

Composition and hydrophilicity control of Mn-doped ferrite ($\text{Mn}_x\text{Fe}_{3-x}\text{O}_4$) nanoparticles induced by polyol differentiation

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† Electronic supplementary information (ESI)

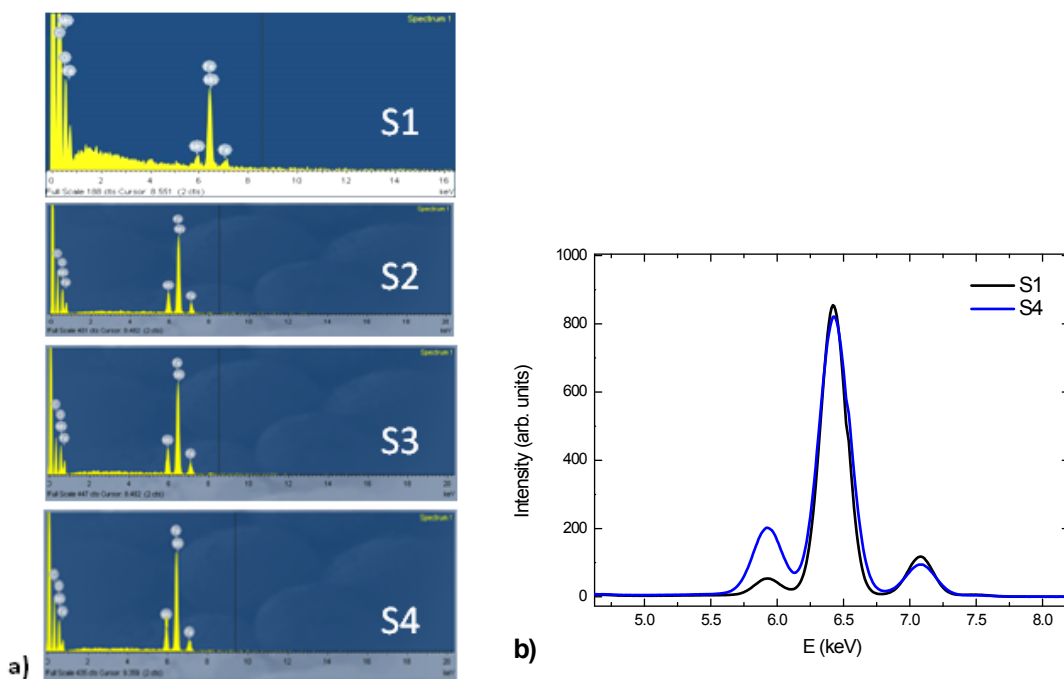


Figure 1S EDS spectra of samples S1-S4 (a) and representative XRF spectra of S1 and S4, respectively (b).

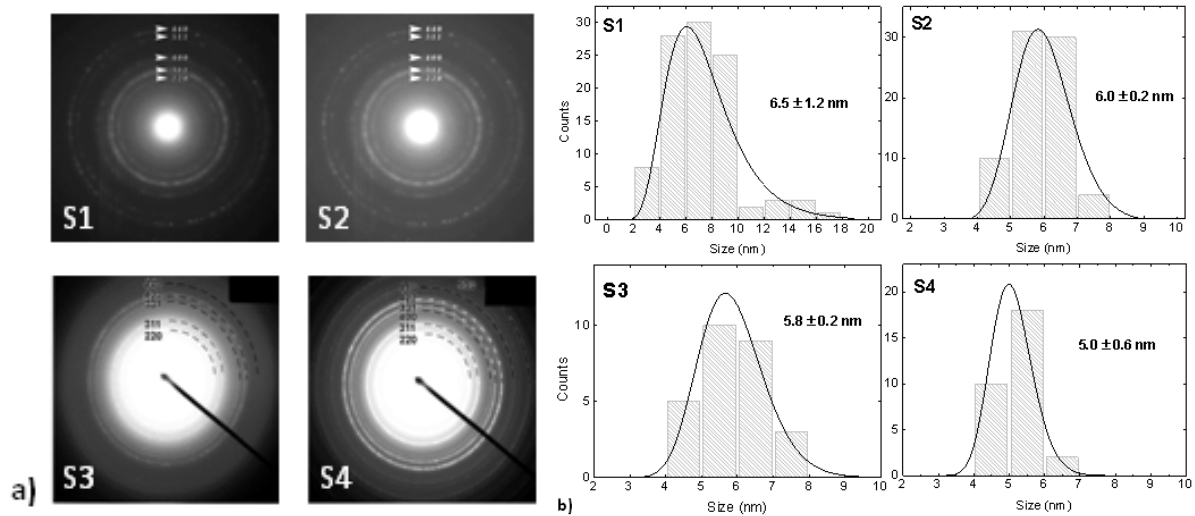
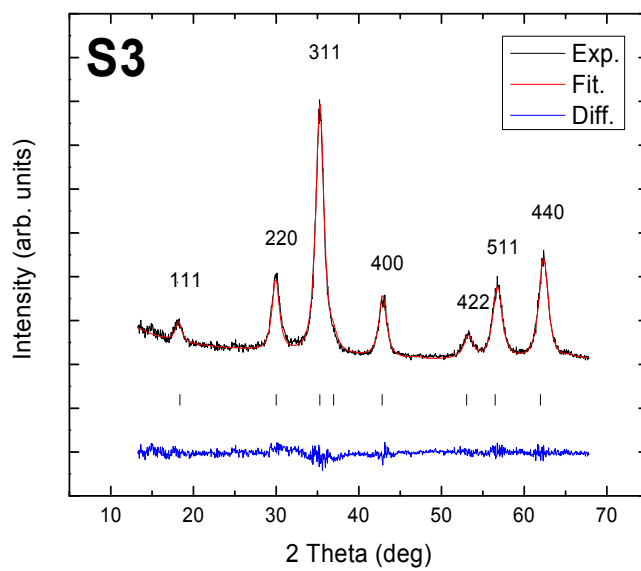
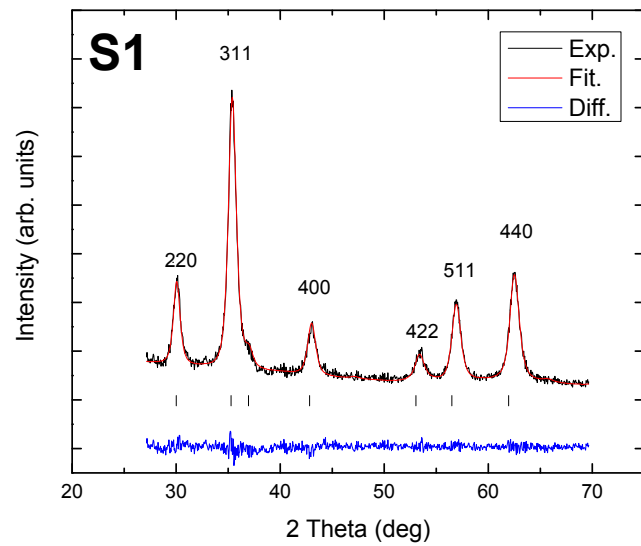


Figure 2S Selected area electron diffraction (SAED) patterns of the samples S1-S4 **(a)** and histograms of particle size distributions of the samples fitted with a log-normal function **(b)**.



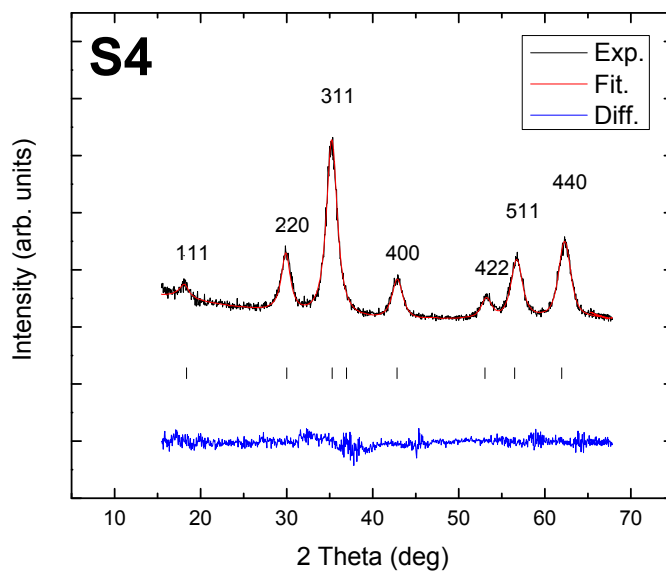


Figure 3S Refined spectra of samples S1, S3 and S4 (ICSD 43462).

Table 1S Refined parameters and Rietveld agreement factors

	S1	S2	S3	S4
α (Å)	8.401(3)	8.411(6)	8.433(2)	8.412(1)
V (Å ³)	592.91(57)	595.03(55)	599.71(69)	595.24(77)
d_R (nm)	7.9(2)	6.7(4)	6.4(3)	4.8(2)
χ^2	7.9	6.7	6.4	4.8
R_p (%)	4.2	1.3	1.4	1.7
R_{wp} (%)	1.91	7.84	6.89	9.6

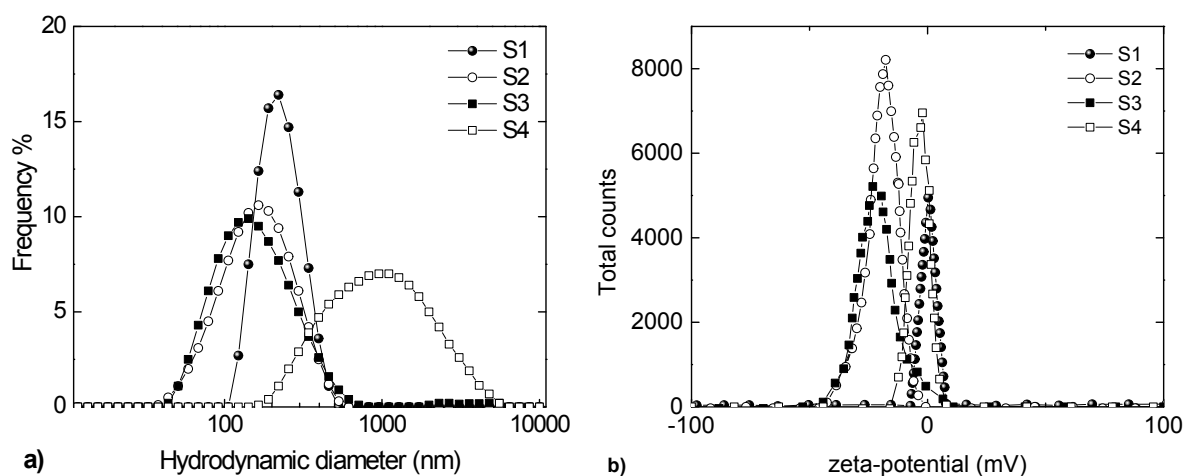


Figure 4S Particle size distribution of the samples S1-S4 in water by DLS **(a)** and zeta-potential **(b)** distribution of samples measured in an aqueous medium at 6.8 pH.

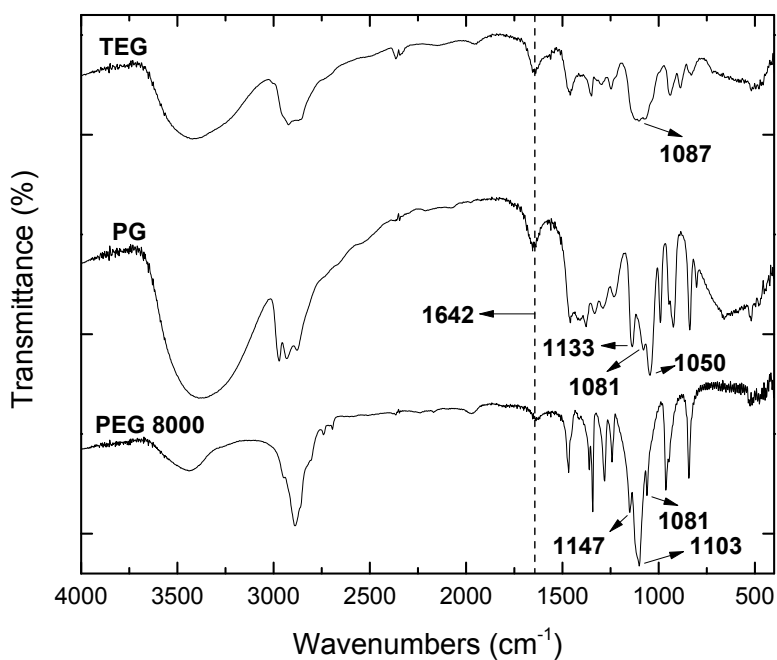


Figure 5S FT-IR spectra of the pure surfactants.