

## Per-file Report

File: Front\_EE1\_2\_3000x.bmp

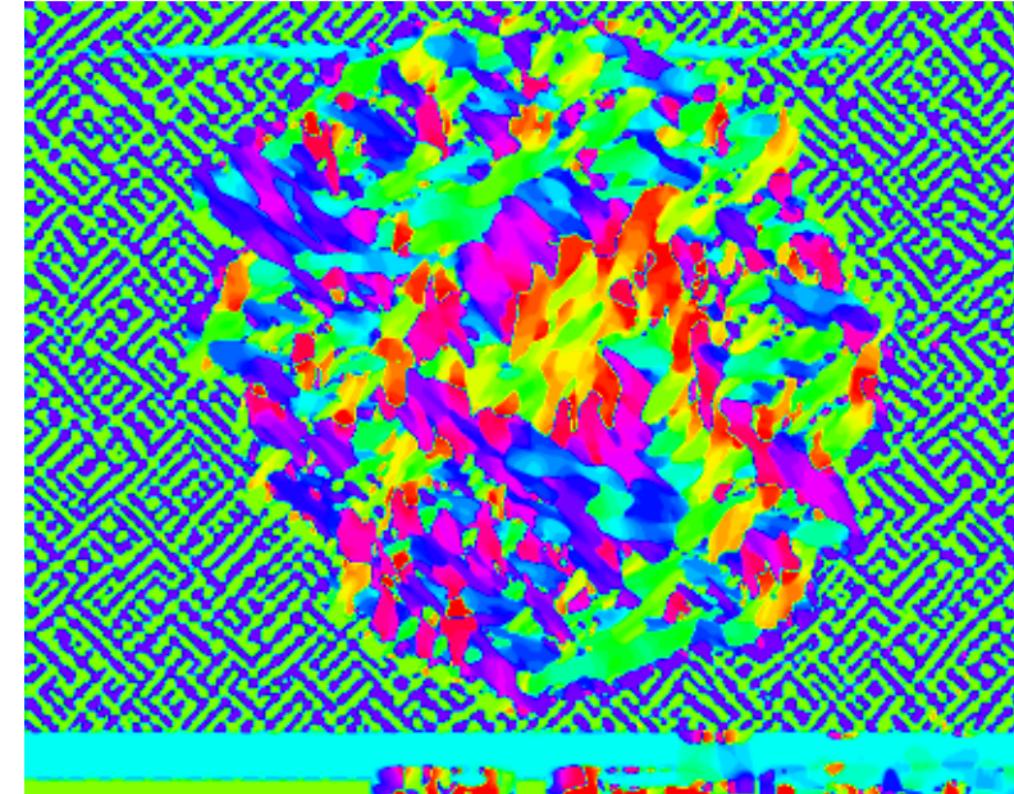
Pattern: Anticlockwise

n\_vectors: 178 | cw\_frac: 0.421 | acw\_frac: 0.579 | div\_frac: 1.000

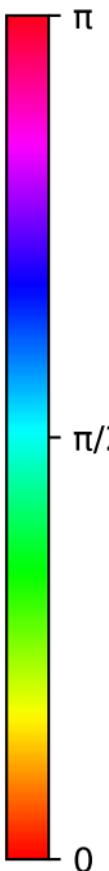
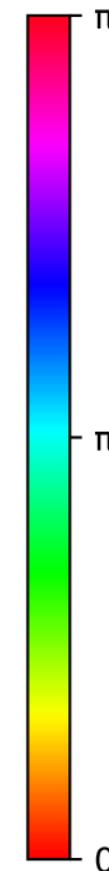
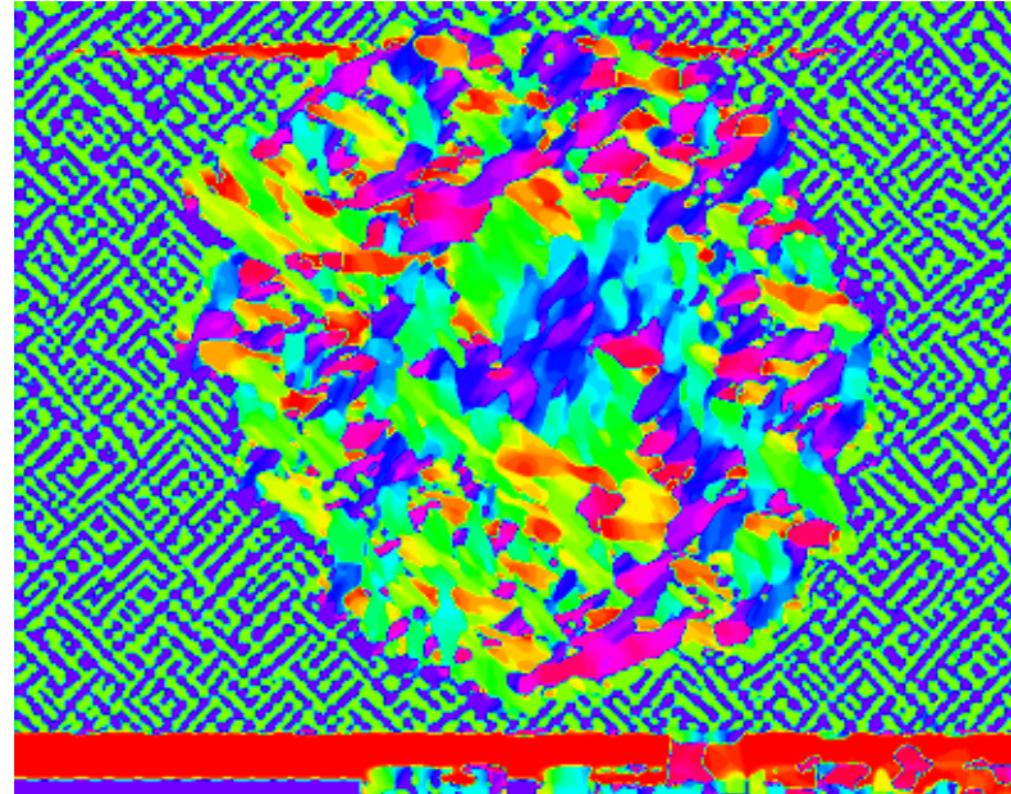
Rotation ( $\phi_{\perp \rightarrow \text{horizontal}}$ ): -27.78° | Center=(671,459)

Gabor angle maps (original, not rotated)

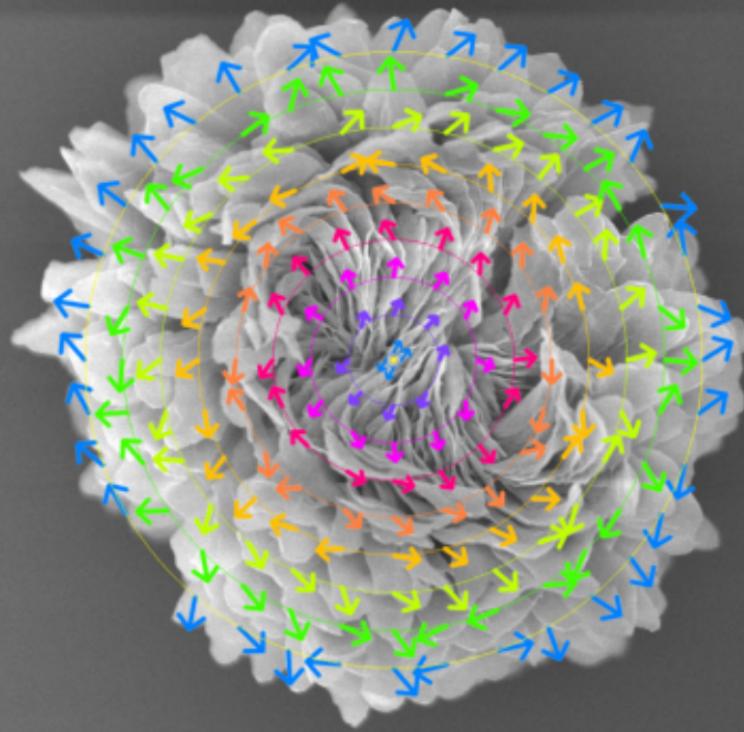
Dominant Tangent ( $0 \rightarrow \pi$ )



Dominant Normal ( $0 \rightarrow \pi$ )



Before rotation



X 3,000

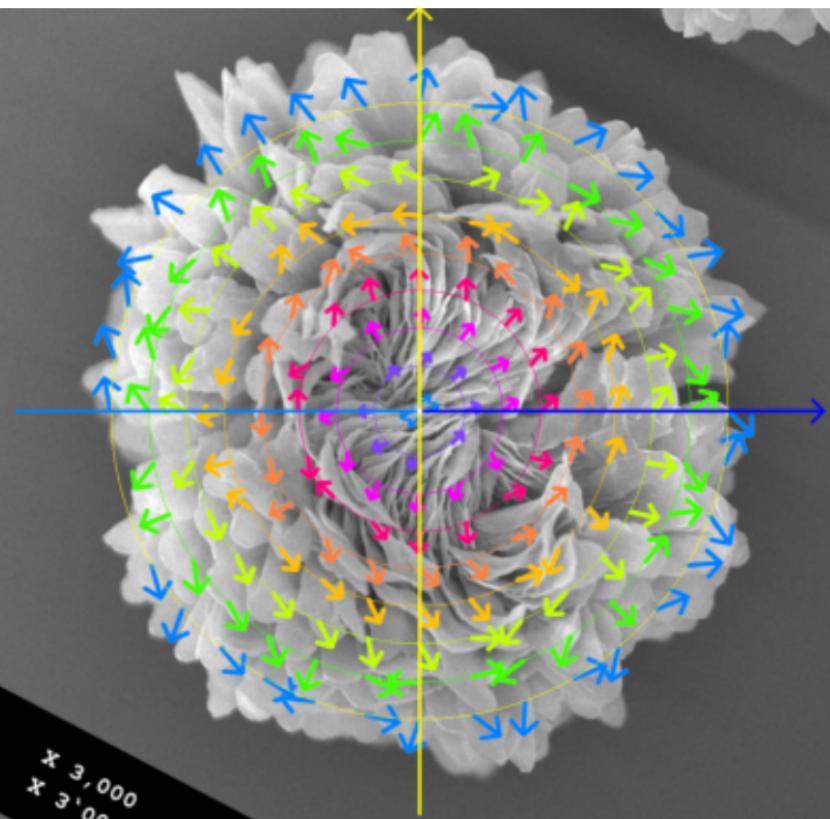
10.0kV SEI

SEM

1 $\mu$ m  
JEOL

WD 4.5mm

After rotation (Code A)  
(angle=-27.78°)



$\times 3,000$

10.0kV SEI

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 1/6)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
1	(9.00, 0.00)	29.35	Anticlockwise
1	(0.00, -9.00)	-58.72	Clockwise
1	(-9.00, 0.00)	34.19	Anticlockwise
1	(0.00, 9.00)	-55.95	Clockwise
2	(52.00, 0.00)	21.99	Anticlockwise
2	(37.00, -37.00)	88.83	Anticlockwise
2	(0.00, -52.00)	-45.04	Clockwise
2	(-37.00, -37.00)	-24.64	Clockwise
2	(-52.00, 0.00)	2.63	Anticlockwise
2	(-37.00, 37.00)	-83.15	Clockwise
2	(0.00, 52.00)	-39.62	Clockwise
2	(37.00, 37.00)	-9.68	Clockwise
3	(95.00, 0.00)	37.40	Anticlockwise
3	(82.00, -47.00)	-39.81	Clockwise
3	(47.00, -82.00)	-56.60	Clockwise
3	(0.00, -95.00)	-13.19	Clockwise
3	(-47.00, -82.00)	3.45	Anticlockwise
3	(-82.00, -47.00)	56.40	Anticlockwise
3	(-95.00, 0.00)	25.29	Anticlockwise
3	(-82.00, 47.00)	57.70	Anticlockwise
3	(-47.00, 82.00)	-3.98	Clockwise
3	(0.00, 95.00)	-11.88	Clockwise
3	(47.00, 82.00)	-9.09	Clockwise
3	(82.00, 48.00)	-6.35	Clockwise
4	(138.00, 0.00)	40.18	Anticlockwise
4	(127.00, -53.00)	9.21	Anticlockwise
4	(98.00, -98.00)	66.35	Anticlockwise
4	(53.00, -127.00)	-17.87	Clockwise
4	(0.00, -138.00)	-5.55	Clockwise
4	(-53.00, -127.00)	61.61	Anticlockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 2/6)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
4	(-98.00, -98.00)	-87.93	Clockwise
4	(-127.00, -53.00)	75.81	Anticlockwise
4	(-138.00, 0.00)	-86.97	Clockwise
4	(-127.00, 53.00)	52.72	Anticlockwise
4	(-98.00, 98.00)	-50.57	Clockwise
4	(-53.00, 127.00)	-10.73	Clockwise
4	(0.00, 138.00)	2.87	Anticlockwise
4	(53.00, 127.00)	22.08	Anticlockwise
4	(98.00, 98.00)	3.06	Anticlockwise
4	(127.00, 53.00)	25.94	Anticlockwise
5	(180.00, 0.00)	59.52	Anticlockwise
5	(171.00, -56.00)	87.20	Anticlockwise
5	(146.00, -106.00)	76.60	Anticlockwise
5	(106.00, -146.00)	70.23	Anticlockwise
5	(56.00, -171.00)	28.50	Anticlockwise
5	(0.00, -180.00)	49.23	Anticlockwise
5	(-56.00, -171.00)	39.73	Anticlockwise
5	(-106.00, -146.00)	50.98	Anticlockwise
5	(-146.00, -106.00)	-9.15	Clockwise
5	(-171.00, -56.00)	84.81	Anticlockwise
5	(-180.00, 0.00)	89.12	Anticlockwise
5	(-171.00, 56.00)	-68.65	Clockwise
5	(-146.00, 106.00)	-66.47	Clockwise
5	(-106.00, 146.00)	-55.33	Clockwise
5	(-56.00, 171.00)	43.35	Anticlockwise
5	(0.00, 180.00)	45.72	Anticlockwise
5	(56.00, 171.00)	21.64	Anticlockwise
5	(106.00, 146.00)	72.79	Anticlockwise
5	(146.00, 106.00)	35.64	Anticlockwise
5	(171.00, 56.00)	37.46	Anticlockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 3/6)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
6	(223.00, 0.00)	74.56	Anticlockwise
6	(215.00, -58.00)	78.62	Anticlockwise
6	(193.00, -111.00)	-20.71	Clockwise
6	(158.00, -158.00)	-66.58	Clockwise
6	(111.00, -193.00)	77.24	Anticlockwise
6	(58.00, -215.00)	25.16	Anticlockwise
6	(0.00, -223.00)	41.66	Anticlockwise
6	(-58.00, -215.00)	40.07	Anticlockwise
6	(-111.00, -193.00)	78.03	Anticlockwise
6	(-158.00, -158.00)	83.07	Anticlockwise
6	(-193.00, -111.00)	-65.32	Clockwise
6	(-215.00, -58.00)	-1.65	Clockwise
6	(-223.00, 0.00)	16.91	Anticlockwise
6	(-215.00, 58.00)	80.41	Anticlockwise
6	(-193.00, 111.00)	83.05	Anticlockwise
6	(-158.00, 158.00)	-46.01	Clockwise
6	(-112.00, 193.00)	20.93	Anticlockwise
6	(-58.00, 215.00)	80.06	Anticlockwise
6	(0.00, 223.00)	86.91	Anticlockwise
6	(58.00, 215.00)	-85.66	Clockwise
6	(111.00, 193.00)	85.15	Anticlockwise
6	(158.00, 158.00)	-87.15	Clockwise
6	(193.00, 112.00)	32.01	Anticlockwise
6	(215.00, 58.00)	59.03	Anticlockwise
7	(266.00, 0.00)	58.19	Anticlockwise
7	(259.00, -59.00)	4.58	Anticlockwise
7	(240.00, -115.00)	12.08	Anticlockwise
7	(208.00, -166.00)	-7.61	Clockwise
7	(166.00, -208.00)	-80.77	Clockwise
7	(115.00, -240.00)	-65.30	Clockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 4/6)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
7	(59.00, -259.00)	74.61	Anticlockwise
7	(0.00, -266.00)	29.29	Anticlockwise
7	(-59.00, -259.00)	25.25	Anticlockwise
7	(-115.00, -240.00)	52.65	Anticlockwise
7	(-166.00, -208.00)	73.44	Anticlockwise
7	(-208.00, -166.00)	75.06	Anticlockwise
7	(-240.00, -115.00)	86.78	Anticlockwise
7	(-259.00, -59.00)	44.39	Anticlockwise
7	(-266.00, 0.00)	-24.67	Clockwise
7	(-259.00, 59.00)	66.57	Anticlockwise
7	(-240.00, 115.00)	24.20	Anticlockwise
7	(-208.00, 166.00)	2.48	Anticlockwise
7	(-166.00, 208.00)	4.17	Anticlockwise
7	(-115.00, 240.00)	45.62	Anticlockwise
7	(-59.00, 259.00)	55.95	Anticlockwise
7	(0.00, 266.00)	70.07	Anticlockwise
7	(59.00, 259.00)	-56.86	Clockwise
7	(115.00, 240.00)	-67.44	Clockwise
7	(166.00, 208.00)	13.31	Anticlockwise
7	(208.00, 166.00)	-51.40	Clockwise
7	(240.00, 115.00)	23.75	Anticlockwise
7	(259.00, 59.00)	-0.20	Clockwise
8	(309.00, 0.00)	33.79	Anticlockwise
8	(303.00, -60.00)	-47.46	Clockwise
8	(285.00, -118.00)	30.71	Anticlockwise
8	(257.00, -172.00)	83.52	Anticlockwise
8	(218.00, -218.00)	0.57	Anticlockwise
8	(172.00, -257.00)	-51.82	Clockwise
8	(118.00, -285.00)	-75.77	Clockwise
8	(60.00, -303.00)	89.65	Anticlockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 5/6)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
8	(0.00, -309.00)	-86.95	Clockwise
8	(-60.00, -303.00)	75.69	Anticlockwise
8	(-118.00, -285.00)	-1.85	Clockwise
8	(-172.00, -257.00)	51.86	Anticlockwise
8	(-218.00, -218.00)	73.98	Anticlockwise
8	(-257.00, -172.00)	63.63	Anticlockwise
8	(-285.00, -118.00)	-0.31	Clockwise
8	(-303.00, -60.00)	42.02	Anticlockwise
8	(-309.00, 0.00)	-55.67	Clockwise
8	(-303.00, 60.00)	-62.48	Clockwise
8	(-285.00, 118.00)	75.29	Anticlockwise
8	(-257.00, 172.00)	75.73	Anticlockwise
8	(-218.00, 218.00)	-27.05	Clockwise
8	(-172.00, 257.00)	-14.69	Clockwise
8	(-118.00, 285.00)	-1.34	Clockwise
8	(-60.00, 303.00)	66.26	Anticlockwise
8	(0.00, 309.00)	-32.86	Clockwise
8	(60.00, 303.00)	25.50	Anticlockwise
8	(118.00, 285.00)	-8.96	Clockwise
8	(172.00, 257.00)	-82.93	Clockwise
8	(218.00, 218.00)	-55.72	Clockwise
8	(257.00, 172.00)	-56.45	Clockwise
8	(285.00, 118.00)	-35.87	Clockwise
8	(303.00, 60.00)	-63.65	Clockwise
9	(352.00, 0.00)	-46.05	Clockwise
9	(347.00, -61.00)	73.89	Anticlockwise
9	(331.00, -120.00)	-34.79	Clockwise
9	(305.00, -176.00)	34.27	Anticlockwise
9	(270.00, -226.00)	61.82	Anticlockwise
9	(226.00, -270.00)	-51.42	Clockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 6/6)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
9	(176.00, -305.00)	81.39	Anticlockwise
9	(120.00, -331.00)	-23.07	Clockwise
9	(61.00, -347.00)	42.68	Anticlockwise
9	(0.00, -352.00)	-20.21	Clockwise
9	(-61.00, -347.00)	88.51	Anticlockwise
9	(-120.00, -331.00)	-75.47	Clockwise
9	(-176.00, -305.00)	86.67	Anticlockwise
9	(-226.00, -270.00)	79.44	Anticlockwise
9	(-270.00, -226.00)	29.89	Anticlockwise
9	(-305.00, -176.00)	75.18	Anticlockwise
9	(-352.00, 0.00)	-79.76	Clockwise
9	(-347.00, 61.00)	-58.28	Clockwise
9	(-331.00, 120.00)	-62.45	Clockwise
9	(-305.00, 176.00)	40.05	Anticlockwise
9	(-270.00, 226.00)	10.26	Anticlockwise
9	(-226.00, 270.00)	-7.77	Clockwise
9	(-176.00, 305.00)	3.24	Anticlockwise
9	(-120.00, 331.00)	19.90	Anticlockwise
9	(-61.00, 347.00)	25.13	Anticlockwise
9	(0.00, 352.00)	-12.17	Clockwise
9	(61.00, 347.00)	-80.39	Clockwise
9	(120.00, 331.00)	27.93	Anticlockwise
9	(176.00, 305.00)	-37.21	Clockwise
9	(226.00, 270.00)	-54.62	Clockwise
9	(270.00, 226.00)	-80.65	Clockwise
9	(305.00, 176.00)	-21.32	Clockwise
9	(331.00, 120.00)	-37.19	Clockwise
9	(347.00, 61.00)	73.53	Anticlockwise
SUMMARY	n_vectors=178	nan	Anticlockwise