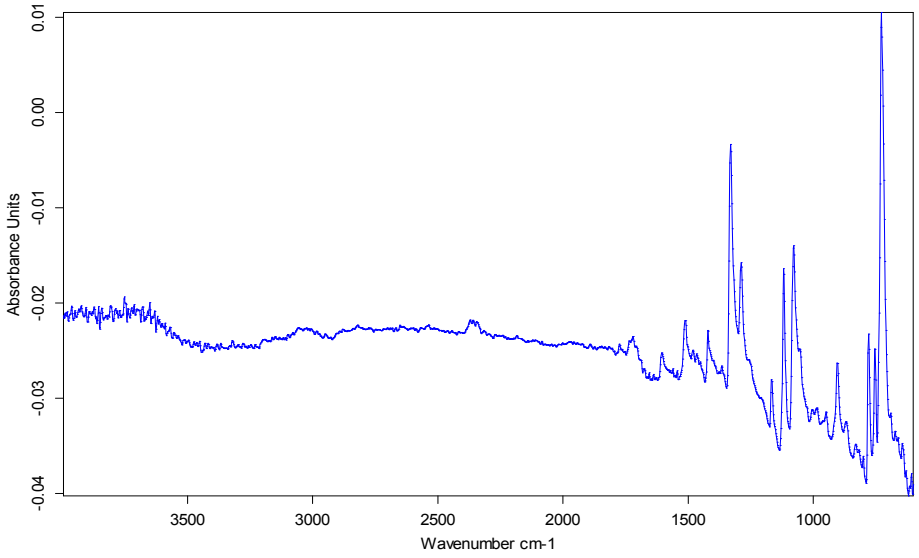


Figure S1A. FTIR spectrum of [Ptc][Cl]

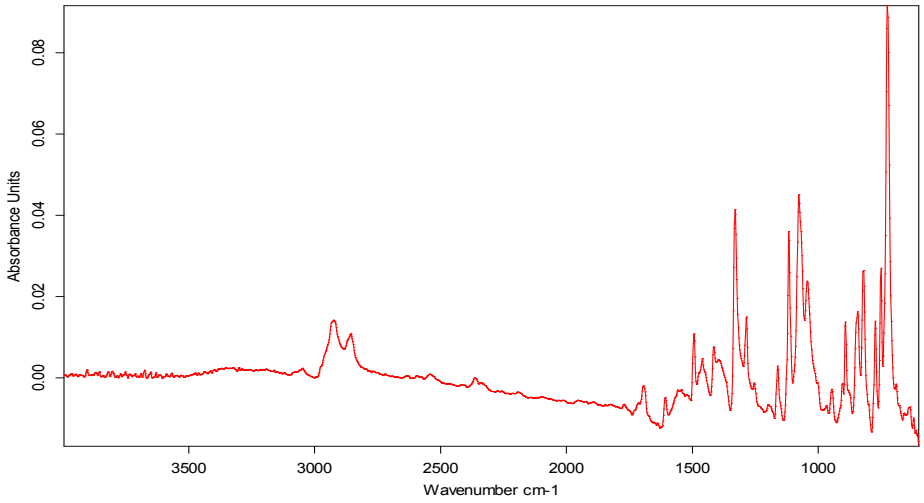


Figure S1B. FTIR spectrum of [Ptc][DC]. The IR band near ~3000 $cm^{-1}$ corresponding to –OH groups present in deoxycholate anion confirms the salt formation.

1H NMR of [Ptc][DC]

1H-NMR (DMSO-d6, 400 MHz): Fe (III) pthalocyanine cation: 7.81 (m, 8H), 7.16 (m, 8H) Deoxycholate anion: δ 4.45 (m, 1H), 4.20 (m, 1H), 3.76 (m, 2H), 2.19 (s, 1H), 2.50 (s, 1H) 1.63-1.14 (m, 24H), 0.90 (s, 3H), 0.88 (s, 3H), 0.57 (s, 3H)

Size dependent magnetic properties of [Ptc][DC] nanoparticles

Nanoparticles of three different sizes viz. 15-20 nm, 25-35 nm, and 50-65 nm as confirmed from the TEM micrographs were synthesized varying the concentration of the stock dye solution inserted into bulk water during reprecipitation. The temperature dependence of magnetic susceptibility for [Ptc][DC] nanoparticles was found to decrease with increasing particle size demonstrating nearly linear temperature dependence between 2-300 K for the smallest nanoparticle size.

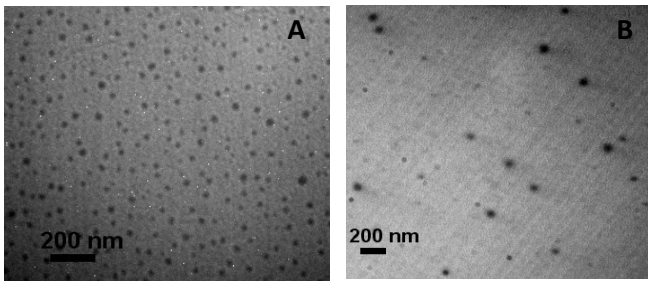


Figure S2: [Ptc][DC] nanoparticles of size (A) 15-20 nm and (B) 50-65 nm.

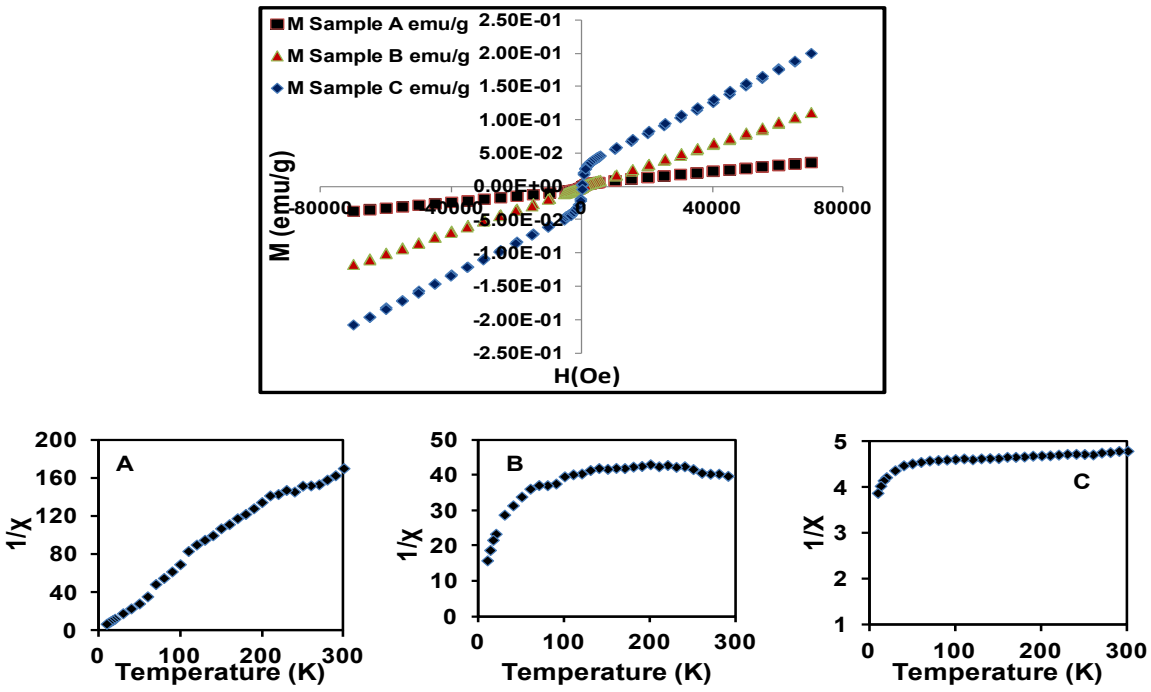


Figure S3: Size dependent magnetic properties of [Ptc][DC] nanoparticles. Sample A 15-20 nm, Sample B 25-35 nm, Sample C 50-65 nm.

Stability of [Ptc][DC] Nanoparticles

The stability of [Ptc][DC] nanoparticles were investigated in 10 % serum over a period of 24 h. The fluorescence emission signal of the nanoparticles was followed at 462 nm for excitation at 400 nm. The emission signal was found to remain stable until 8 h and then gradually drop over the studied period. However, the drop in intensity was only 15% over 24 h indicating appreciably high stability of the nanoparticles and absence of any significant serum induced aggregation.

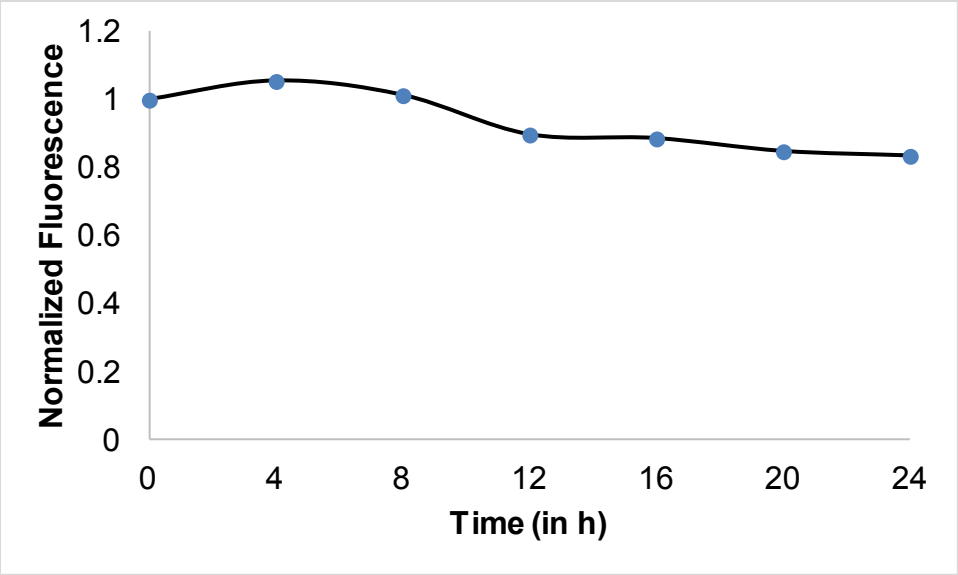


Figure S4: Stability study of [Ptc][DC] nanoparticles in 10% Serum