



Article

Effect of Magnetic Heating on Stability of Magnetic Colloids

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S1. Supplementary Materials

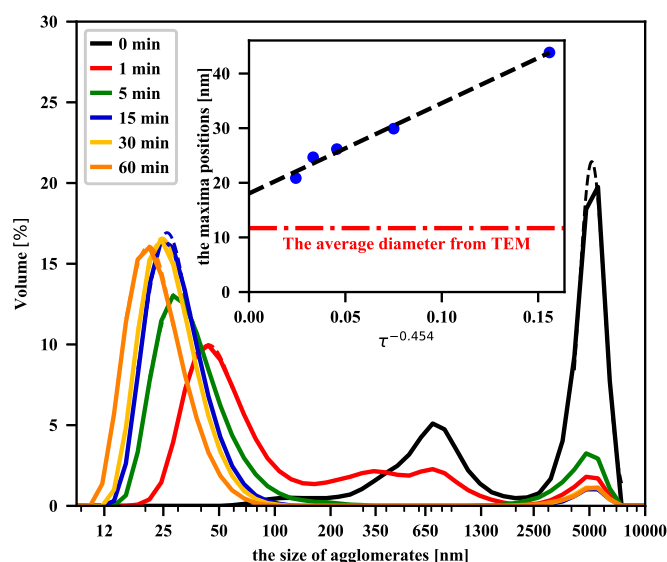


Figure S1. The volume-based size distribution of the agglomerates of the nanoparticles dispersed in an aqueous suspension with pH = 11.5 for different sonication durations. An interpolation of the distribution function near their maximum is marked with a dashed line. The inset suggests a power-law trend of the dependence of the mean hydrodynamic diameter on the duration of the sonication process, where the HD offset value is 17.8 nm. The dimensionless quantity τ is defined as (the sonication time)/(1 min).

Table S1. Slopes and SAR values of nanoparticles for sonication durations as in panel (a) in Figure 4.

Sonication Time [min]	Slope [°C/min]	SAR [W/g]
0	1.55	16.61
1	3.09	33.14
5	4.39	47.06
15	5.15	55.19
30	4.87	52.15
60	5.40	57.88
120	5.34	57.24

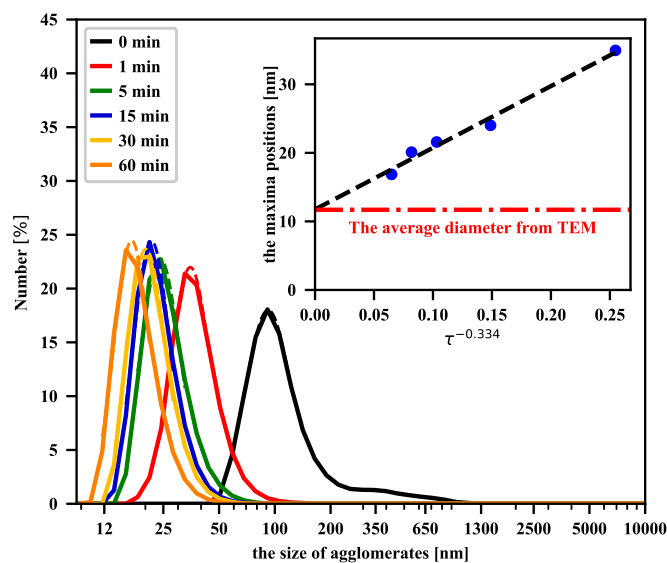


Figure S2. The number-based size distribution of the agglomerates of the nanoparticles dispersed in an aqueous suspension with pH = 11.5 for different sonication durations. An interpolation of the distribution function near their maximum is marked with a dashed line. The inset suggests a power-law trend of the dependence of the mean hydrodynamic diameter on the duration of the sonication process, where the HD offset value is 11.5 nm. The dimensionless quantity τ is defined as (the sonication time)/(1 min).

Table S2. SAR values of nanoparticles for sonication durations as in panel (b) in Figure 4. The symbol Δ SAR means the difference between the highest and the lowest value of the SAR coefficient for a given sonication time.

Sonication Time [min]	SAR [W/g]	SAR _{mean} [W/g]	Δ SAR	Δ SAR/SAR _{mean} [%]
0	25.86	23.12	5.16	22.3
	20.71			
	21.34			
	22.19			
	25.51			
15	48.55	45.67	4.81	10.5
	43.74			
	47.14			
	45.09			
	43.81			
120	51.52	53.53	4.24	7.9
	53.35			
	53.50			
	55.76			