

## Per-file Report

File: Front\_EE1\_3\_3000x.bmp

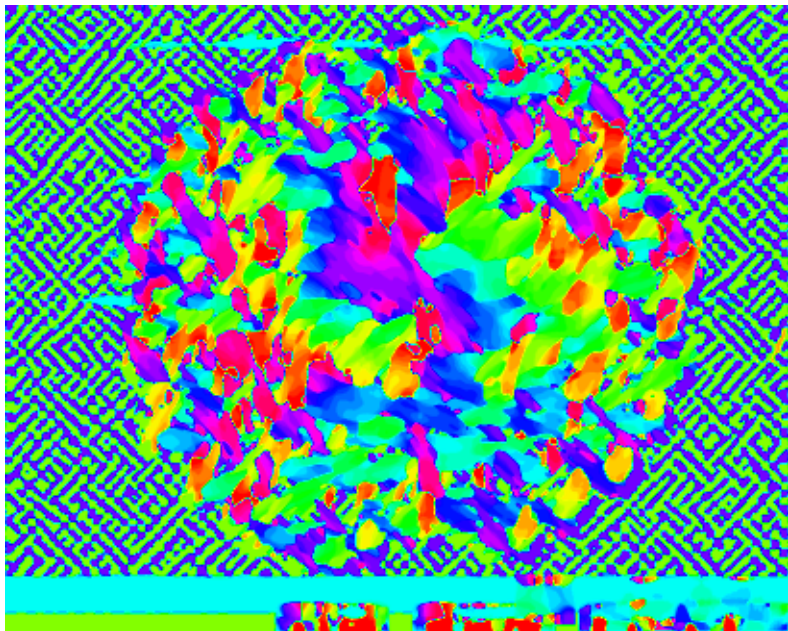
Pattern: Anticlockwise

n\_vectors: 180 | cw\_frac: 0.322 | acw\_frac: 0.678 | div\_frac: 1.000

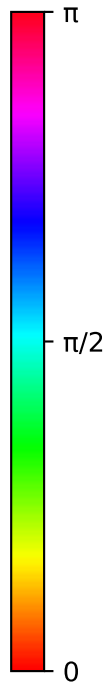
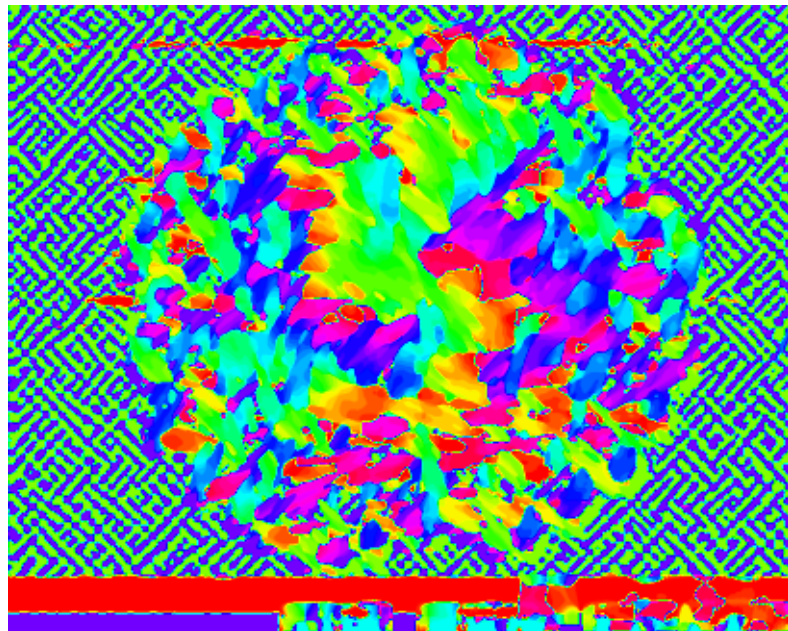
Rotation ( $\phi_{\perp \rightarrow \text{horizontal}}$ ): 39.05° | Center=(648,465)

# Gabor angle maps (original, not rotated)

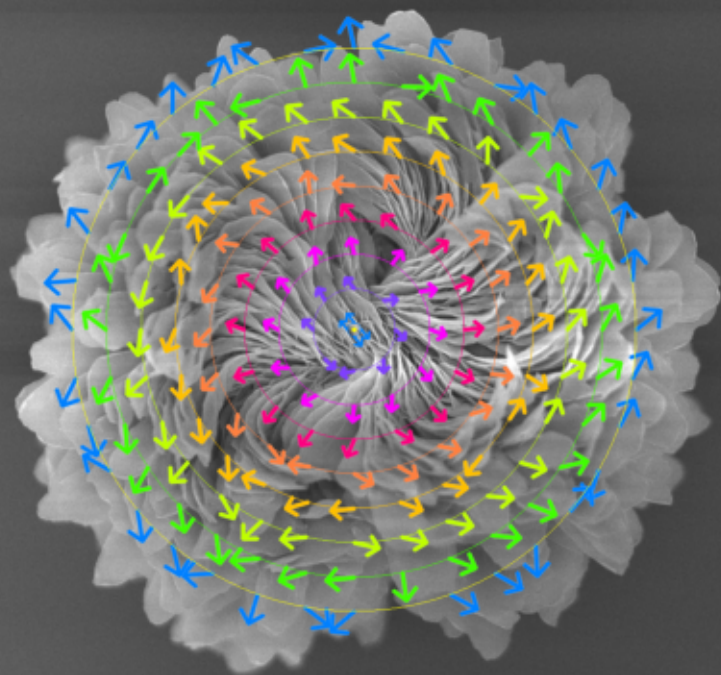
## Dominant Tangent ( $0 \rightarrow \pi$ )



## Dominant Normal ( $0 \rightarrow \pi$ )

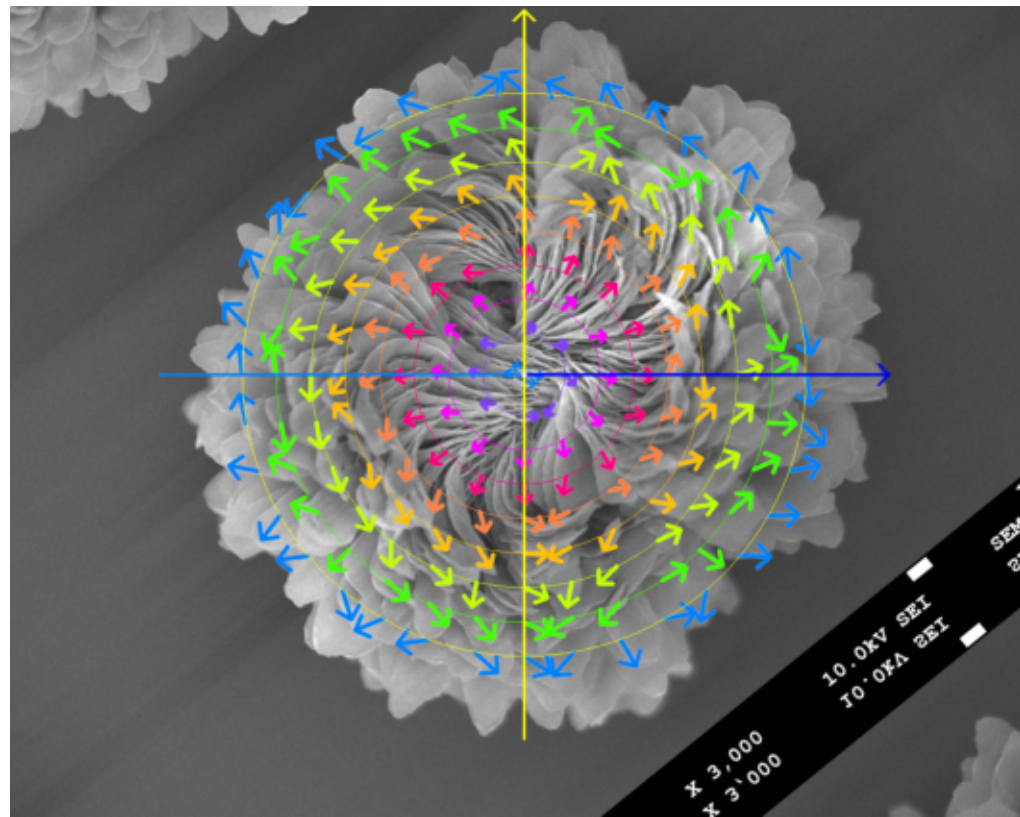


Before rotation



X 3,000 10.0kV SEI SEM 1μm JEOL WD 4.5mm

After rotation (Code A)  
(angle=39.05°)



# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 1/7)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
1	(9.00, 0.00)	-11.51	Clockwise
1	(0.00, -9.00)	75.94	Anticlockwise
1	(-9.00, 0.00)	-14.23	Clockwise
1	(0.00, 9.00)	78.33	Anticlockwise
2	(52.00, 0.00)	-43.00	Clockwise
2	(37.00, -37.00)	-75.92	Clockwise
2	(0.00, -52.00)	86.11	Anticlockwise
2	(-37.00, -37.00)	-46.53	Clockwise
2	(-52.00, 0.00)	-18.60	Clockwise
2	(-37.00, 37.00)	32.92	Anticlockwise
2	(0.00, 52.00)	-47.67	Clockwise
2	(37.00, 37.00)	-45.21	Clockwise
3	(96.00, 0.00)	-21.29	Clockwise
3	(83.00, -48.00)	-20.26	Clockwise
3	(48.00, -83.00)	-22.21	Clockwise
3	(0.00, -96.00)	-5.39	Clockwise
3	(-48.00, -83.00)	-21.82	Clockwise
3	(-83.00, -48.00)	-34.04	Clockwise
3	(-96.00, 0.00)	-17.49	Clockwise
3	(-83.00, 48.00)	-9.77	Clockwise
3	(-48.00, 83.00)	16.24	Anticlockwise
3	(0.00, 96.00)	-22.54	Clockwise
3	(48.00, 83.00)	-22.68	Clockwise
3	(83.00, 48.00)	-26.69	Clockwise
4	(139.00, 0.00)	-4.08	Clockwise
4	(128.00, -53.00)	31.08	Anticlockwise
4	(98.00, -98.00)	-14.83	Clockwise
4	(53.00, -128.00)	-33.68	Clockwise
4	(0.00, -139.00)	4.59	Anticlockwise
4	(-53.00, -128.00)	-2.28	Clockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 2/7)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
4	(-98.00, -98.00)	-10.77	Clockwise
4	(-128.00, -53.00)	-9.73	Clockwise
4	(-139.00, 0.00)	9.21	Anticlockwise
4	(-128.00, 53.00)	14.03	Anticlockwise
4	(-98.00, 98.00)	1.03	Anticlockwise
4	(-53.00, 128.00)	64.74	Anticlockwise
4	(0.00, 139.00)	-11.75	Clockwise
4	(53.00, 128.00)	-2.61	Clockwise
4	(98.00, 98.00)	-1.73	Clockwise
4	(128.00, 53.00)	-1.51	Clockwise
5	(182.00, 0.00)	68.17	Anticlockwise
5	(173.00, -56.00)	38.73	Anticlockwise
5	(147.00, -107.00)	53.16	Anticlockwise
5	(107.00, -147.00)	66.19	Anticlockwise
5	(56.00, -173.00)	-79.27	Clockwise
5	(0.00, -182.00)	66.37	Anticlockwise
5	(-56.00, -173.00)	32.99	Anticlockwise
5	(-107.00, -147.00)	18.21	Anticlockwise
5	(-147.00, -107.00)	48.54	Anticlockwise
5	(-173.00, -56.00)	70.19	Anticlockwise
5	(-182.00, 0.00)	28.52	Anticlockwise
5	(-173.00, 56.00)	9.80	Anticlockwise
5	(-147.00, 107.00)	-11.30	Clockwise
5	(-107.00, 147.00)	74.94	Anticlockwise
5	(-56.00, 173.00)	49.22	Anticlockwise
5	(0.00, 182.00)	-3.81	Clockwise
5	(56.00, 173.00)	4.72	Anticlockwise
5	(107.00, 147.00)	26.32	Anticlockwise
5	(147.00, 107.00)	-6.07	Clockwise
5	(173.00, 56.00)	10.35	Anticlockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 3/7)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
6	(226.00, 0.00)	-86.34	Clockwise
6	(218.00, -58.00)	55.34	Anticlockwise
6	(196.00, -113.00)	44.25	Anticlockwise
6	(160.00, -160.00)	37.07	Anticlockwise
6	(113.00, -196.00)	-55.23	Clockwise
6	(58.00, -218.00)	-75.10	Clockwise
6	(0.00, -226.00)	87.90	Anticlockwise
6	(-58.00, -218.00)	46.75	Anticlockwise
6	(-113.00, -196.00)	61.03	Anticlockwise
6	(-160.00, -160.00)	68.87	Anticlockwise
6	(-196.00, -113.00)	67.19	Anticlockwise
6	(-218.00, -58.00)	-57.99	Clockwise
6	(-226.00, 0.00)	52.94	Anticlockwise
6	(-218.00, 58.00)	36.68	Anticlockwise
6	(-196.00, 113.00)	27.89	Anticlockwise
6	(-160.00, 160.00)	63.39	Anticlockwise
6	(-113.00, 196.00)	54.10	Anticlockwise
6	(-58.00, 218.00)	41.71	Anticlockwise
6	(0.00, 226.00)	34.81	Anticlockwise
6	(58.00, 218.00)	-78.29	Clockwise
6	(113.00, 196.00)	11.74	Anticlockwise
6	(160.00, 160.00)	35.19	Anticlockwise
6	(196.00, 113.00)	31.39	Anticlockwise
6	(218.00, 58.00)	77.81	Anticlockwise
7	(269.00, 0.00)	19.07	Anticlockwise
7	(262.00, -60.00)	50.59	Anticlockwise
7	(242.00, -117.00)	56.49	Anticlockwise
7	(210.00, -168.00)	48.53	Anticlockwise
7	(168.00, -210.00)	77.33	Anticlockwise
7	(117.00, -242.00)	-71.44	Clockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 4/7)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
7	(60.00, -262.00)	-23.17	Clockwise
7	(0.00, -269.00)	66.95	Anticlockwise
7	(-60.00, -262.00)	1.73	Anticlockwise
7	(-117.00, -242.00)	74.60	Anticlockwise
7	(-168.00, -210.00)	38.57	Anticlockwise
7	(-210.00, -168.00)	81.87	Anticlockwise
7	(-242.00, -117.00)	84.97	Anticlockwise
7	(-262.00, -60.00)	86.45	Anticlockwise
7	(-269.00, 0.00)	87.79	Anticlockwise
7	(-262.00, 60.00)	20.81	Anticlockwise
7	(-242.00, 117.00)	37.74	Anticlockwise
7	(-210.00, 168.00)	36.39	Anticlockwise
7	(-168.00, 210.00)	54.71	Anticlockwise
7	(-117.00, 242.00)	52.93	Anticlockwise
7	(-60.00, 262.00)	63.58	Anticlockwise
7	(0.00, 269.00)	32.75	Anticlockwise
7	(60.00, 262.00)	-48.31	Clockwise
7	(117.00, 242.00)	46.40	Anticlockwise
7	(168.00, 210.00)	60.69	Anticlockwise
7	(210.00, 168.00)	49.87	Anticlockwise
7	(242.00, 117.00)	41.82	Anticlockwise
7	(262.00, 60.00)	85.72	Anticlockwise
8	(313.00, 0.00)	32.35	Anticlockwise
8	(307.00, -61.00)	10.40	Anticlockwise
8	(289.00, -120.00)	45.96	Anticlockwise
8	(260.00, -174.00)	74.93	Anticlockwise
8	(221.00, -221.00)	10.83	Anticlockwise
8	(174.00, -260.00)	85.87	Anticlockwise
8	(120.00, -289.00)	-63.83	Clockwise
8	(61.00, -307.00)	-69.09	Clockwise

# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 5/7)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
8	(0.00, -313.00)	67.25	Anticlockwise
8	(-61.00, -307.00)	50.33	Anticlockwise
8	(-120.00, -289.00)	62.92	Anticlockwise
8	(-174.00, -260.00)	83.24	Anticlockwise
8	(-221.00, -221.00)	0.62	Anticlockwise
8	(-260.00, -174.00)	-51.02	Clockwise
8	(-289.00, -120.00)	-46.02	Clockwise
8	(-307.00, -61.00)	89.73	Anticlockwise
8	(-313.00, 0.00)	-80.32	Clockwise
8	(-307.00, 61.00)	68.65	Anticlockwise
8	(-289.00, 120.00)	-26.85	Clockwise
8	(-260.00, 174.00)	54.05	Anticlockwise
8	(-221.00, 221.00)	-6.26	Clockwise
8	(-174.00, 260.00)	25.23	Anticlockwise
8	(-120.00, 289.00)	46.40	Anticlockwise
8	(-61.00, 307.00)	56.92	Anticlockwise
8	(0.00, 313.00)	60.15	Anticlockwise
8	(61.00, 307.00)	-24.09	Clockwise
8	(120.00, 289.00)	79.13	Anticlockwise
8	(174.00, 260.00)	-89.00	Clockwise
8	(221.00, 221.00)	48.02	Anticlockwise
8	(260.00, 174.00)	62.42	Anticlockwise
8	(289.00, 120.00)	39.01	Anticlockwise
8	(307.00, 61.00)	-71.20	Clockwise
9	(356.00, 0.00)	-82.87	Clockwise
9	(351.00, -62.00)	-35.12	Clockwise
9	(335.00, -122.00)	32.32	Anticlockwise
9	(308.00, -178.00)	31.76	Anticlockwise
9	(272.00, -228.00)	36.64	Anticlockwise
9	(229.00, -273.00)	-48.53	Clockwise



# Ring coordinates + Angle( $\alpha'$ ) + Pattern (page 6/7)

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
9	(178.00, -308.00)	70.47	Anticlockwise
9	(122.00, -335.00)	9.50	Anticlockwise
9	(62.00, -351.00)	-51.40	Clockwise
9	(0.00, -356.00)	58.89	Anticlockwise
9	(-62.00, -351.00)	58.48	Anticlockwise
9	(-122.00, -335.00)	-61.69	Clockwise
9	(-178.00, -308.00)	-37.14	Clockwise
9	(-229.00, -273.00)	56.87	Anticlockwise
9	(-273.00, -229.00)	-32.73	Clockwise
9	(-308.00, -178.00)	22.27	Anticlockwise
9	(-335.00, -122.00)	-30.54	Clockwise
9	(-351.00, -62.00)	-87.71	Clockwise
9	(-356.00, 0.00)	-83.83	Clockwise
9	(-351.00, 62.00)	-35.44	Clockwise
9	(-335.00, 122.00)	-46.83	Clockwise
9	(-308.00, 178.00)	-56.46	Clockwise
9	(-273.00, 229.00)	89.04	Anticlockwise
9	(-229.00, 273.00)	16.39	Anticlockwise
9	(-178.00, 308.00)	85.37	Anticlockwise
9	(-122.00, 335.00)	53.71	Anticlockwise
9	(-62.00, 351.00)	-64.17	Clockwise
9	(0.00, 356.00)	48.65	Anticlockwise
9	(62.00, 351.00)	71.11	Anticlockwise
9	(122.00, 335.00)	52.56	Anticlockwise
9	(178.00, 308.00)	52.69	Anticlockwise
9	(229.00, 273.00)	85.96	Anticlockwise
9	(273.00, 229.00)	34.34	Anticlockwise
9	(308.00, 178.00)	81.16	Anticlockwise
9	(335.00, 122.00)	75.54	Anticlockwise
9	(351.00, 62.00)	-82.98	Clockwise

Ring	Coordinate	Angle ( $\alpha'$ )	Pattern
SUMMARY	n_vectors=180	nan	Anticlockwise