

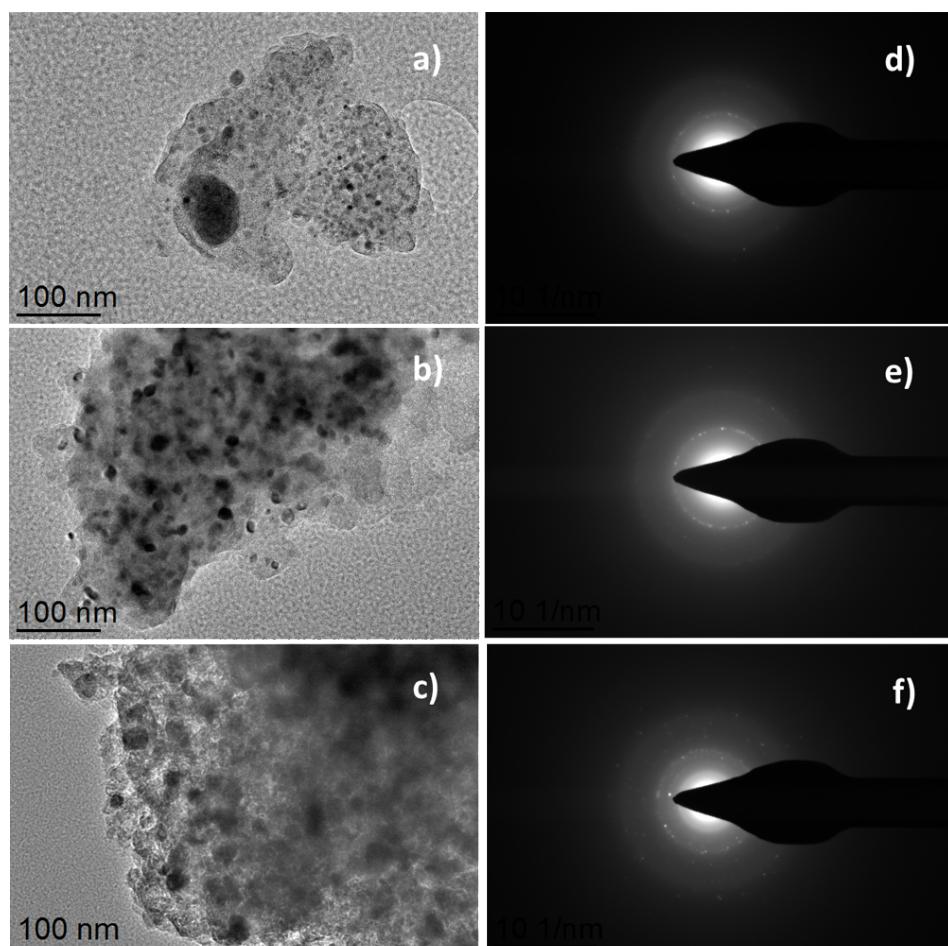
## Supporting Information

# Preparation and size-dependent magnetism of highly dispersed iron silicide nanoparticles on silica

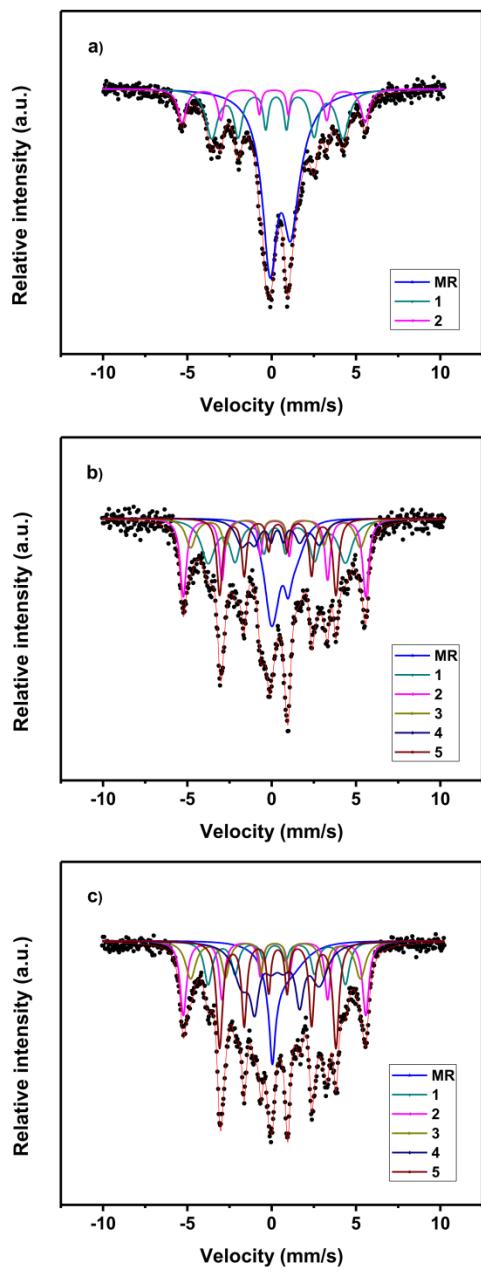
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**Figure S1.** Representative TEM and corresponding SAED patterns of the samples (a, d) Ar-600, (b, e) Ar-700, and (c, f) Ar-800.



**Figure S2.**  $^{57}\text{Fe}$  Mössbauer spectra of the samples (a) Ar-600, (b) Ar-700, and (c) Ar-800 measured at  $-196\text{ }^{\circ}\text{C}$ .

**Table S1.**  $^{57}\text{Fe}$  Mössbauer parameters of the samples Ar-600, Ar-700 and Ar-800 measured at -196 °C.

Sample	Subspectrum	IS/mm s <sup>-1</sup>	QS/mm s <sup>-1</sup>	H/T	RI/%	LW/mm s <sup>-1</sup>
Ar-600	1	0.30	0.07	24.2	28.4	0.36
	2	0.12	-0.01	33.7	13.9	0.25
	magnetic relaxation(MR)	0.51	-	10.4	57.6	0.62
Ar-700	1	0.25	0.12	25.3	23.0	0.44
	2	0.18	-0.02	33.6	18.8	0.31
	3	0.21	0.05	31.3	11.1	0.33
	4	0.43	0.21	14.3	11.5	0.37
	5	0.37	-0.01	21.4	16.4	0.31
	magnetic relaxation(MR)	0.47	-	6.7	19.3	0.30
Ar-800	1	0.25	0.12	25.3	11.8	0.44
	2	0.18	-0.02	33.6	16.3	0.32
	3	0.21	0.05	31.3	13.1	0.29
	4	0.43	0.21	14.3	23.0	0.90
	5	0.37	-0.01	21.4	21.7	0.30
magnetic relaxation(MR)		0.47	-	10.9	14.1	0.30