

## RS A

**Cell morphology:** Rod-shaped

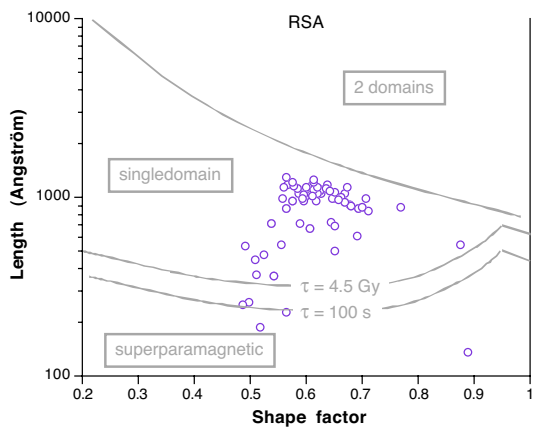
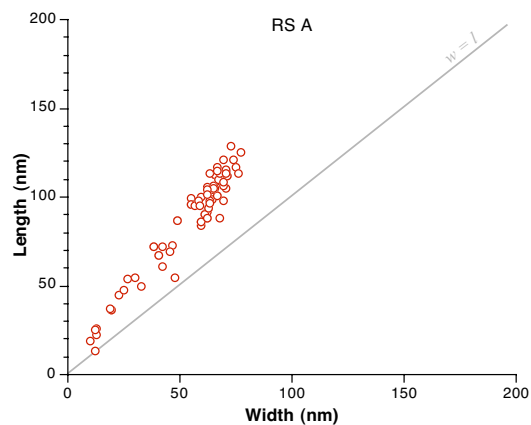
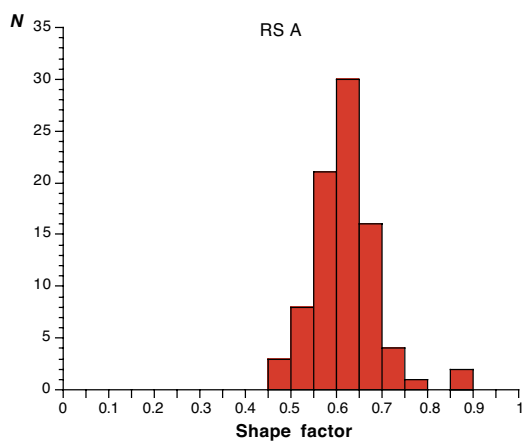
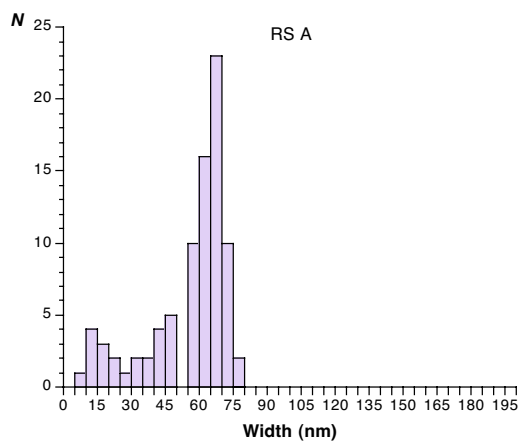
**Cell size:**  $\sim 4 \times 2 \mu\text{m}$

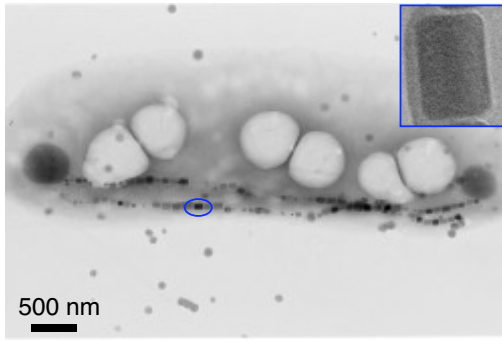
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 30$  aligned irregularly

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
129	14	90 (27)	77	10	56 (18)	85	3.5 (2.0)	1.8 (1.0)	5.3 (3.0)





## RS B

**Cell morphology:** Rod-shaped

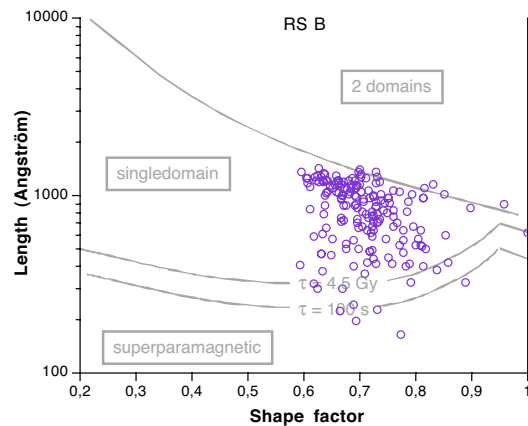
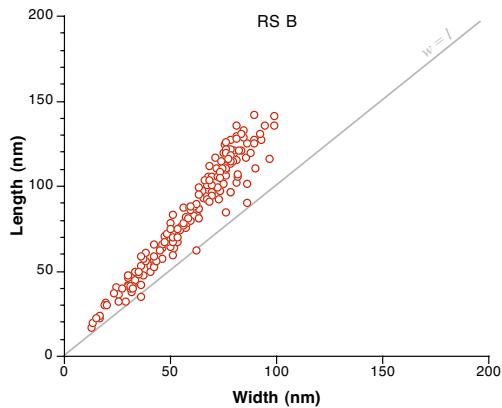
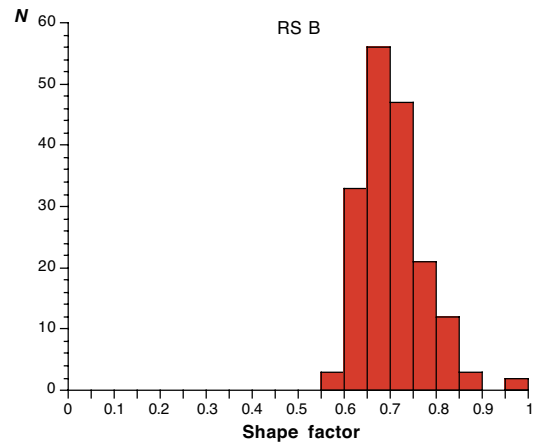
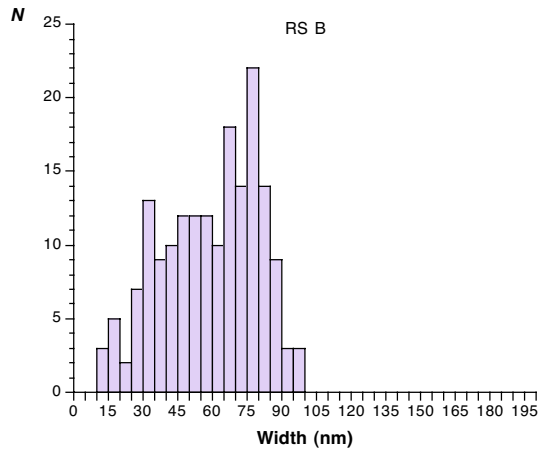
**Cell size:**  $\sim 6.5 \times 2.5 \mu\text{m}$

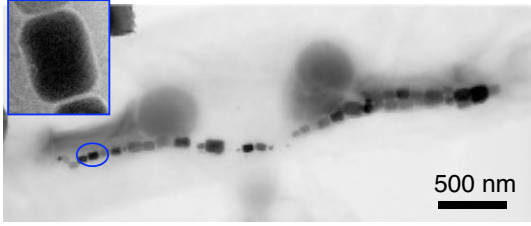
**Number of magnetites chains:** 2

**Number of crystals per cell:**  $\sim 100$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
142	17	84 (31)	99	13	59 (21)	178	4.0 (3.2)	2.0 (1.6)	20.3 (16.5)





## RS C

**Cell morphology:** Rod-shaped

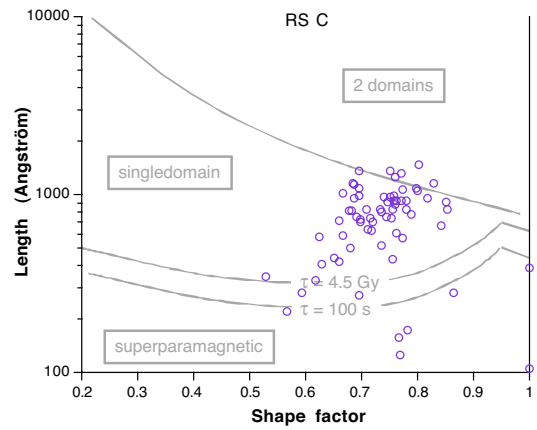
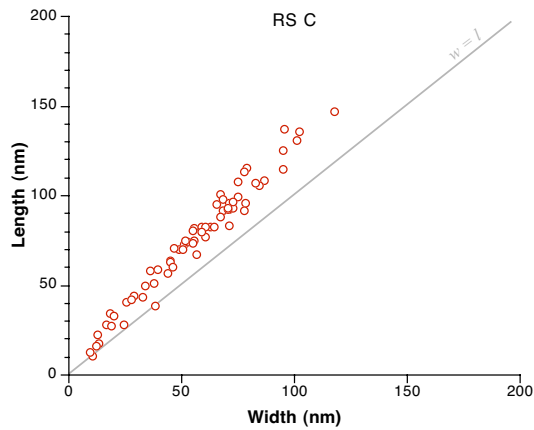
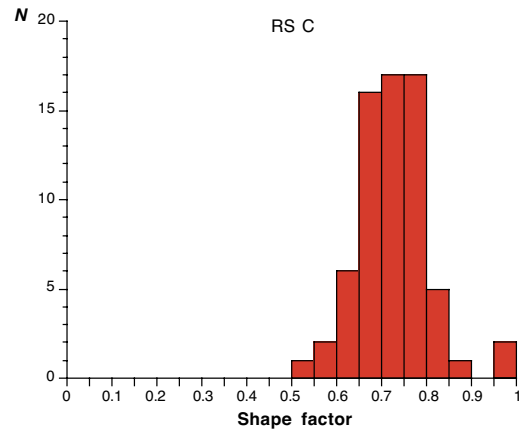
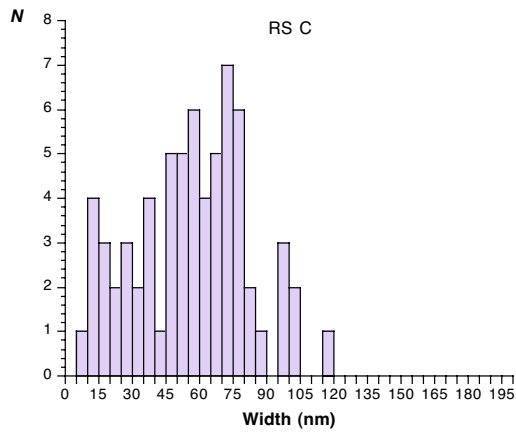
**Cell size:**  $\sim \times 1.5 \mu\text{m}$

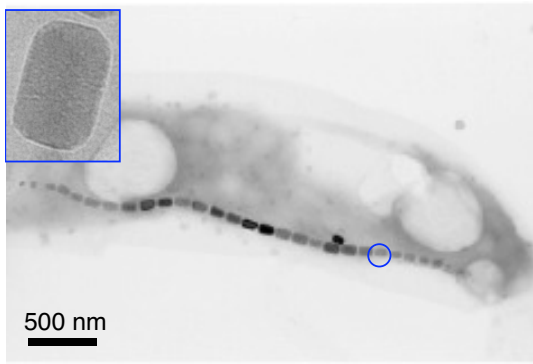
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 30$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
147	11	75 (32)	118	10	56 (25)	67	3.7 (4.0)	1.9 (2.0)	5.6 (6.0)





## RS D

**Cell morphology:** Rod-shaped

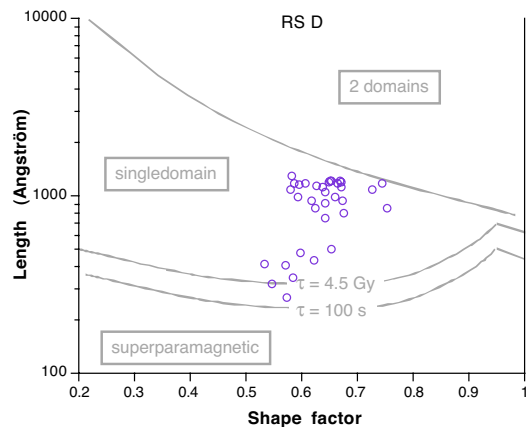
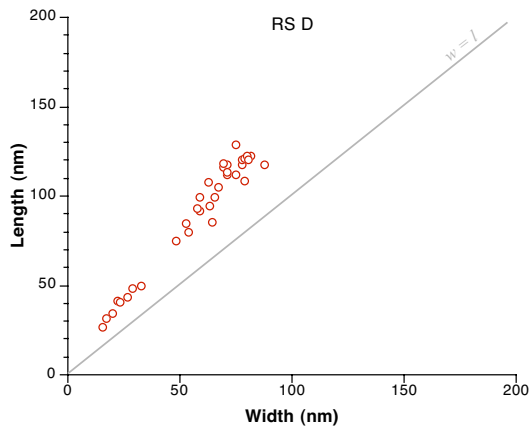
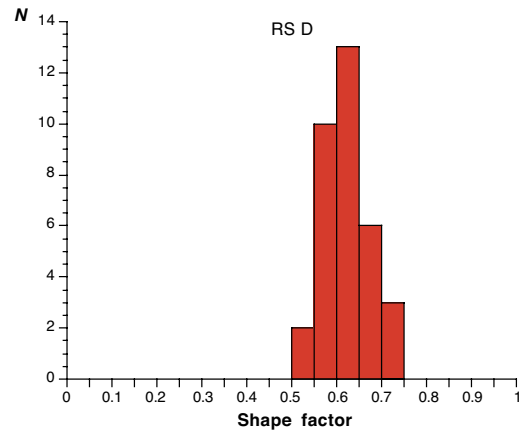
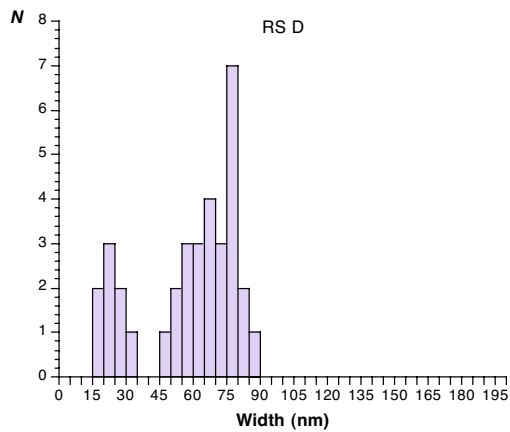
**Cell size:**  $\sim 4 \times - \mu\text{m}$

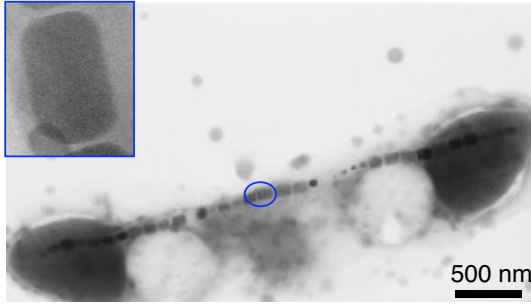
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 30$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
129	27	91 (32)	88	15	58 (22)	34	4.2 (2.8)	2.1 (1.4)	6.3 (4.3)





## RS E

**Cell morphology:** Rod-shaped

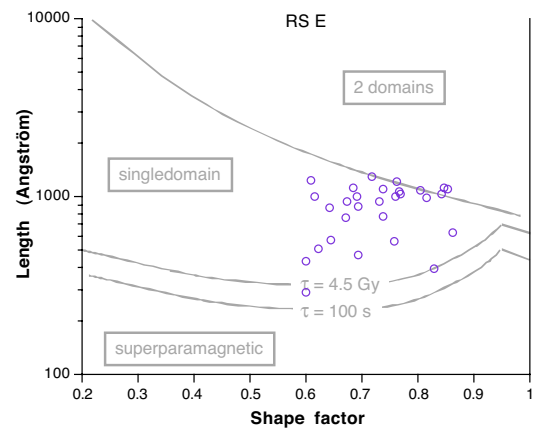
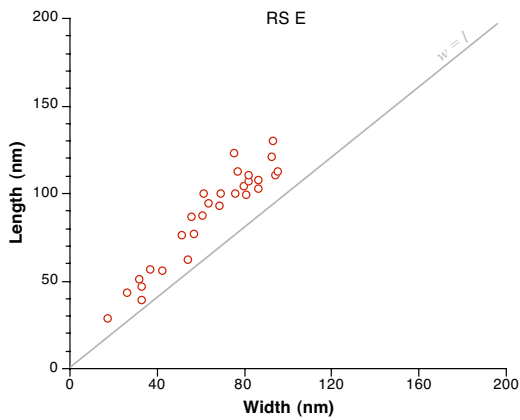
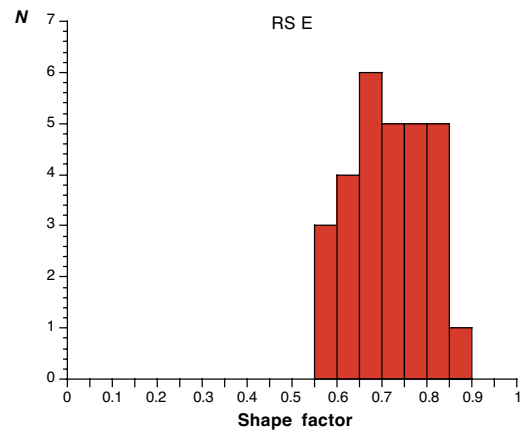
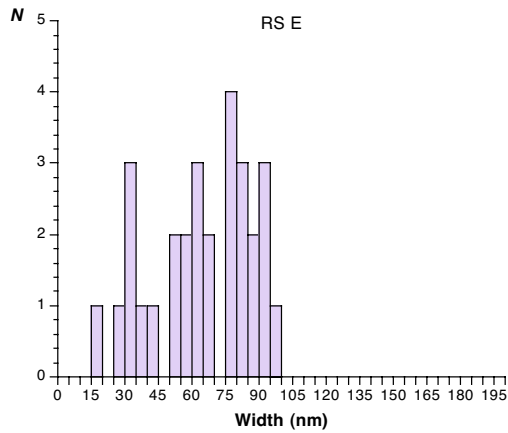
**Cell size:**  $\sim 4 \times 1 \mu\text{m}$

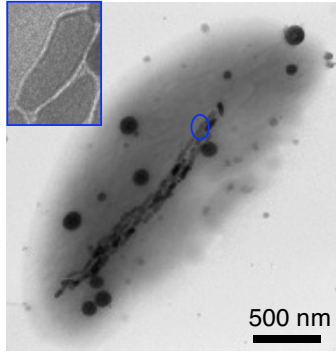
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 30$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
130	29	88 (28)	95	17	64 (23)	29	4.7 (3.5)	2.4 (1.7)	7.2 (5.2)





## RS F

**Cell morphology:** Rod-shaped

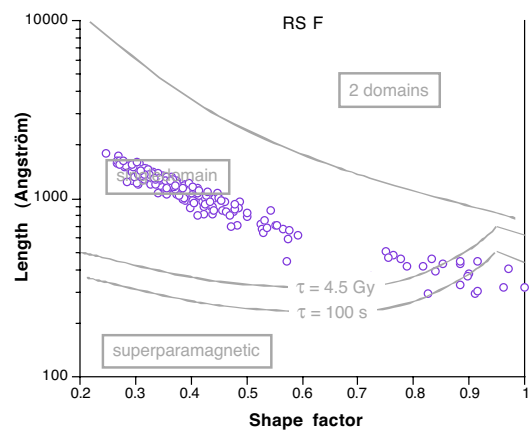
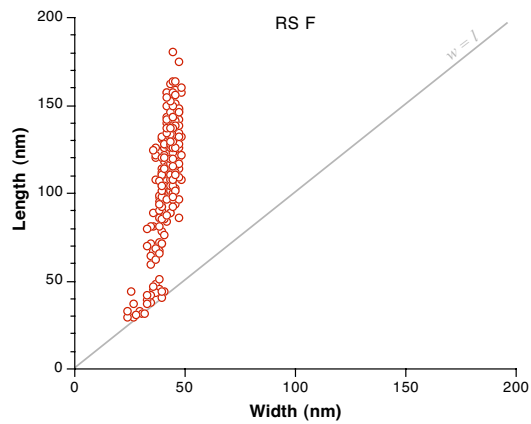
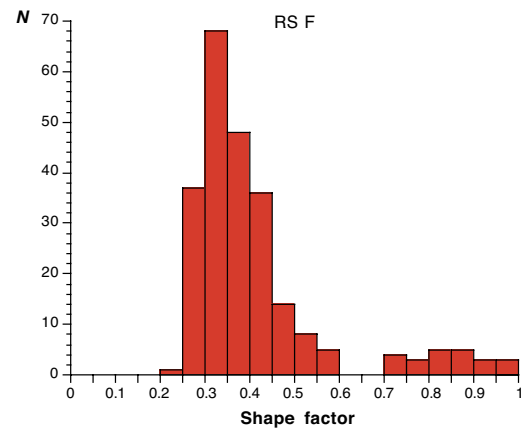
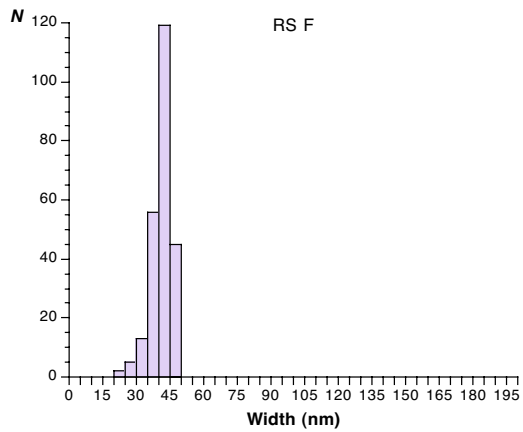
**Cell size:**  $\sim 3 \times 1.5 \mu\text{m}$

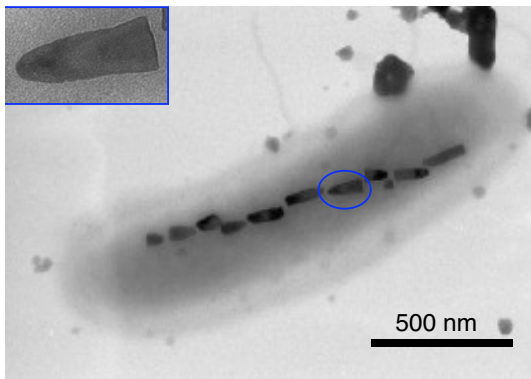
**Number of magnetites chains:** 1 multiple chain

**Number of crystals per cell:**  $\sim 100$

**Crystal morphology:** tooth-shaped

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$nM$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
180	29	110 (33)	48	24	41 (4)	240	2.0 (0.8)	1.0 (0.4)	10.0 (4.1)





## RS G

**Cell morphology:** Rod-shaped

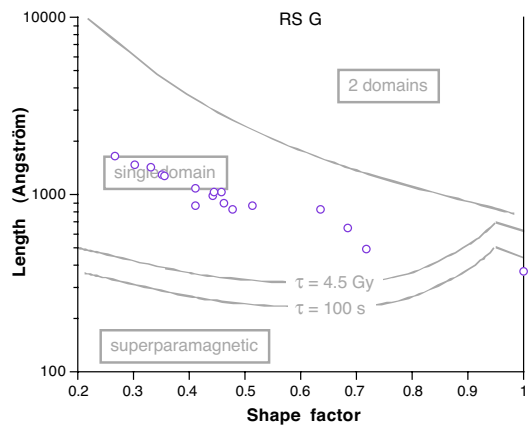
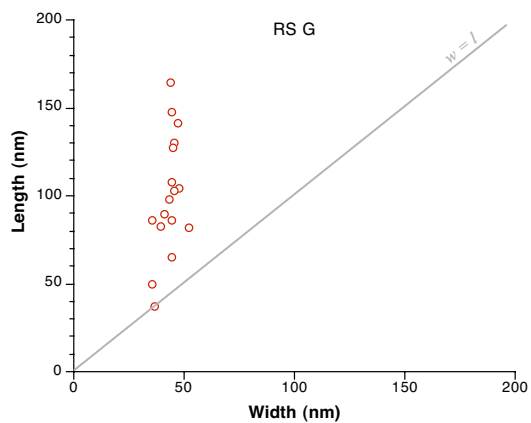
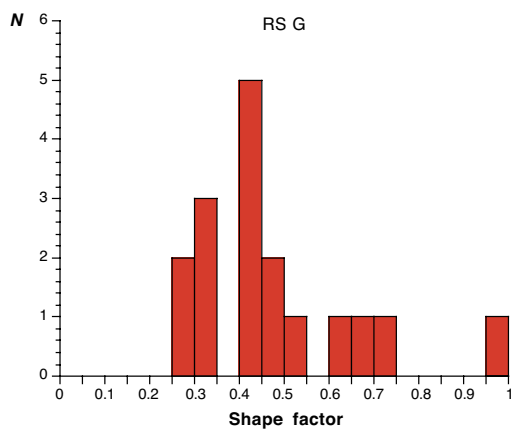
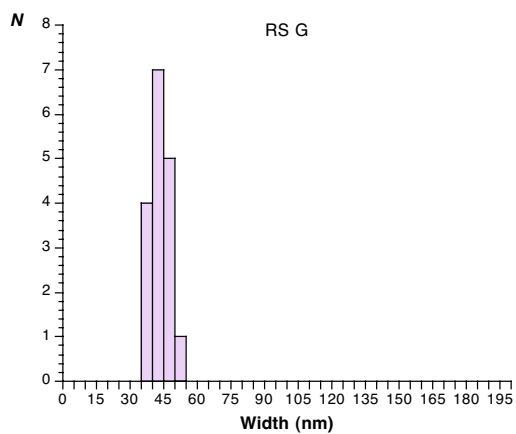
**Cell size:**  $\sim 1.5 \times 0.5 \mu\text{m}$

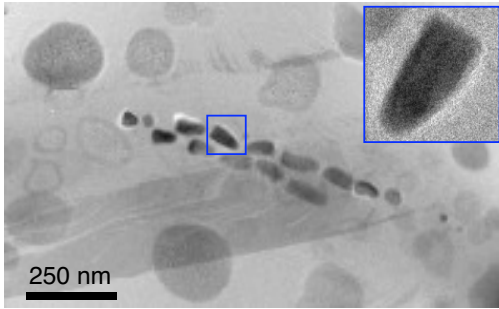
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 5$  to 10

**Crystal morphology:** bullet-shaped

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	Min	Mean size (nm)				
165	37	100 (34)	52	37	43 (4)	17	2.0 (0.8)	1.0 (0.4)	1.0 (0.4)





## RS H

**Cell morphology:** Rod-shaped

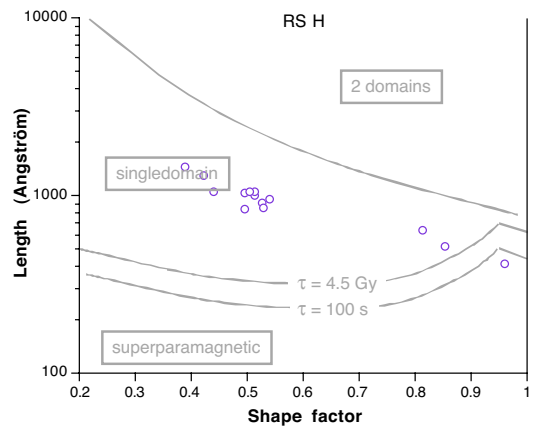
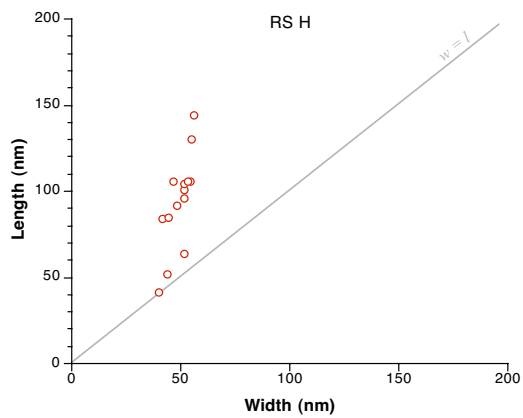
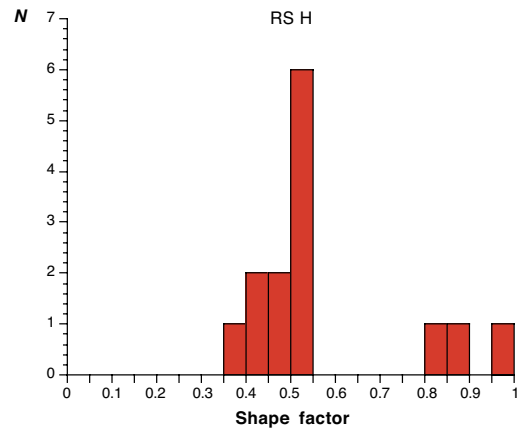
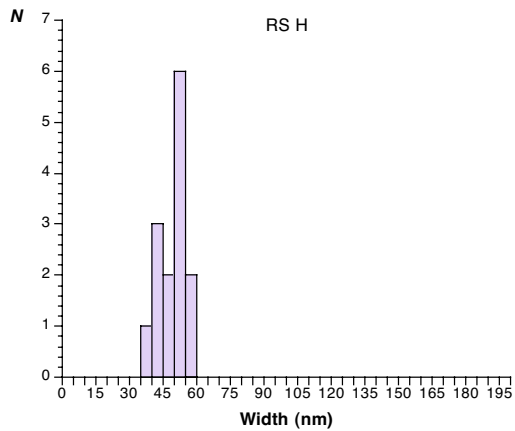
**Cell size:**  $\sim \times - \mu\text{m}$

**Number of magnetites chains:** 1

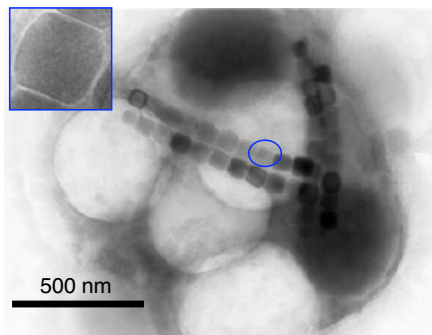
**Number of crystals per cell:**  $\sim 17$

**Crystal morphology:** tooth-shaped

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
144	41	93 (28)	56	40	49 (5)	14	2.4 (1.0)	1.2 (0.5)	2.0 (0.9)







## MC A

**Cell morphology:** coccus

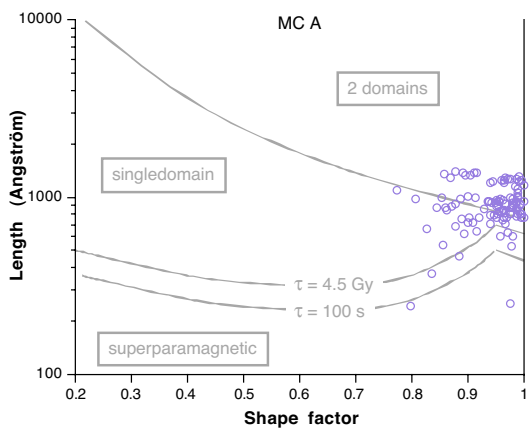
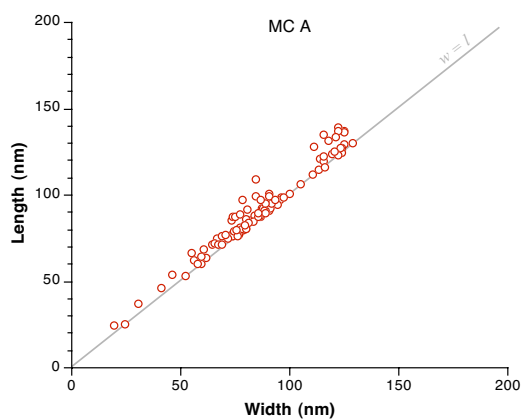
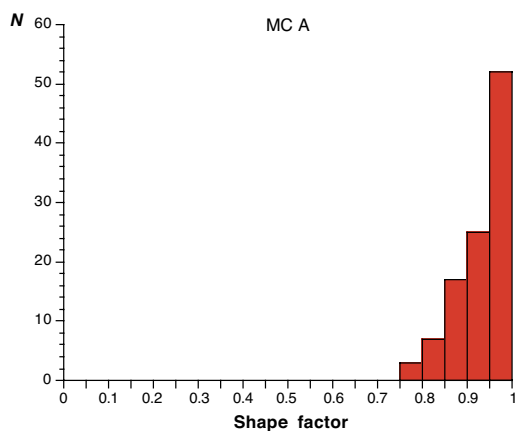
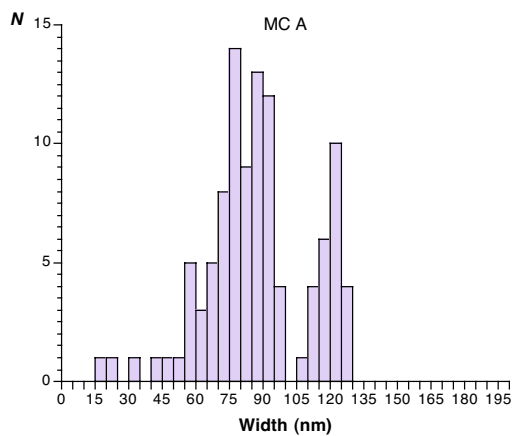
**Cell size:**  $\varnothing \sim 2.5 \mu\text{m}$

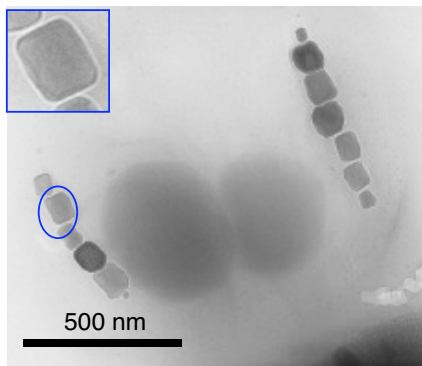
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 50$

**Crystal morphology:** cubbic

Size of crystals (nm)						$N$	$V_{\text{mean}}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
139	24	92 (24)	129	19	87 (23)	104	8.4 (6.0)	4.2 (3.0)	21.2 (15.0)





## MC B

**Cell morphology:** coccus

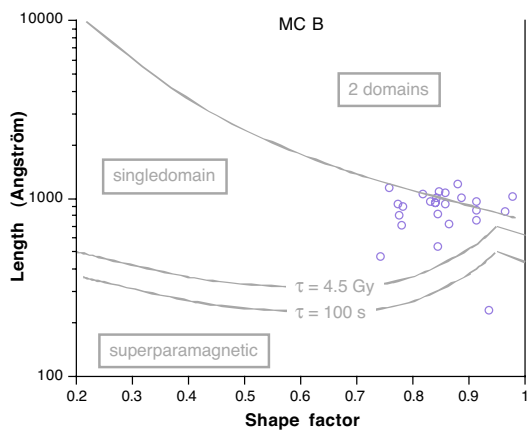
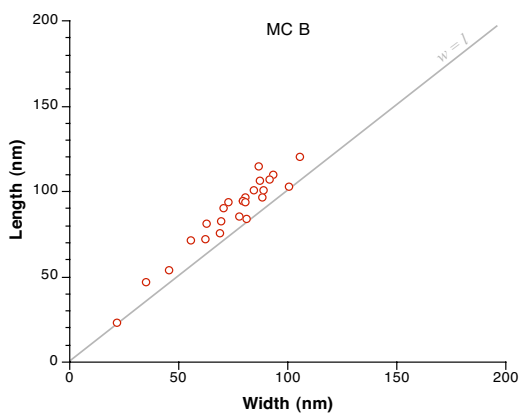
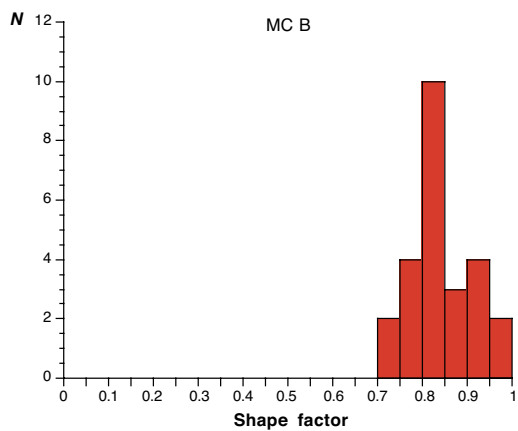
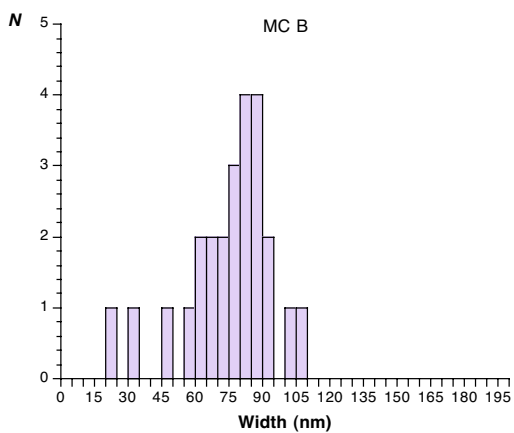
**Cell size:**  $\varnothing \sim 1$  to  $2 \mu\text{m}$

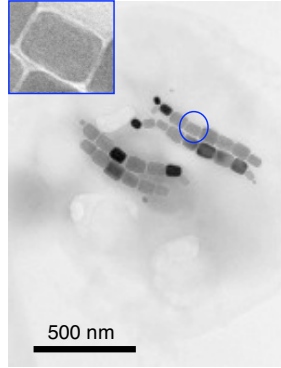
**Number of magnetites chains:** 2

**Number of crystals per cell:**  $\sim 10$

**Crystal morphology:** prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n \cdot M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
120	23	88 (22)	106	22	75 (20)	25	5.7 (3.2)	2.9 (1.6)	2.9 (1.6)





# MC C

**Cell morphology:** coccus

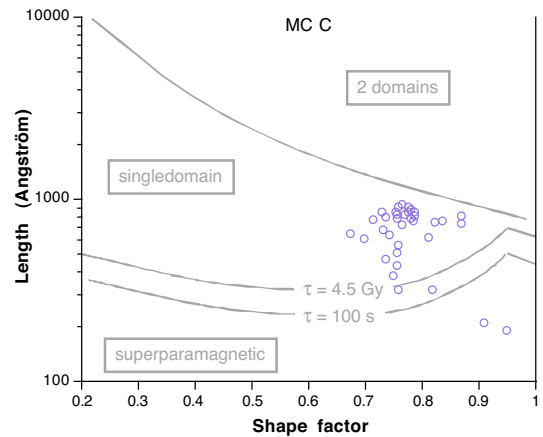
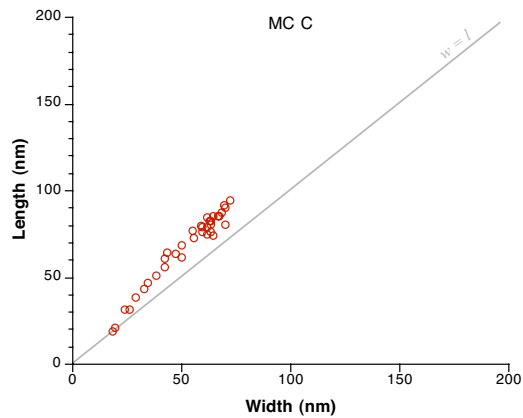
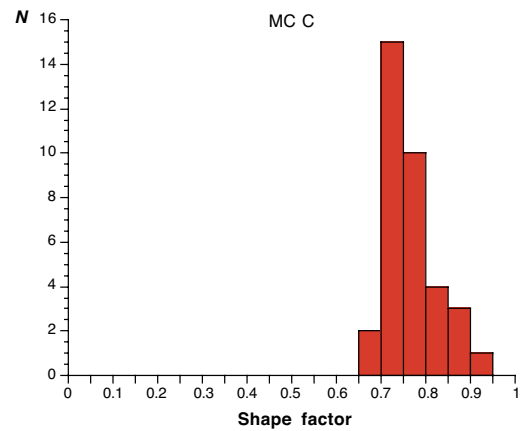
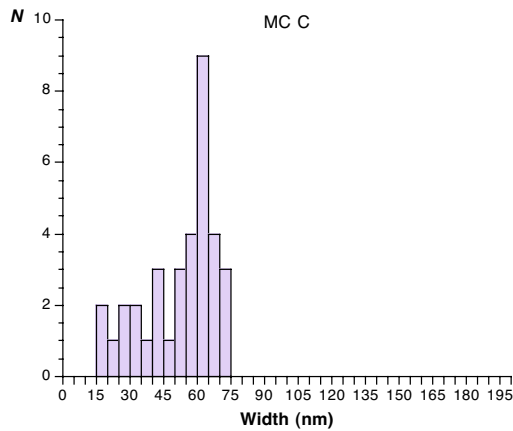
**Cell size:**  $\varnothing \sim 1.5 \mu\text{m}$

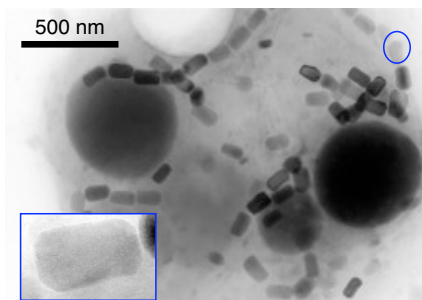
**Number of magnetites chains:** 4 (2 double chains)

**Number of crystals per cell:**  $\sim 35$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
94	19	68 (21)	72	18	52 (16)	35	2.3 (1.4)	1.2 (0.7)	4.1 (2.6)





## MC D

**Cell morphology:** coccus

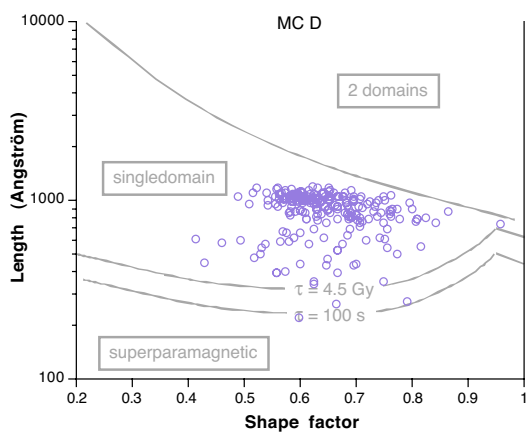
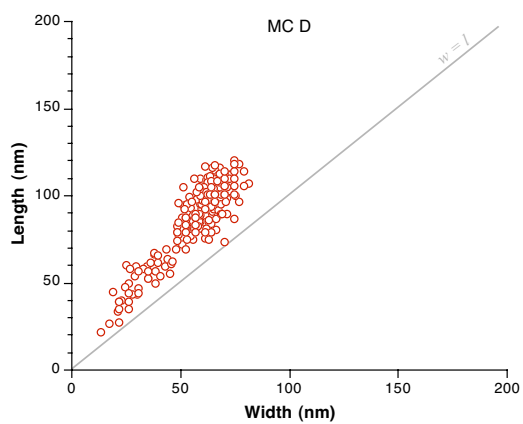
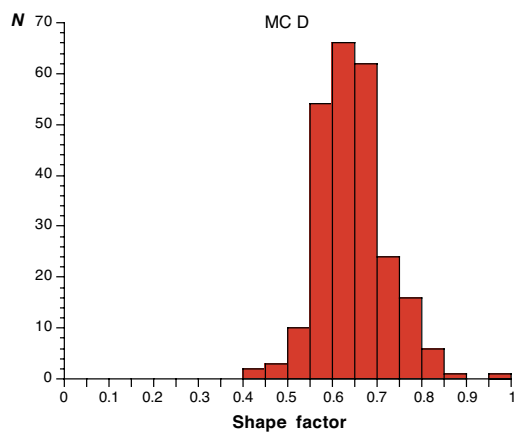
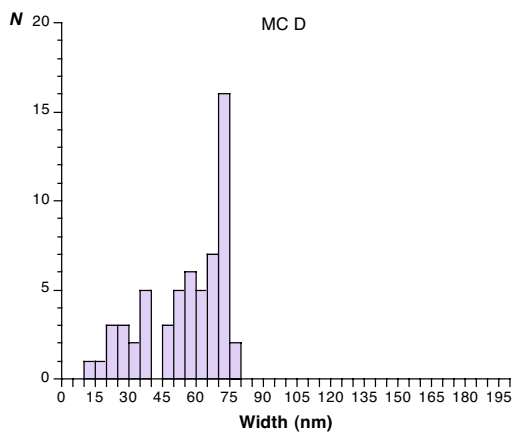
**Cell size:**  $\varnothing \sim 1$  to  $4 \mu\text{m}$

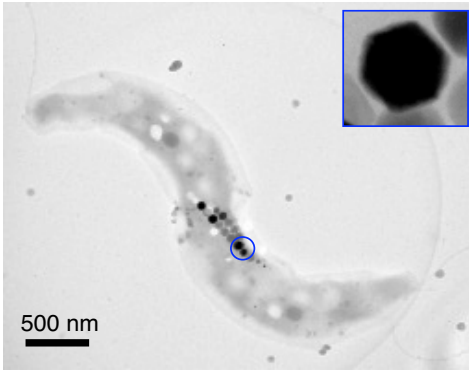
**Number of magnetites chains:** clusters or irregular chains

**Number of crystals per cell:**  $\sim 120$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
120	22	89 (21)	81	13	57 (14)	245	3.3 (1.6)	1.7 (0.8)	20.1 (10.0)





# MS A

**Cell morphology:** spirillum

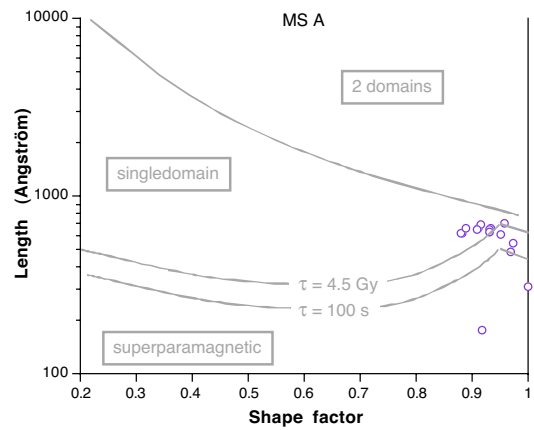
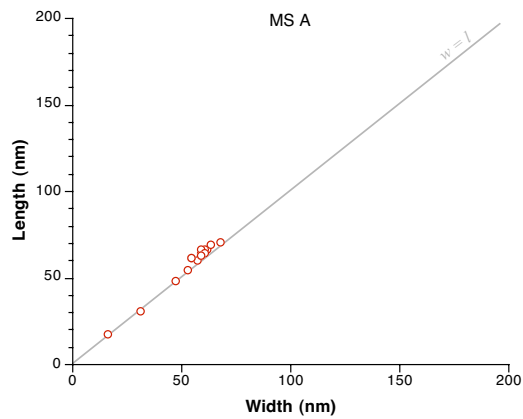
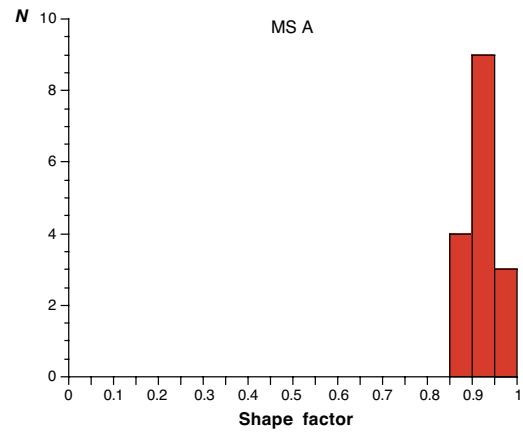
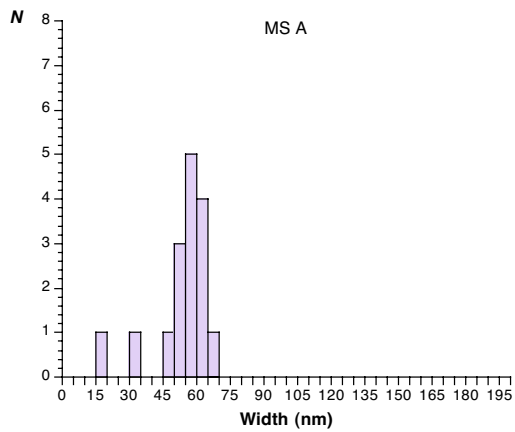
**Cell size:**  $\sim 3 \times 0.5 \mu\text{m}$

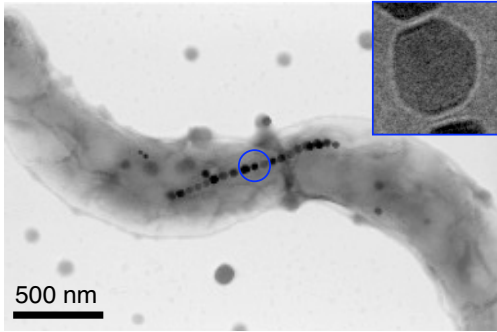
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 17$

**Crystal morphology:** cuboctahedral

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
71	18	58 (14)	68	16	54 (13)	16	1.0 (0.5)	0.5 (0.2)	0.9 (0.4)





## MS B

**Cell morphology:** spirillum

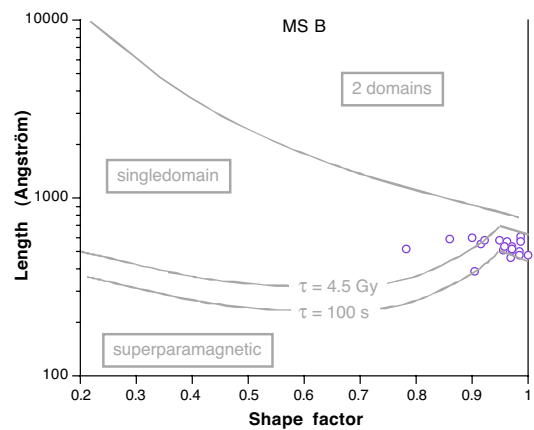
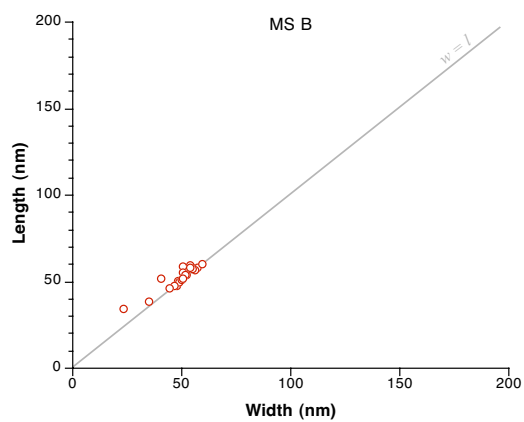
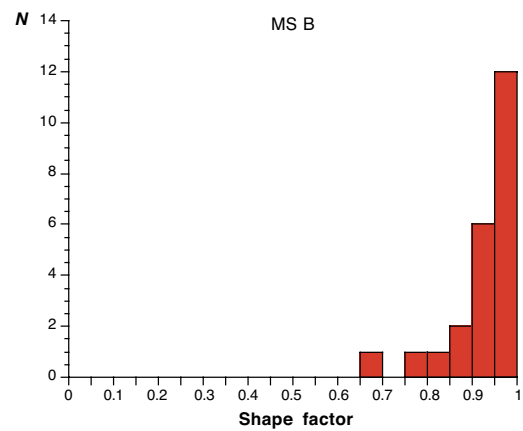
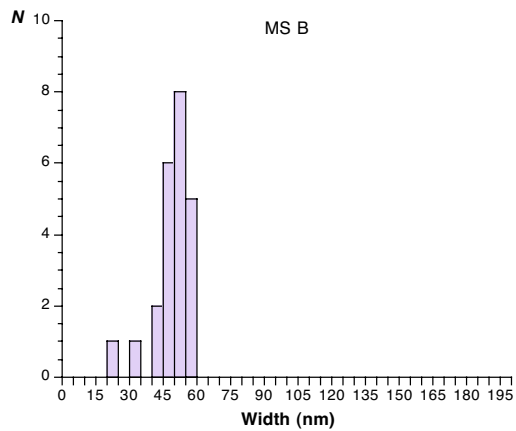
**Cell size:**  $\sim 3.5 \times 0.5 \mu\text{m}$

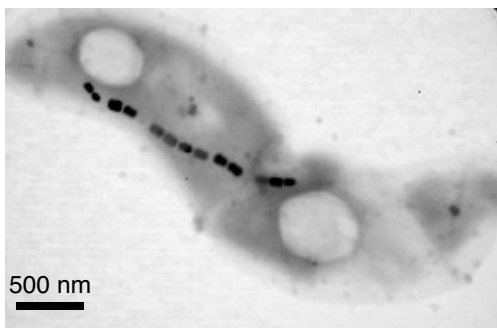
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 23$

**Crystal morphology:** cuboctahedral

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
61	34	52 (7)	60	23	49 (8)	23	0.7 (0.2)	0.4 (0.1)	0.8 (0.3)





## MS C

**Cell morphology:** spirillum

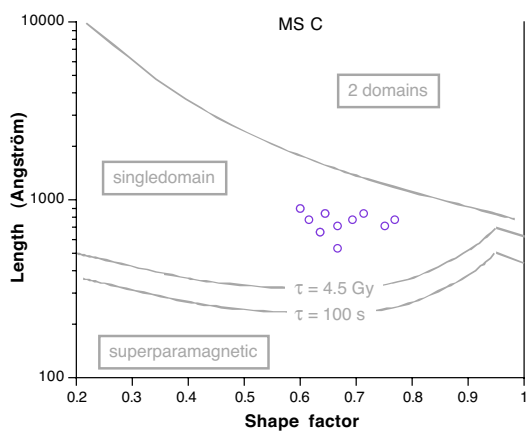
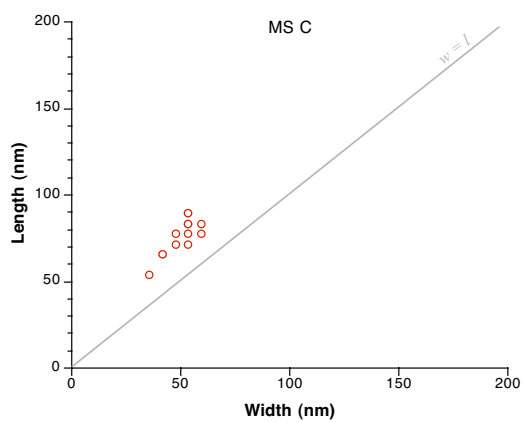
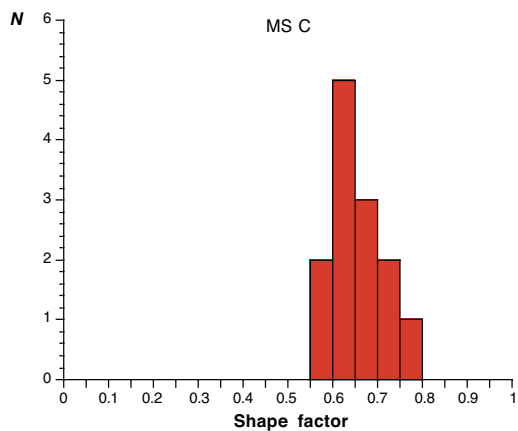
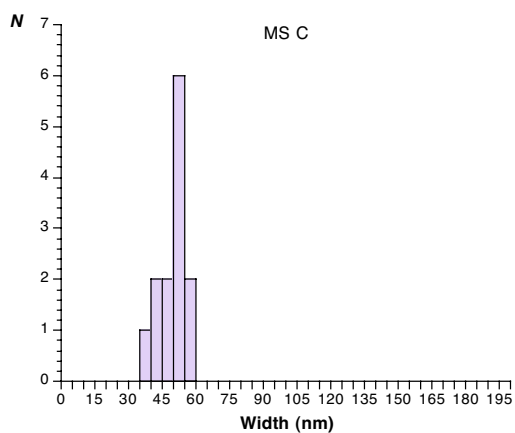
**Cell size:**  $\sim 3 \times 0.5 \mu\text{m}$

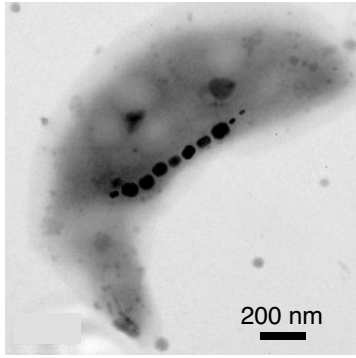
**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 13$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22} \text{m}^3$ )	$M$ ( $\cdot 10^{-16} \text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15} \text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
89	54	76 (10)	60	36	50 (7)	13	2.0 (0.7)	1.0 (0.3)	1.0 (0.3)





# MV A

**Cell morphology:** vibrio

**Cell size:**  $\sim 1.5 \times 0.5 \mu\text{m}$

**Number of magnetites chains:** 1

**Number of crystals per cell:**  $\sim 10$

**Crystal morphology:** e-prismatic

Size of crystals (nm)						$N$	$V_{mean}$ ( $\cdot 10^{-22}\text{m}^3$ )	$M$ ( $\cdot 10^{-16}\text{Am}^2$ ) magnetic moment	$n.M$ ( $\cdot 10^{-15}\text{Am}^2$ ) magnetic moment per cell
$l$ (length)			$w$ (width)						
max	min	Mean size (nm)	max	min	Mean size (nm)				
83	31	58 (18)	68	15	43 (19)	10	1.5 (1.2)	0.7 (0.6)	0.7 (0.6)

