

Per-file Report

File: Front_EE-1_5_3000x.bmp

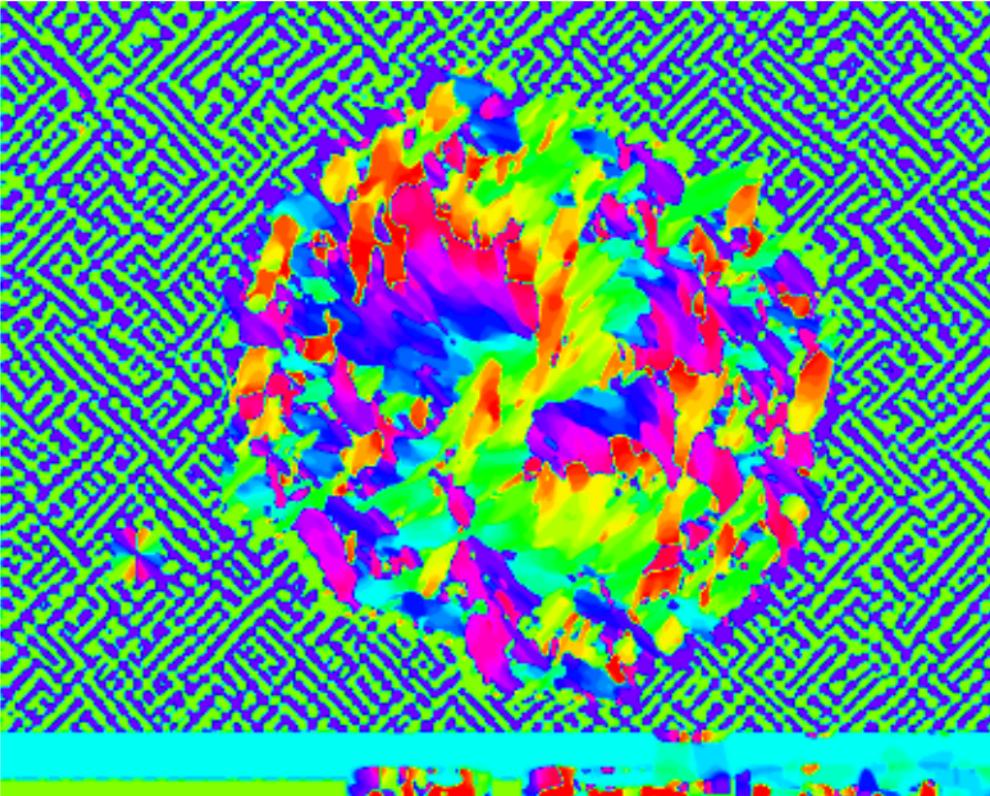
Pattern: Clockwise

n_vectors: 180 | cw_frac: 0.710 | acw_frac: 0.290 | div_frac: 1.000

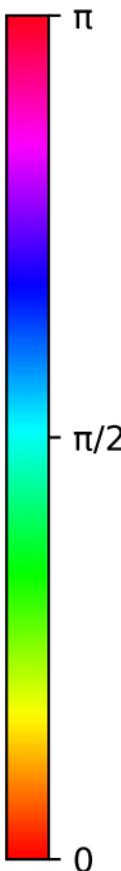
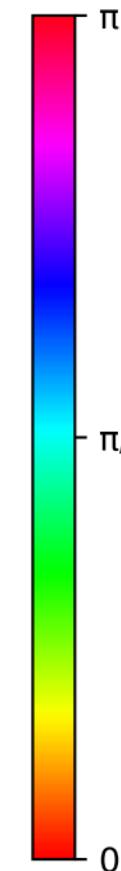
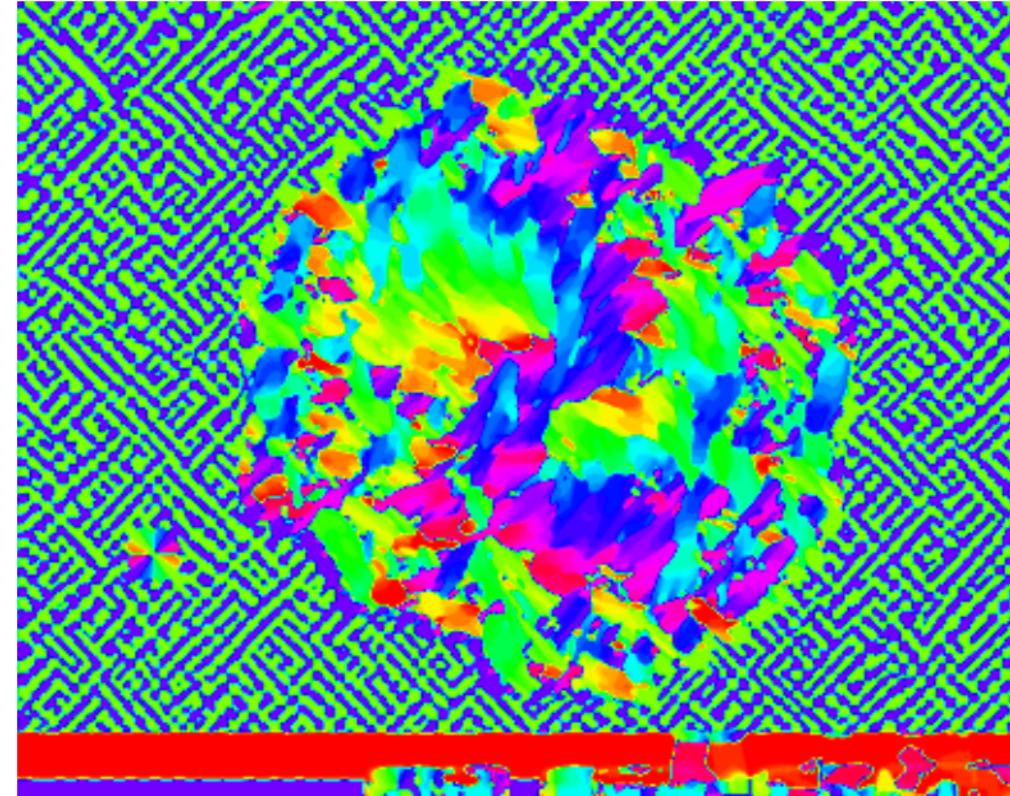
Rotation ($\phi_{\perp \rightarrow \text{horizontal}}$): -32.17° | Center=(678,492)

Gabor angle maps (original, not rotated)

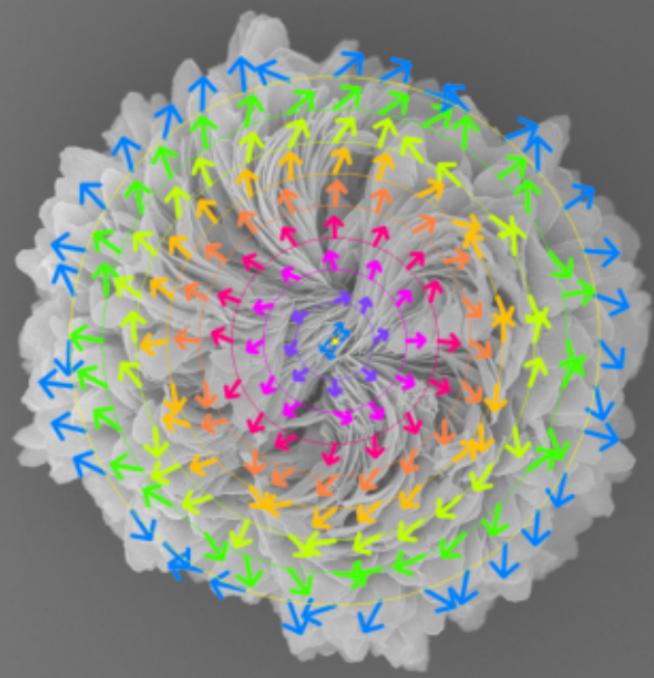
Dominant Tangent ($0 \rightarrow \pi$)



Dominant Normal ($0 \rightarrow \pi$)



Before rotation



X 3,000

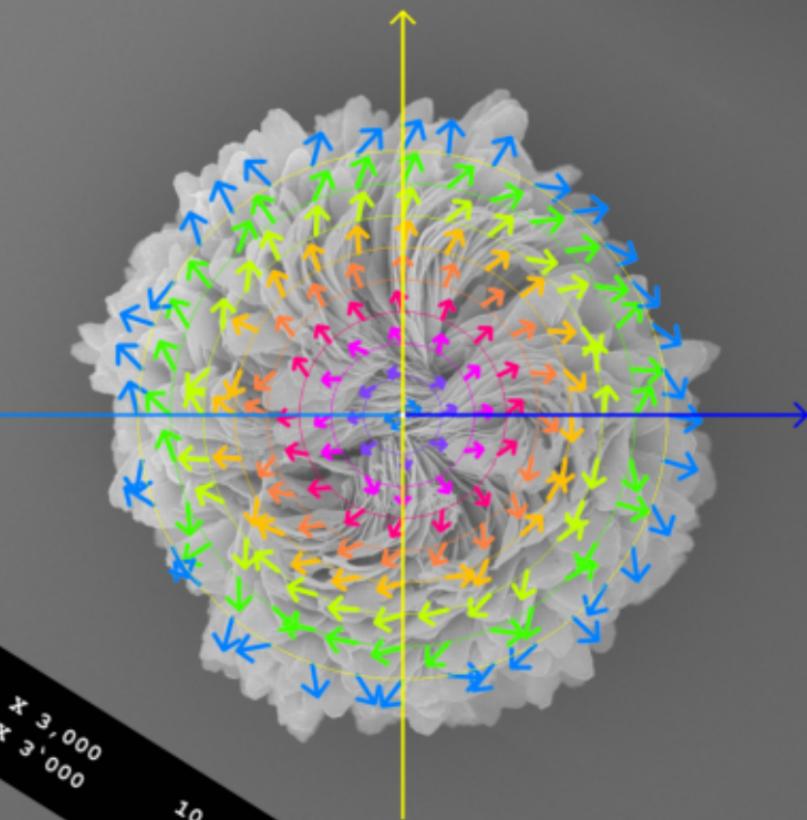
10.0kV SEI

SEM

1 μ m
JEOL

WD 4.6mm

After rotation (Code A)
(angle=-32.17°)



$\times 3,000$

$\times 3,000$

10.0kV SEI

Ring coordinates + Angle(α') + Pattern (page 1/7)

Ring	Coordinate	Angle (α')	Pattern
1	(8.00, 0.00)	32.55	Anticlockwise
1	(0.00, -8.00)	-60.38	Clockwise
1	(-8.00, 0.00)	27.30	Anticlockwise
1	(0.00, 8.00)	-63.78	Clockwise
2	(45.00, 0.00)	27.16	Anticlockwise
2	(32.00, -32.00)	39.54	Anticlockwise
2	(0.00, -45.00)	15.45	Anticlockwise
2	(-32.00, -32.00)	-10.48	Clockwise
2	(-45.00, 0.00)	18.65	Anticlockwise
2	(-32.00, 32.00)	75.80	Anticlockwise
2	(0.00, 45.00)	74.73	Anticlockwise
2	(32.00, 32.00)	-19.35	Clockwise
3	(82.00, 0.00)	18.92	Anticlockwise
3	(71.00, -41.00)	36.92	Anticlockwise
3	(41.00, -71.00)	2.25	Anticlockwise
3	(0.00, -82.00)	-0.77	Clockwise
3	(-41.00, -71.00)	55.23	Anticlockwise
3	(-71.00, -41.00)	-25.28	Clockwise
3	(-82.00, 0.00)	34.21	Anticlockwise
3	(-71.00, 41.00)	34.18	Anticlockwise
3	(-41.00, 71.00)	37.88	Anticlockwise
3	(0.00, 82.00)	36.61	Anticlockwise
3	(41.00, 71.00)	21.74	Anticlockwise
3	(71.00, 41.00)	11.93	Anticlockwise
4	(118.00, 0.00)	43.65	Anticlockwise
4	(109.00, -45.00)	56.09	Anticlockwise
4	(83.00, -83.00)	-9.18	Clockwise
4	(45.00, -109.00)	-27.55	Clockwise
4	(0.00, -118.00)	-31.09	Clockwise
4	(-45.00, -109.00)	-31.60	Clockwise

Ring coordinates + Angle(α') + Pattern (page 2/7)

Ring	Coordinate	Angle (α')	Pattern
4	(-83.00, -83.00)	-39.51	Clockwise
4	(-109.00, -45.00)	-34.21	Clockwise
4	(-118.00, 0.00)	11.53	Anticlockwise
4	(-109.00, 45.00)	-33.56	Clockwise
4	(-83.00, 83.00)	-7.58	Clockwise
4	(-45.00, 109.00)	16.09	Anticlockwise
4	(0.00, 118.00)	18.44	Anticlockwise
4	(45.00, 109.00)	0.98	Anticlockwise
4	(83.00, 83.00)	-1.30	Clockwise
4	(109.00, 45.00)	3.07	Anticlockwise
5	(155.00, 0.00)	-41.16	Clockwise
5	(147.00, -48.00)	-81.98	Clockwise
5	(125.00, -91.00)	-35.43	Clockwise
5	(91.00, -125.00)	-31.40	Clockwise
5	(48.00, -147.00)	-44.99	Clockwise
5	(0.00, -155.00)	-58.42	Clockwise
5	(-48.00, -147.00)	-48.96	Clockwise
5	(-91.00, -125.00)	-45.93	Clockwise
5	(-125.00, -91.00)	-45.03	Clockwise
5	(-147.00, -48.00)	36.99	Anticlockwise
5	(-155.00, 0.00)	-27.61	Clockwise
5	(-147.00, 48.00)	59.16	Anticlockwise
5	(-125.00, 91.00)	-14.60	Clockwise
5	(-91.00, 125.00)	-10.09	Clockwise
5	(-48.00, 147.00)	3.60	Anticlockwise
5	(0.00, 155.00)	-0.40	Clockwise
5	(48.00, 147.00)	-4.13	Clockwise
5	(91.00, 125.00)	-20.00	Clockwise
5	(125.00, 91.00)	-12.00	Clockwise
5	(147.00, 48.00)	-22.35	Clockwise

Ring coordinates + Angle(α') + Pattern (page 3/7)

Ring	Coordinate	Angle (α')	Pattern
6	(192.00, 0.00)	-88.96	Clockwise
6	(185.00, -50.00)	-83.58	Clockwise
6	(166.00, -96.00)	88.27	Anticlockwise
6	(136.00, -136.00)	88.02	Anticlockwise
6	(96.00, -166.00)	-53.71	Clockwise
6	(50.00, -185.00)	79.17	Anticlockwise
6	(0.00, -192.00)	-76.44	Clockwise
6	(-50.00, -185.00)	-64.82	Clockwise
6	(-96.00, -166.00)	-49.71	Clockwise
6	(-136.00, -136.00)	-66.27	Clockwise
6	(-166.00, -96.00)	54.33	Anticlockwise
6	(-185.00, -50.00)	-18.84	Clockwise
6	(-192.00, 0.00)	-41.13	Clockwise
6	(-185.00, 50.00)	83.57	Anticlockwise
6	(-166.00, 96.00)	4.52	Anticlockwise
6	(-136.00, 136.00)	-23.11	Clockwise
6	(-96.00, 166.00)	-11.28	Clockwise
6	(-50.00, 185.00)	-10.59	Clockwise
6	(0.00, 192.00)	-14.34	Clockwise
6	(50.00, 185.00)	-15.20	Clockwise
6	(96.00, 166.00)	-21.67	Clockwise
6	(136.00, 136.00)	-6.93	Clockwise
6	(166.00, 96.00)	-33.65	Clockwise
6	(185.00, 50.00)	-57.80	Clockwise
7	(228.00, 0.00)	80.74	Anticlockwise
7	(222.00, -51.00)	-88.94	Clockwise
7	(205.00, -99.00)	-83.92	Clockwise
7	(178.00, -142.00)	75.29	Anticlockwise
7	(142.00, -178.00)	-51.35	Clockwise
7	(99.00, -205.00)	-69.88	Clockwise

Ring coordinates + Angle(α') + Pattern (page 4/7)

Ring	Coordinate	Angle (α')	Pattern
7	(51.00, -222.00)	-88.75	Clockwise
7	(0.00, -228.00)	-73.29	Clockwise
7	(-51.00, -222.00)	-79.94	Clockwise
7	(-99.00, -205.00)	-81.08	Clockwise
7	(-142.00, -178.00)	-89.53	Clockwise
7	(-178.00, -142.00)	48.71	Anticlockwise
7	(-205.00, -99.00)	-50.77	Clockwise
7	(-222.00, -51.00)	-16.26	Clockwise
7	(-228.00, 0.00)	-59.12	Clockwise
7	(-222.00, 51.00)	56.55	Anticlockwise
7	(-205.00, 99.00)	-65.88	Clockwise
7	(-178.00, 142.00)	-58.68	Clockwise
7	(-142.00, 178.00)	-17.13	Clockwise
7	(-99.00, 205.00)	-29.15	Clockwise
7	(-51.00, 222.00)	-23.10	Clockwise
7	(0.00, 228.00)	-18.02	Clockwise
7	(51.00, 222.00)	-39.06	Clockwise
7	(99.00, 205.00)	-24.74	Clockwise
7	(142.00, 178.00)	-61.23	Clockwise
7	(178.00, 142.00)	-25.04	Clockwise
7	(205.00, 99.00)	-80.29	Clockwise
7	(222.00, 51.00)	84.79	Anticlockwise
8	(265.00, 0.00)	60.85	Anticlockwise
8	(260.00, -52.00)	-66.54	Clockwise
8	(245.00, -101.00)	5.05	Anticlockwise
8	(220.00, -147.00)	-86.93	Clockwise
8	(187.00, -187.00)	76.93	Anticlockwise
8	(147.00, -220.00)	-47.40	Clockwise
8	(101.00, -245.00)	59.69	Anticlockwise
8	(52.00, -260.00)	-54.90	Clockwise

Ring coordinates + Angle(α') + Pattern (page 5/7)

Ring	Coordinate	Angle (α')	Pattern
8	(0.00, -265.00)	-75.54	Clockwise
8	(-52.00, -260.00)	-88.49	Clockwise
8	(-101.00, -245.00)	-79.97	Clockwise
8	(-147.00, -220.00)	81.54	Anticlockwise
8	(-187.00, -187.00)	46.82	Anticlockwise
8	(-220.00, -147.00)	0.81	Anticlockwise
8	(-245.00, -101.00)	72.30	Anticlockwise
8	(-260.00, -52.00)	-80.78	Clockwise
8	(-265.00, 0.00)	-42.80	Clockwise
8	(-260.00, 52.00)	-52.27	Clockwise
8	(-245.00, 101.00)	-35.97	Clockwise
8	(-220.00, 147.00)	-17.40	Clockwise
8	(-187.00, 187.00)	-65.09	Clockwise
8	(-147.00, 220.00)	0.68	Anticlockwise
8	(-101.00, 245.00)	-47.72	Clockwise
8	(-52.00, 260.00)	-31.38	Clockwise
8	(0.00, 265.00)	-25.56	Clockwise
8	(52.00, 260.00)	-39.98	Clockwise
8	(101.00, 245.00)	-54.74	Clockwise
8	(147.00, 220.00)	-50.26	Clockwise
8	(187.00, 187.00)	-36.74	Clockwise
8	(220.00, 147.00)	-41.39	Clockwise
8	(245.00, 101.00)	22.30	Anticlockwise
8	(260.00, 52.00)	-14.11	Clockwise
9	(302.00, 0.00)	-9.87	Clockwise
9	(297.00, -52.00)	-6.17	Clockwise
9	(284.00, -103.00)	-41.70	Clockwise
9	(262.00, -151.00)	-52.62	Clockwise
9	(231.00, -194.00)	-79.63	Clockwise
9	(194.00, -231.00)	6.75	Anticlockwise

Ring coordinates + Angle(α') + Pattern (page 6/7)

Ring	Coordinate	Angle (α')	Pattern
9	(151.00, -262.00)	-76.26	Clockwise
9	(103.00, -284.00)	-56.93	Clockwise
9	(52.00, -297.00)	75.37	Anticlockwise
9	(0.00, -302.00)	-37.48	Clockwise
9	(-52.00, -297.00)	41.31	Anticlockwise
9	(-103.00, -284.00)	29.50	Anticlockwise
9	(-151.00, -262.00)	-50.06	Clockwise
9	(-194.00, -231.00)	24.34	Anticlockwise
9	(-231.00, -194.00)	-82.58	Clockwise
9	(-262.00, -151.00)	87.09	Anticlockwise
9	(-284.00, -103.00)	-51.30	Clockwise
9	(-297.00, -52.00)	69.70	Anticlockwise
9	(-302.00, 0.00)	-76.46	Clockwise
9	(-297.00, 52.00)	-35.28	Clockwise
9	(-284.00, 103.00)	0.87	Anticlockwise
9	(-262.00, 151.00)	80.25	Anticlockwise
9	(-231.00, 194.00)	-33.25	Clockwise
9	(-194.00, 231.00)	-13.07	Clockwise
9	(-151.00, 262.00)	15.29	Anticlockwise
9	(-103.00, 284.00)	-34.73	Clockwise
9	(-52.00, 297.00)	-53.45	Clockwise
9	(0.00, 302.00)	-29.53	Clockwise
9	(52.00, 297.00)	4.01	Anticlockwise
9	(103.00, 284.00)	-12.66	Clockwise
9	(151.00, 262.00)	-67.59	Clockwise
9	(194.00, 231.00)	-42.27	Clockwise
9	(231.00, 194.00)	-64.98	Clockwise
9	(262.00, 151.00)	-73.07	Clockwise
9	(284.00, 103.00)	-56.13	Clockwise
9	(297.00, 52.00)	-65.93	Clockwise

Ring coordinates + Angle(α') + Pattern (page 7/7)

Ring	Coordinate	Angle (α')	Pattern
SUMMARY	n_vectors=180	nan	Clockwise