An experimental and theoretical linkage to optimize hyperthermia of hybrid magneto-fluorescent nanocomposites

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† Electronic Supplementary Information (ESI)

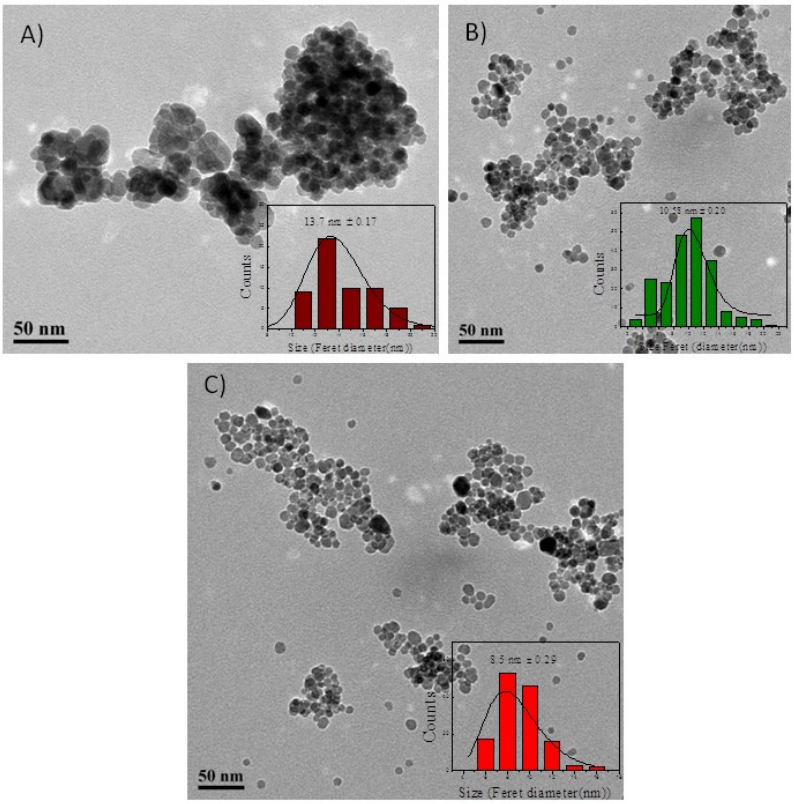


Figure S1. *TEM images and size distributions of the samples:* S_1-$Zn_{0.45}Fe_{2.55}O_4$@PG *(A,),* S_2-$Zn_{0.6}Fe_{2.4}O_4$@TrEG *(B) and* S_3-$Zn_{0.3}Fe_{2.7}O_4$@TEG *(C).*

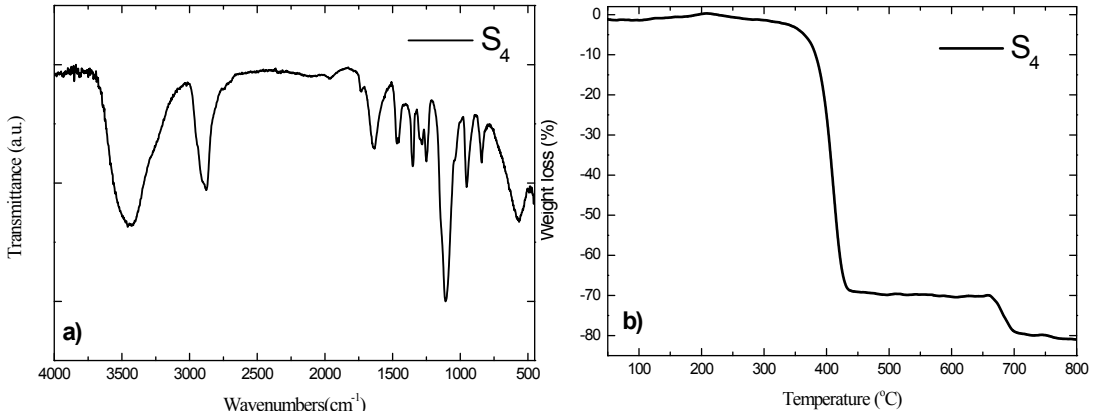


Figure S2. *Basic characterization of the solvothermally prepared* S_4*:*$Zn_{0.53}Fe_{2.47}O_4$*@PEG MNPs:* ***a)*** *FT-IR spectrum and* ***b)*** *TGA curve of the sample.*

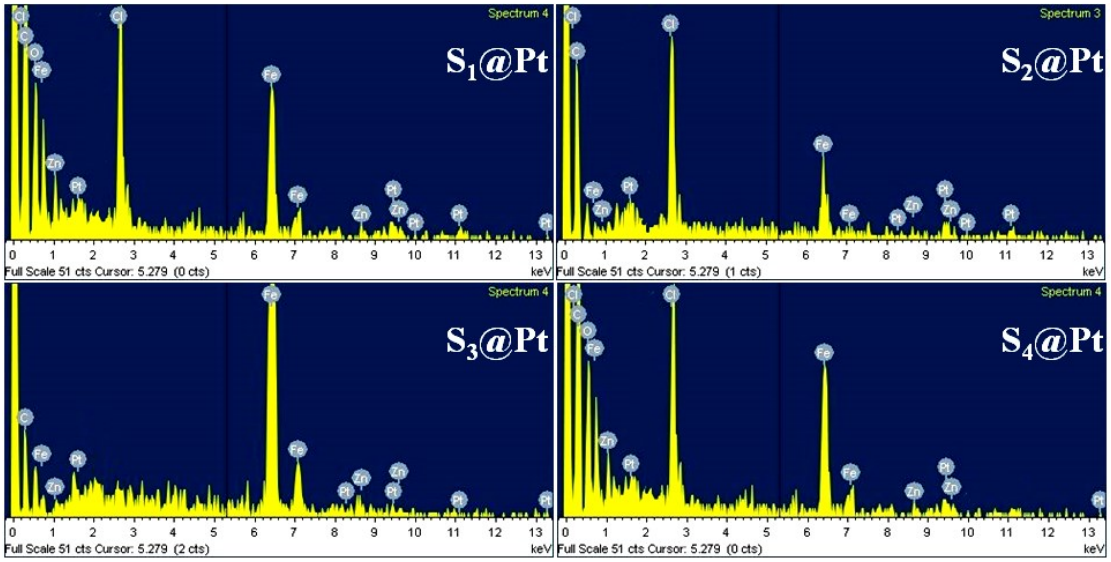
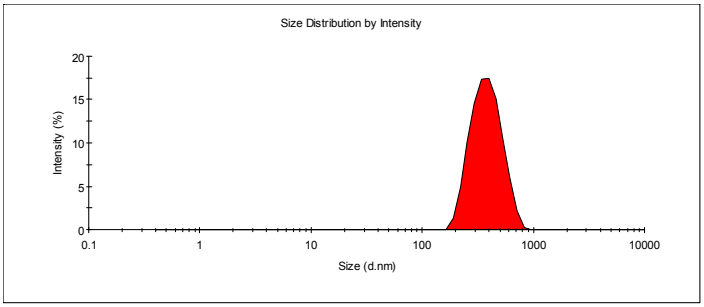
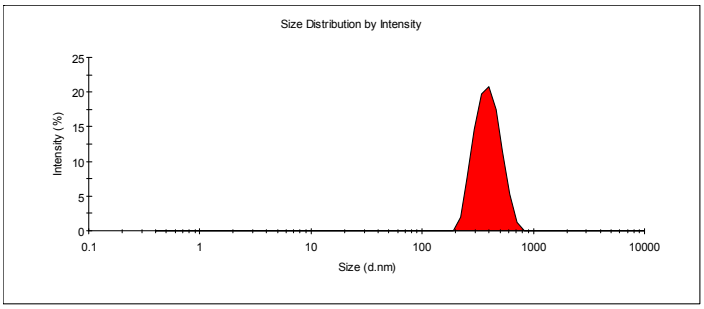


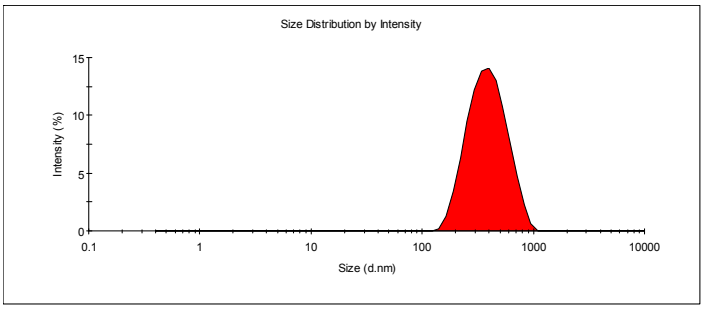
Figure S3. *EDS spectra of the magneto-fluorescent nanocomposites.*



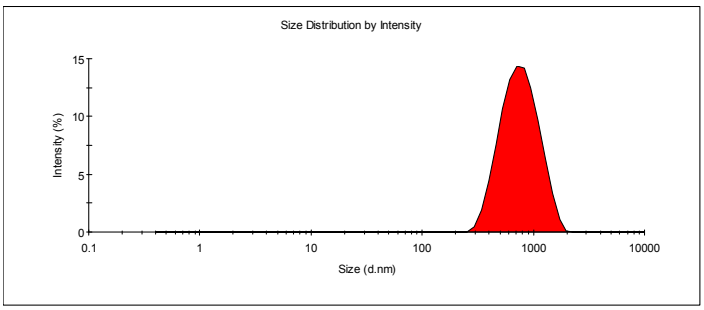
S_1@Pt: 370 nm, PdI (0.190)



S_2@Pt: 404 nm, PdI (0.174)



S_3@Pt: 349 nm, PdI (0.189)



S_4@Pt: 620 nm, PdI (0.213)

Figure S4. *DLS spectra of the magneto-fluorescent nanocomposites.*

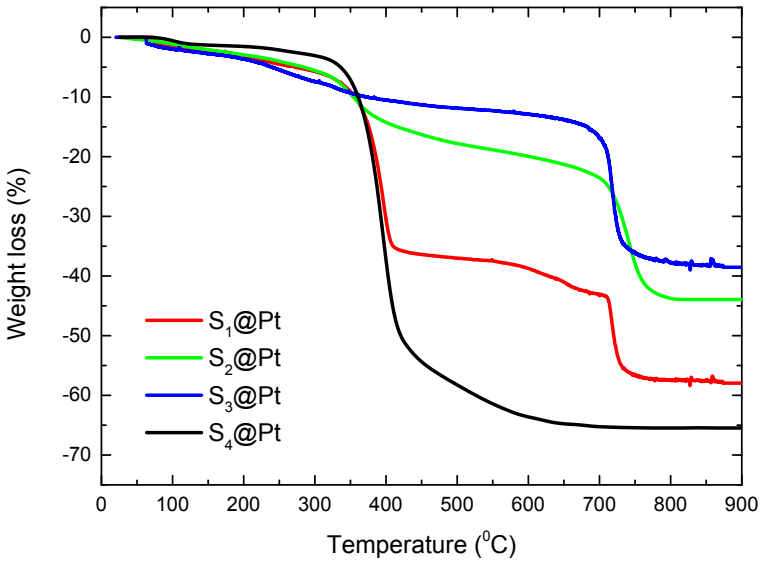


Figure S5. *TGA analysis of the hybrid nanocomposites under inert atmosphere.*

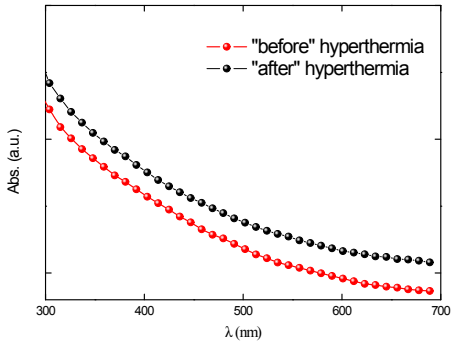


Figure S6. *Indicative absorption spectra of the composites (S_4@Pt) before and after the hyperthermia measurements.*

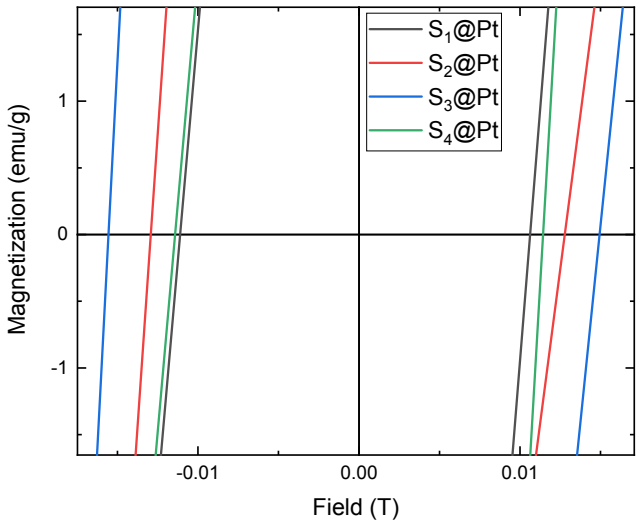


Figure S7*. Central part of hysteresis loops.*

Table S1. *Coercive field values of samples*

Sample	Coercive field (mT)
S_1@Pt	10.6
S_2@Pt	12.8
S_3@Pt	15.3
S_4@Pt	11.5