Electronic Supplementary Material (ESI) for CrystEngComm.

- ELECTRONIC SUPPLEMENTARY INFORMATION -

Formation of maghemite nanoflowers in polyol: tuning the particle size via the precursor stoichiometry

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Contents

1 TEM Particle Size Distributions

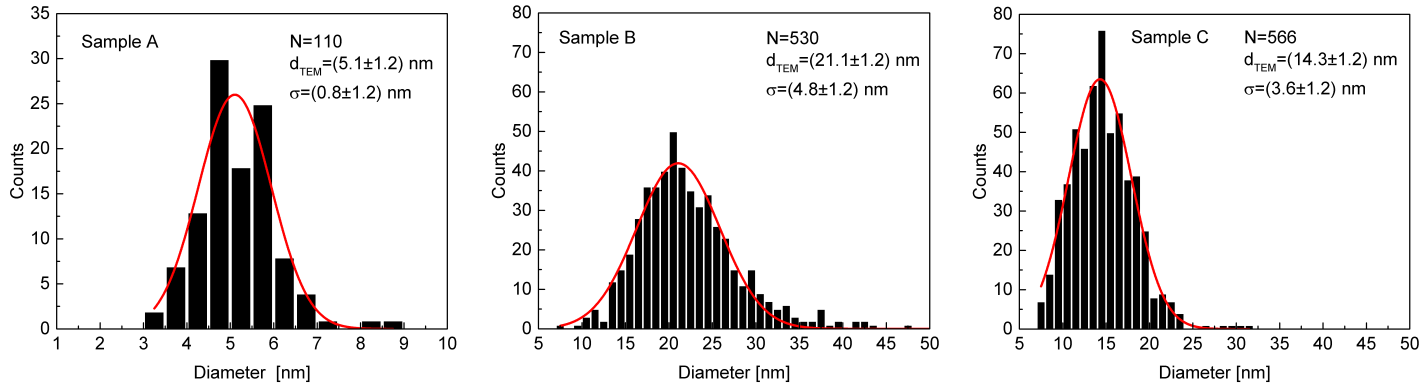

Figure 1: Particle size distributions for samples A, B and C. N is the number of evaluated particles, d_{TEM} is the mean value and σ is the standard deviation of the normal distribution.

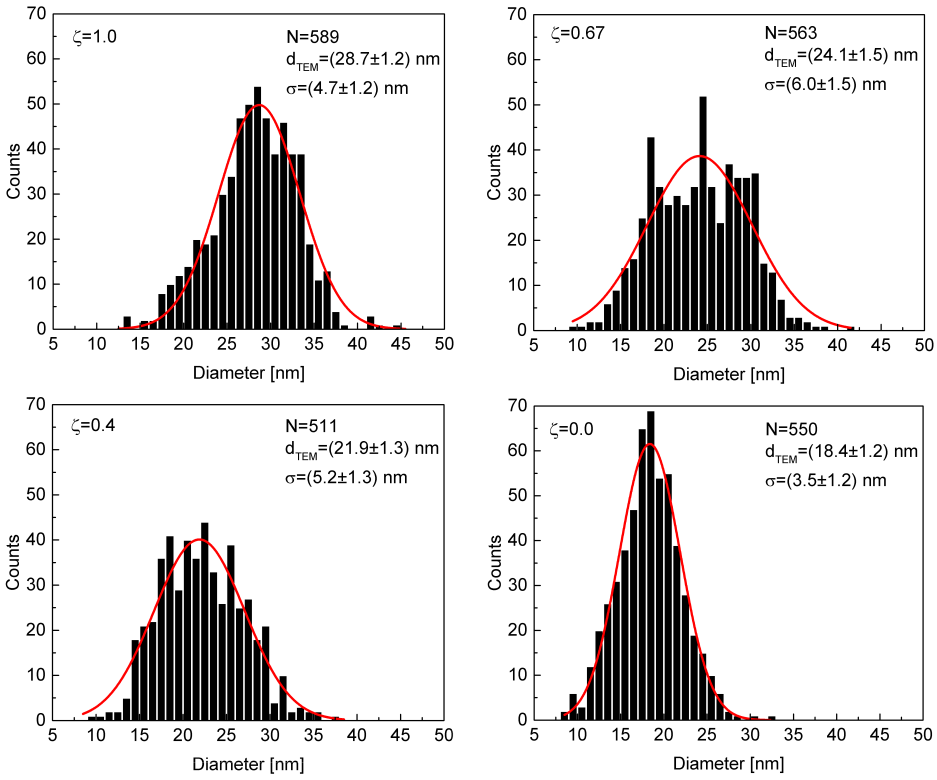

Figure 2: Particle size distributions for samples prepared with $\zeta = 1; 0.67; 0.4$ and 0.0. N is the number of evaluated particles, d_{TEM} is the mean value and σ is the standard deviation of the normal distribution.

2 Mössbauer fitting parameters

Sample B					
Site	IS $[\frac{\text{mm}}{\text{s}}]$	QS $[\frac{\text{mm}}{\text{s}}]$	$\mu_0 H_{\text{hf}}$ [T]	FWHM $[\frac{\text{mm}}{\text{s}}]$	Rel. int. [%]
A_b	0.326 ± 0.002	-0.007 ± 0.002	47.3 ± 0.1	0.288 ± 0.005	46.1
B_b	0.352 ± 0.004	-0.017 ± 0.004	45.1 ± 0.1	0.326 ± 0.011	30.9
A_s	0.401 ± 0.007	-0.001 ± 0.006	41.9 ± 0.1	0.337 ± 0.020	15.2
B_s	0.434 ± 0.011	-0.01 ± 0.01	38.1 ± 0.2	0.328 ± 0.024	7.7
Sample C					
Site	IS $[\frac{\text{mm}}{\text{s}}]$	QS $[\frac{\text{mm}}{\text{s}}]$	$\mu_0 H_{\text{hf}}$ [T]	FWHM $[\frac{\text{mm}}{\text{s}}]$	Rel. int. [%]
A_b	0.330 ± 0.011	-0.01 ± 0.01	44.9 ± 0.2	0.47 ± 0.04	19.4
B_b	0.313 ± 0.016	-0.010 ± 0.015	40.1 ± 0.5	0.87 ± 0.09	38.6
A_s	0.38 ± 0.07	0.00 ± 0.06	33.0 ± 0.8	0.98 ± 0.24	23.0
B_s	0.34 ± 0.09	0.06 ± 0.06	18.3 ± 0.9	1.20 ± 0.60	17.9
Doublet	0.48 ± 0.08	1.49 ± 0.17	-	0.36 ± 0.18	1.1
$\zeta = 1.0$					
Site	IS $[\frac{\text{mm}}{\text{s}}]$	QS $[\frac{\text{mm}}{\text{s}}]$	$\mu_0 H_{\text{hf}}$ [T]	FWHM $[\frac{\text{mm}}{\text{s}}]$	Rel. int. [%]
A_b	0.324 ± 0.003	0.006 ± 0.002	47.8 ± 0.1	0.241 ± 0.005	41.5
B_b	0.329 ± 0.004	0.002 ± 0.002	46.1 ± 0.1	0.280 ± 0.011	34.7
A_s	0.361 ± 0.013	-0.003 ± 0.002	43.2 ± 0.2	0.343 ± 0.012	16.8
B_s	0.445 ± 0.016	-0.006 ± 0.004	39.2 ± 0.3	0.352 ± 0.014	7.0
$\zeta = 0.67$					
Site	IS $[\frac{\text{mm}}{\text{s}}]$	QS $[\frac{\text{mm}}{\text{s}}]$	$\mu_0 H_{\text{hf}}$ [T]	FWHM $[\frac{\text{mm}}{\text{s}}]$	Rel. int. [%]
A_b	0.325 ± 0.008	0.002 ± 0.002	47.0 ± 0.2	0.297 ± 0.014	38.4
B_b	0.327 ± 0.009	0.001 ± 0.001	44.9 ± 0.2	0.366 ± 0.011	33.6
A_s	0.344 ± 0.022	-0.002 ± 0.002	40.9 ± 0.3	0.54 ± 0.04	20.8
B_s	0.463 ± 0.028	-0.003 ± 0.003	36.8 ± 0.3	0.55 ± 0.08	7.2
$\zeta = 0.4$					
Site	IS $[\frac{\text{mm}}{\text{s}}]$	QS $[\frac{\text{mm}}{\text{s}}]$	$\mu_0 H_{\text{hf}}$ [T]	FWHM $[\frac{\text{mm}}{\text{s}}]$	Rel. int. [%]
A_b	0.317 ± 0.008	0.002 ± 0.002	46.7 ± 0.1	0.301 ± 0.008	39.5
B_b	0.319 ± 0.015	-0.004 ± 0.002	44.4 ± 0.3	0.370 ± 0.014	25.5
A_s	0.341 ± 0.022	-0.007 ± 0.004	41.0 ± 0.4	0.519 ± 0.026	25.7
B_s	0.46 ± 0.03	-0.008 ± 0.004	35.9 ± 0.5	0.55 ± 0.08	9.3
$\zeta = 0.0$					
Site	IS $[\frac{\text{mm}}{\text{s}}]$	QS $[\frac{\text{mm}}{\text{s}}]$	$\mu_0 H_{\text{hf}}$ [T]	FWHM $[\frac{\text{mm}}{\text{s}}]$	Rel. int. [%]
A_b	0.311 ± 0.013	-0.004 ± 0.002	44.6 ± 0.2	0.446 ± 0.021	23.4
B_b	0.319 ± 0.015	-0.008 ± 0.002	41.2 ± 0.4	0.53 ± 0.04	24.4
A_s	0.358 ± 0.025	-0.008 ± 0.003	36.3 ± 0.4	0.82 ± 0.06	33.0
B_s	0.44 ± 0.04	-0.012 ± 0.004	26.9 ± 0.9	0.92 ± 0.12	13.6
Doublet	0.41 ± 0.04	2.38 ± 0.12	-	0.9 ± 0.1	5.6

Table 1: Hyperfine parameters of all contriubuting subspectra with bulk and surface contributions for A- and B-sites for samples B, C, and ζ=1.0; 0.67; 0.4; 0.0. Two samples were fitted with an additional doublet.