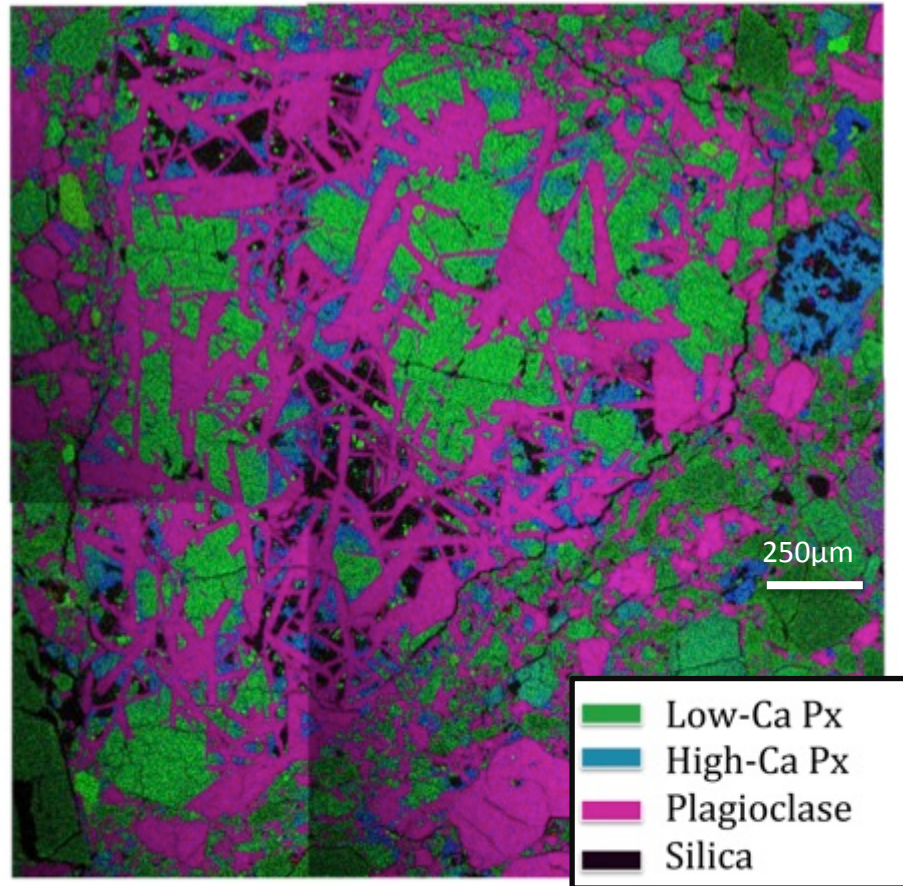


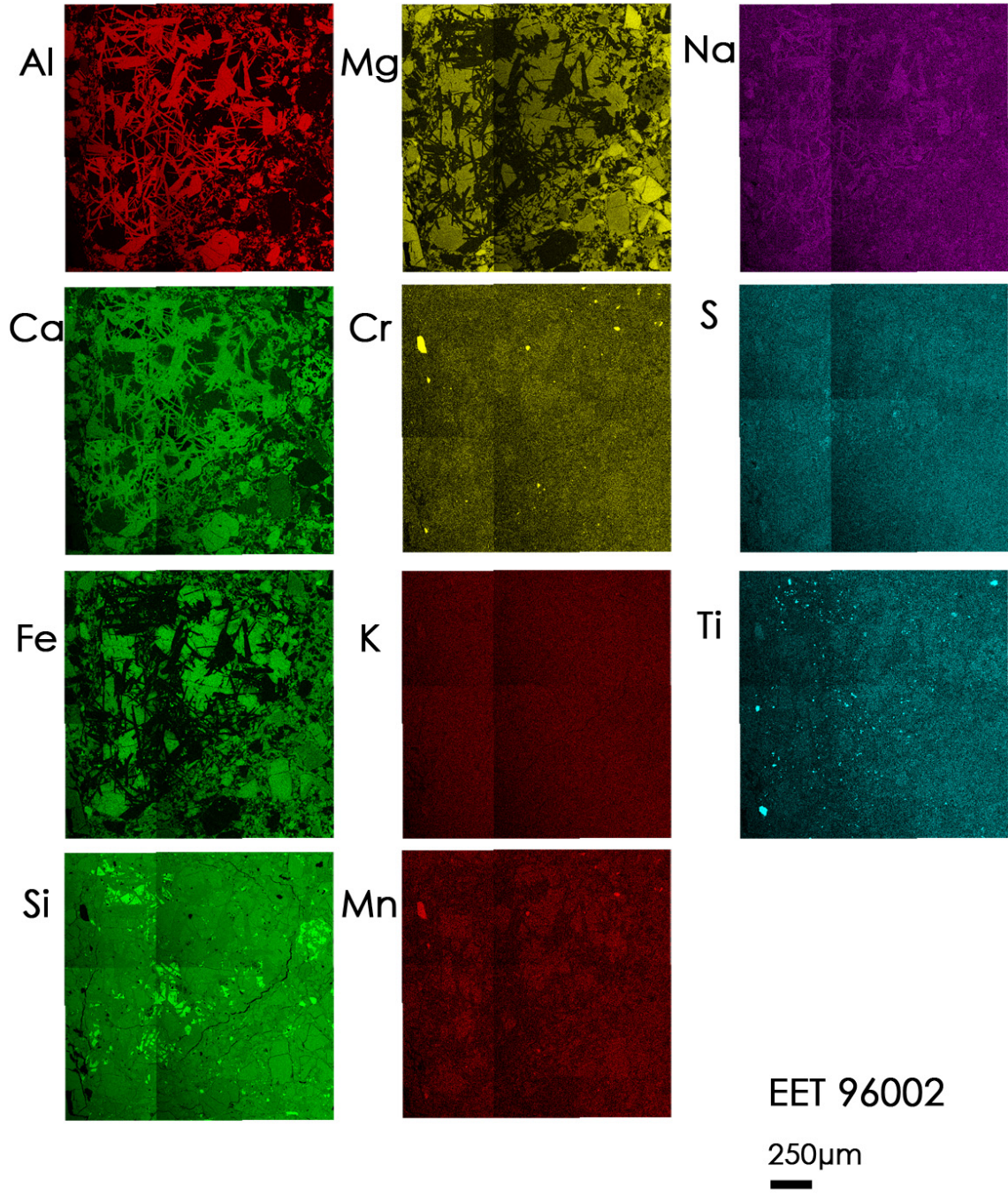
Appendix F – EET 96002

F1. SEM Mineral Map

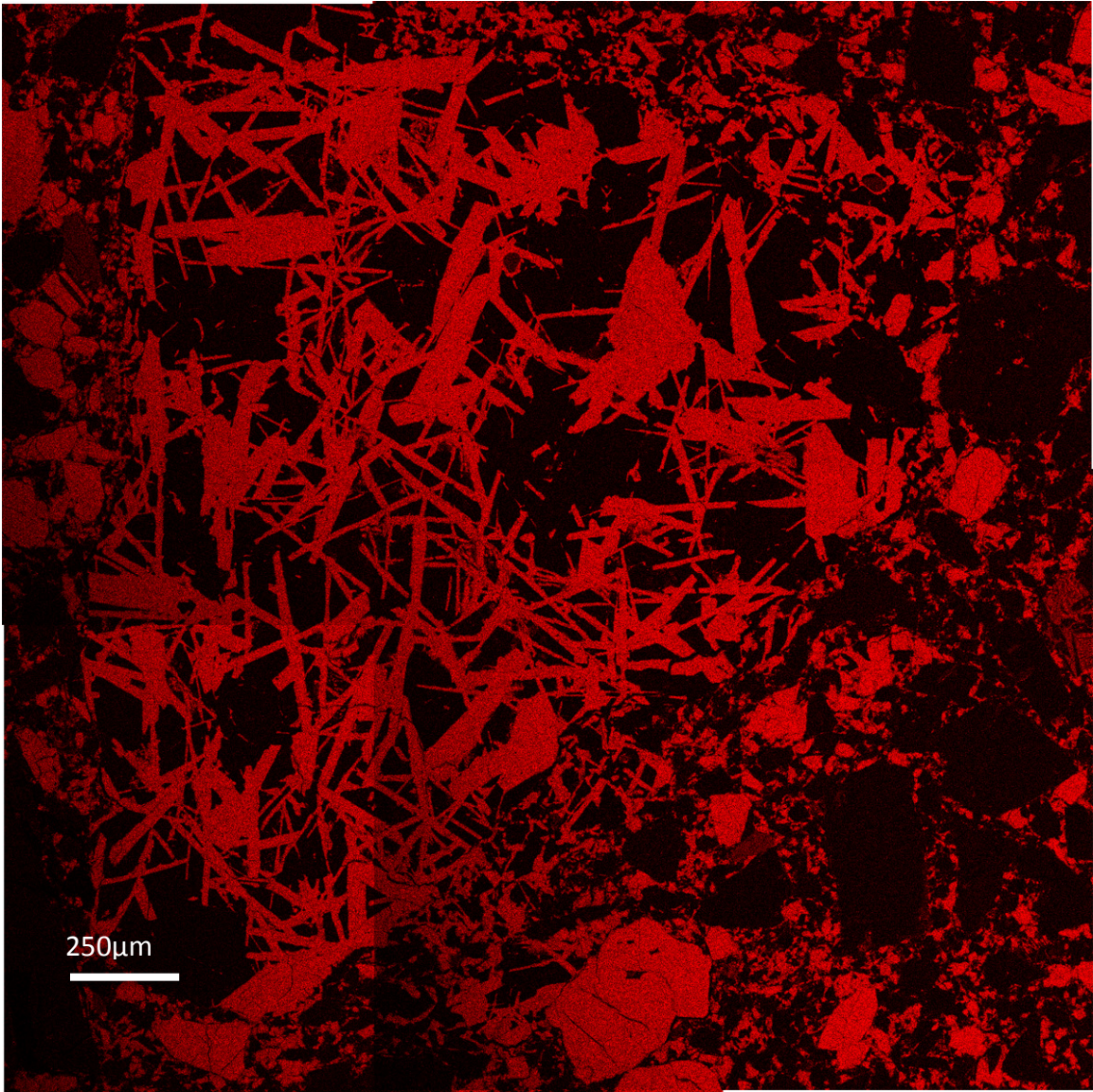


EET 96002 has large plagioclase laths and is the coarsest grained sample.

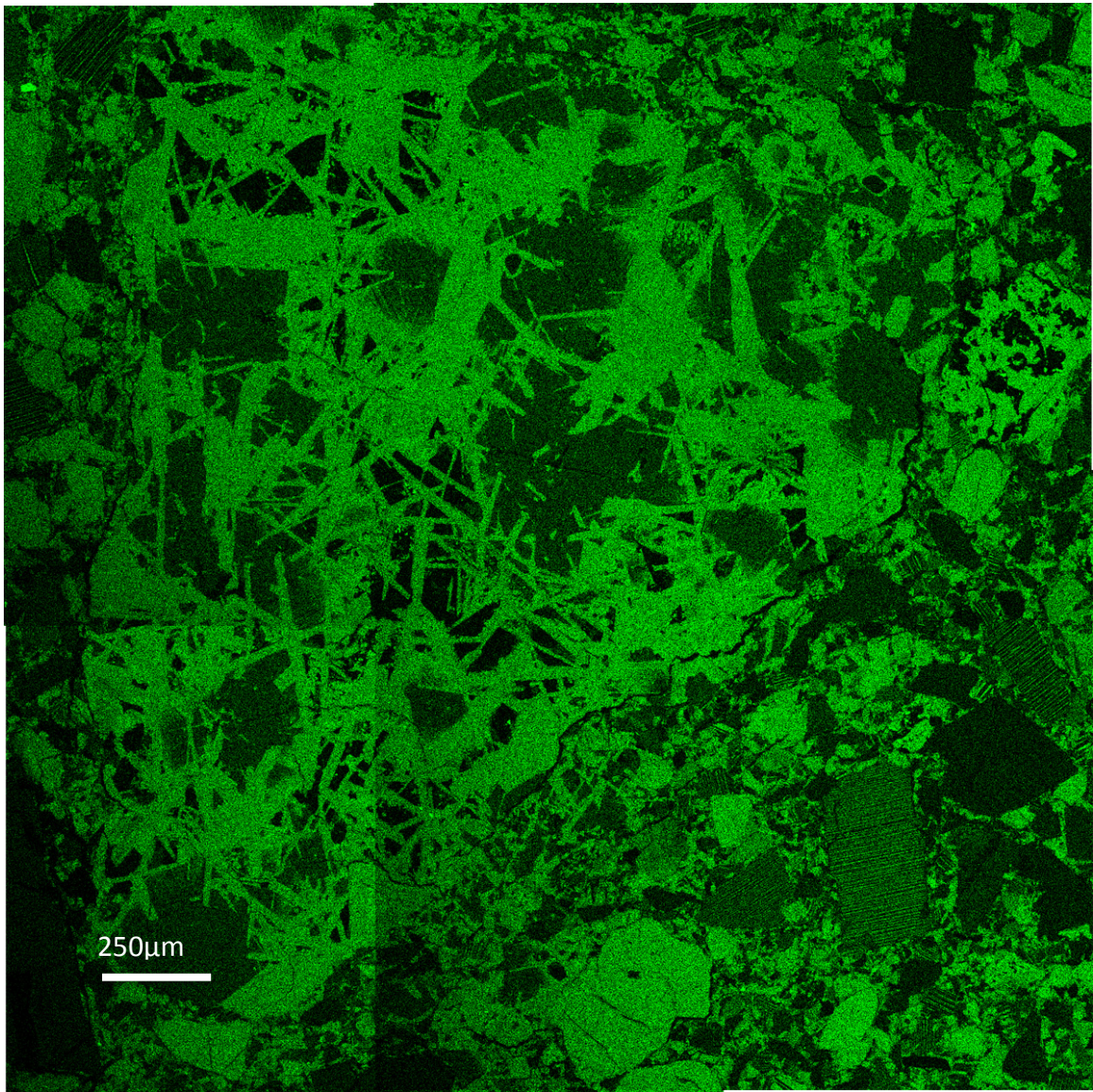
F2. SEM Elemental X-ray maps (All clasts were analyzed for eleven elements (Al, Ca, Fe, Si, Mg, Cr, K, Mn, Na, S, and Ti); however if some are extremely dark, this is due to the fact that the element appeared below the detection limit of the SEM, thus showing a colored map with no distinguishable data. For this reason, we have not included a full size element map of K, Mn, and Na.



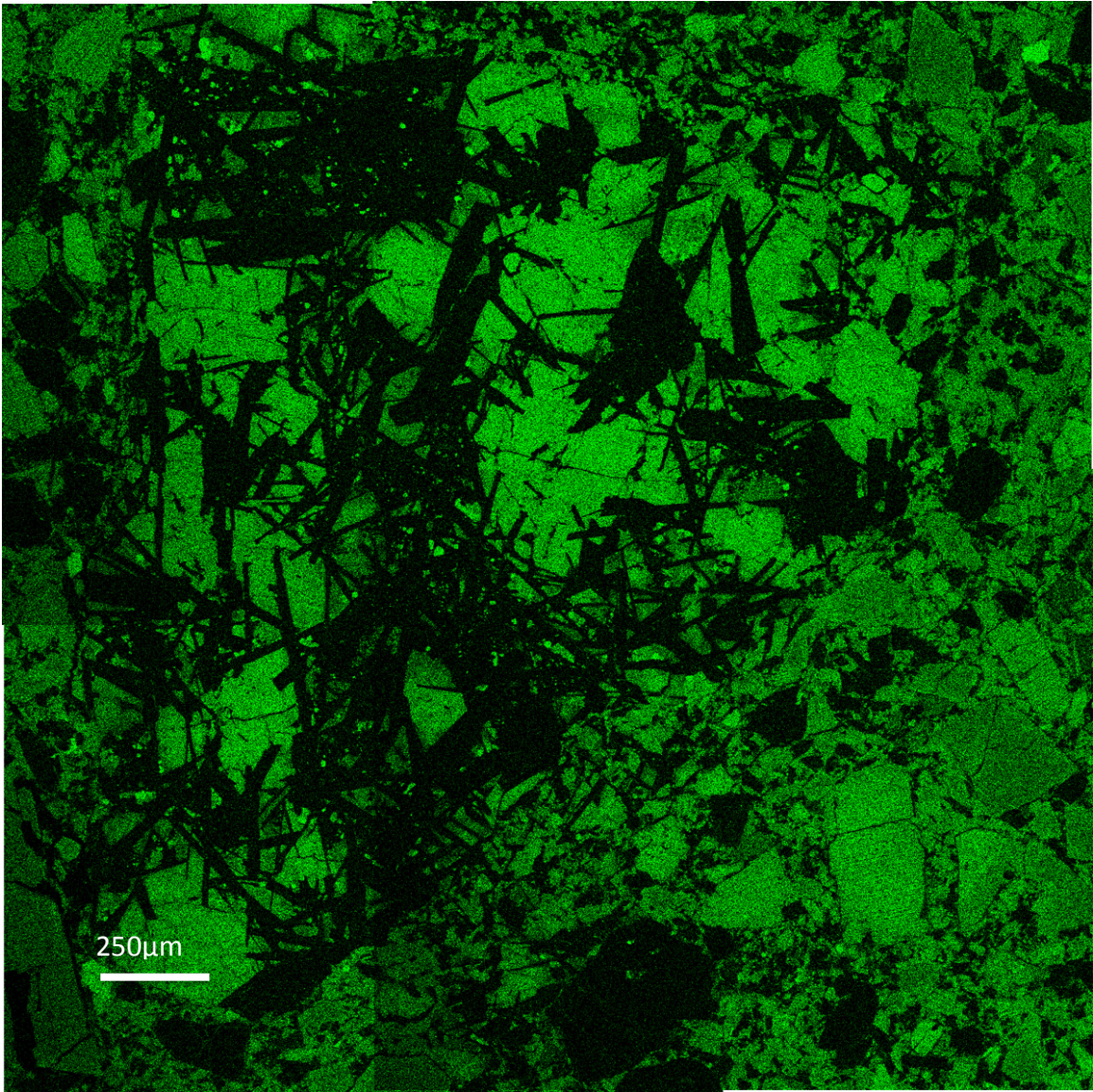
Al



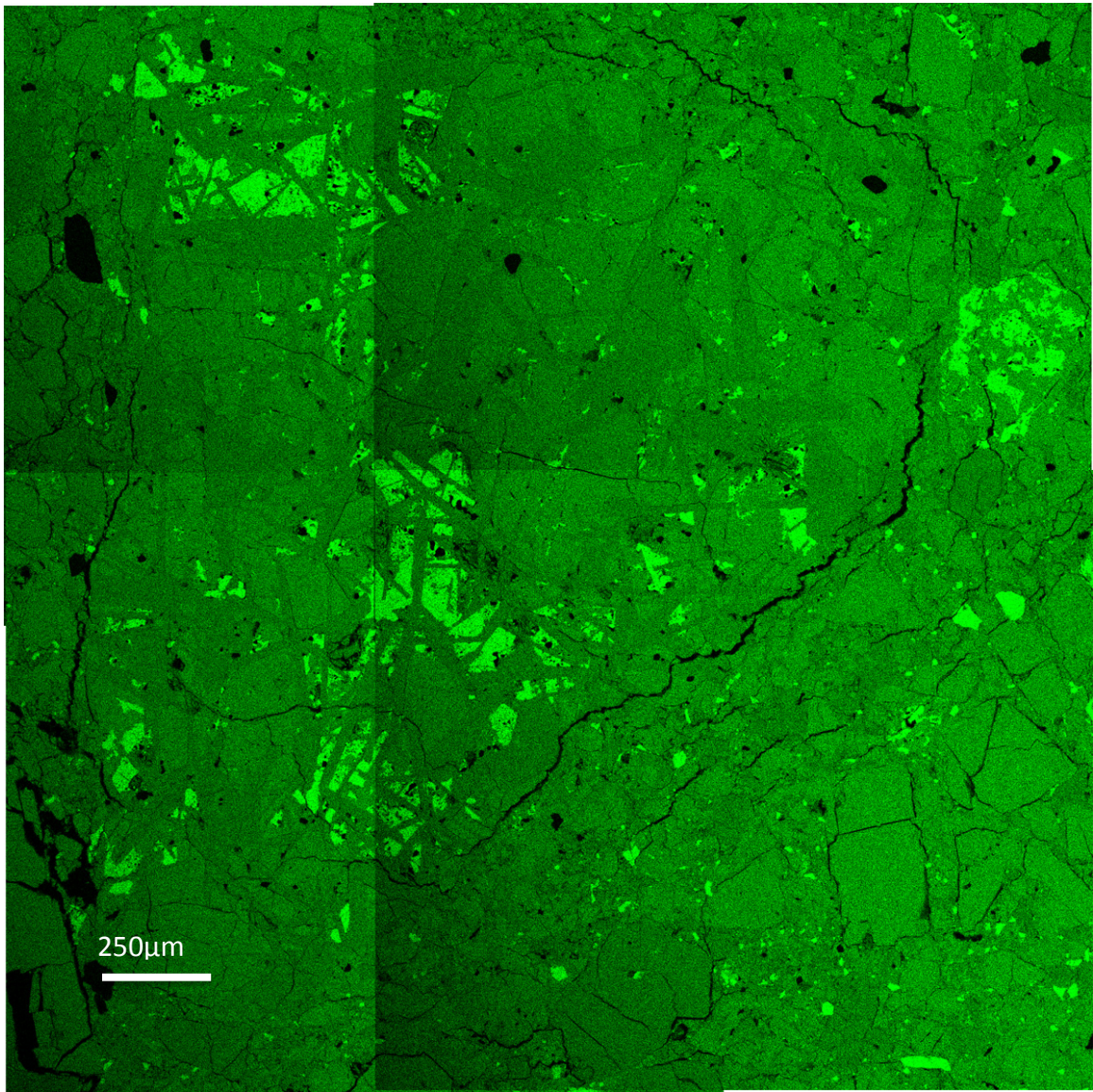
Ca



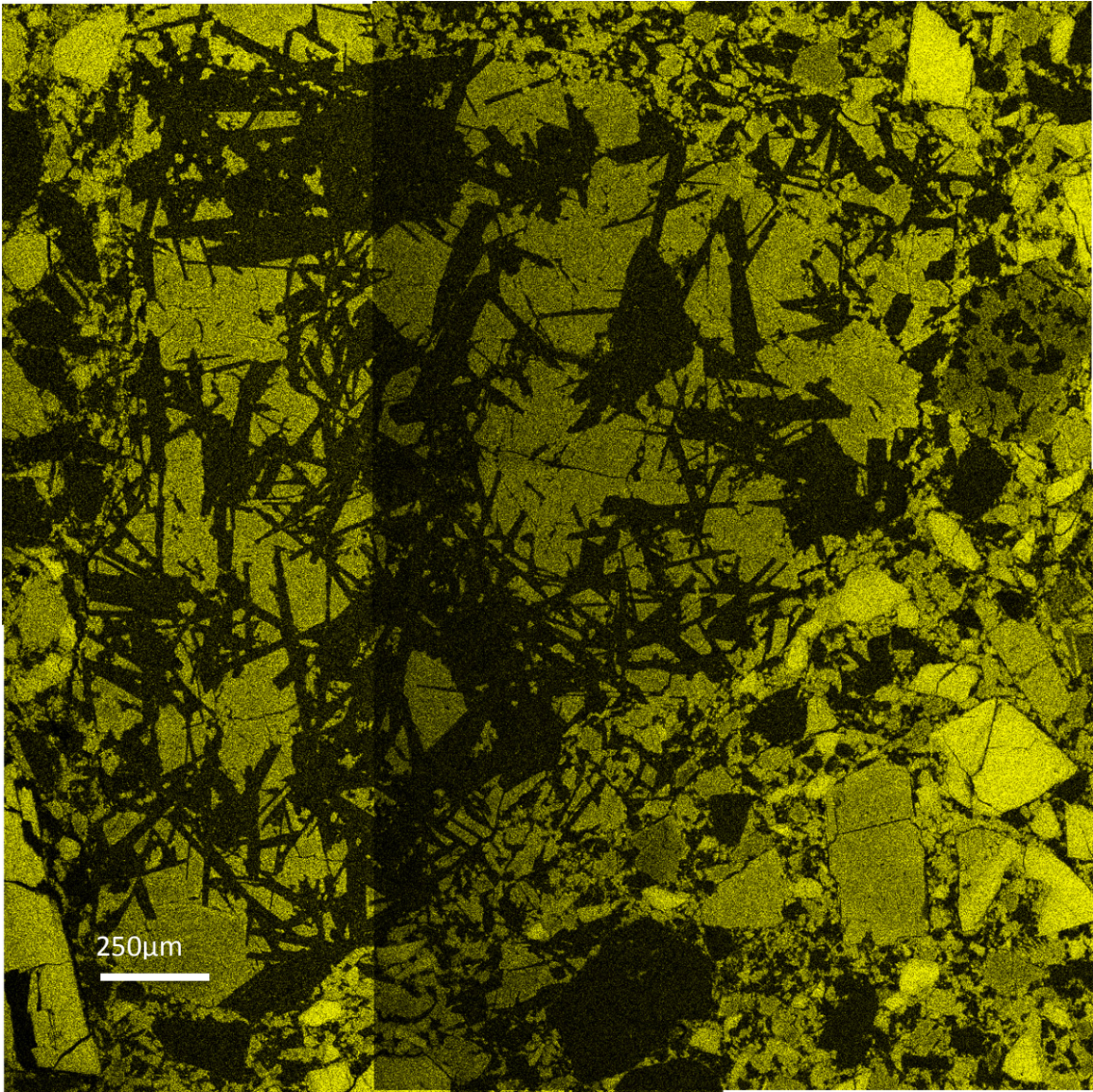
Fe



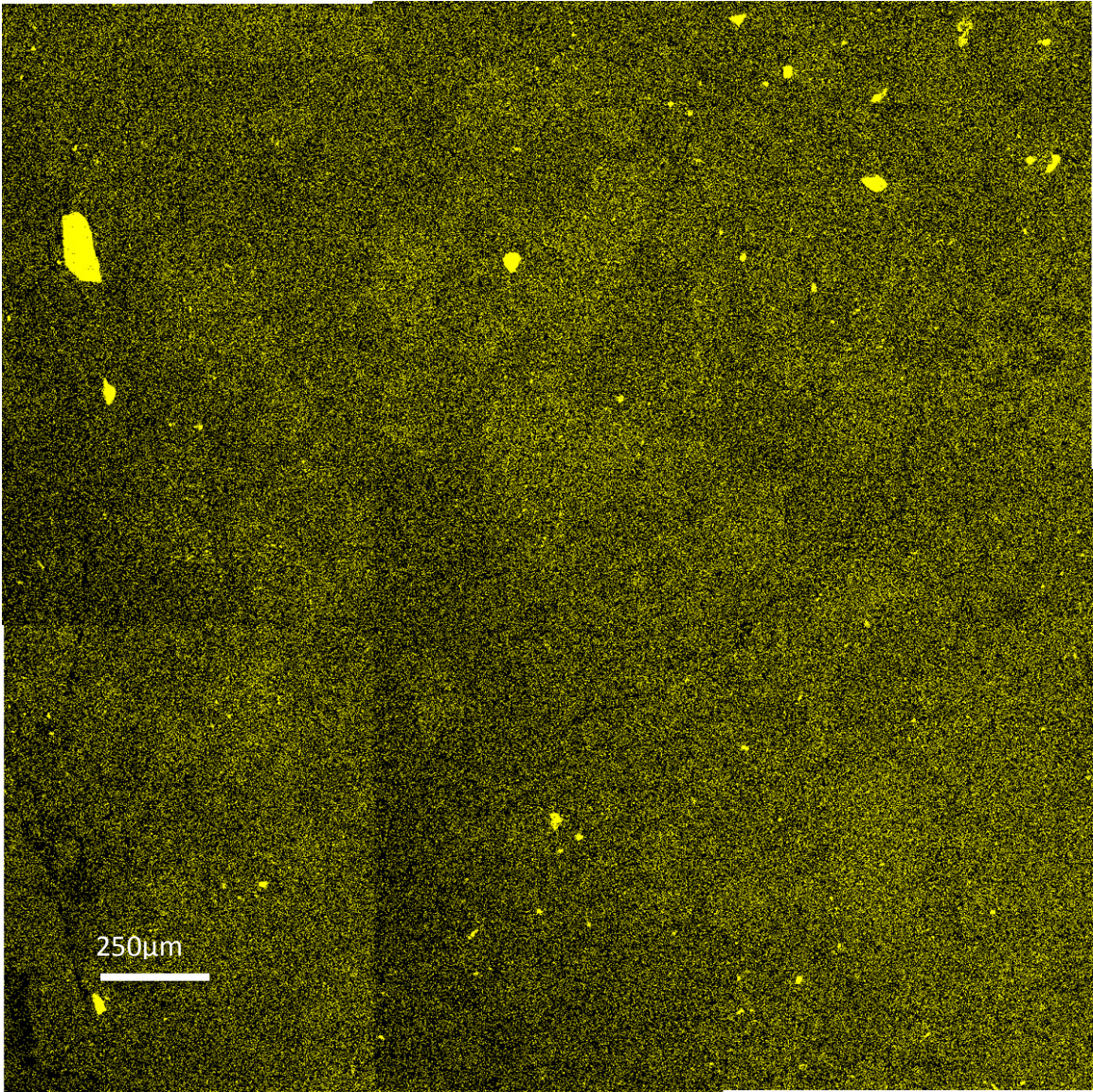
Si



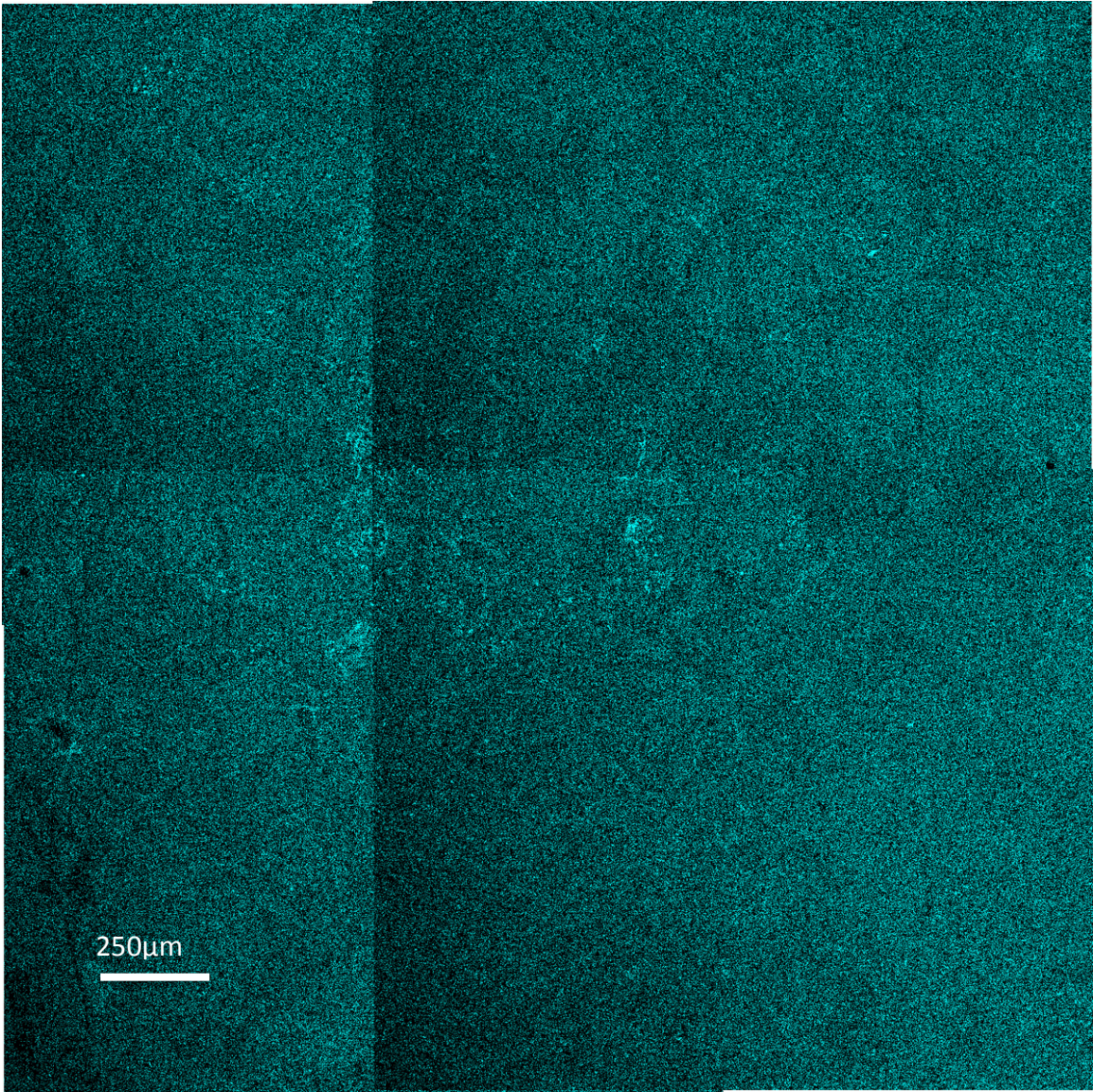
Mg



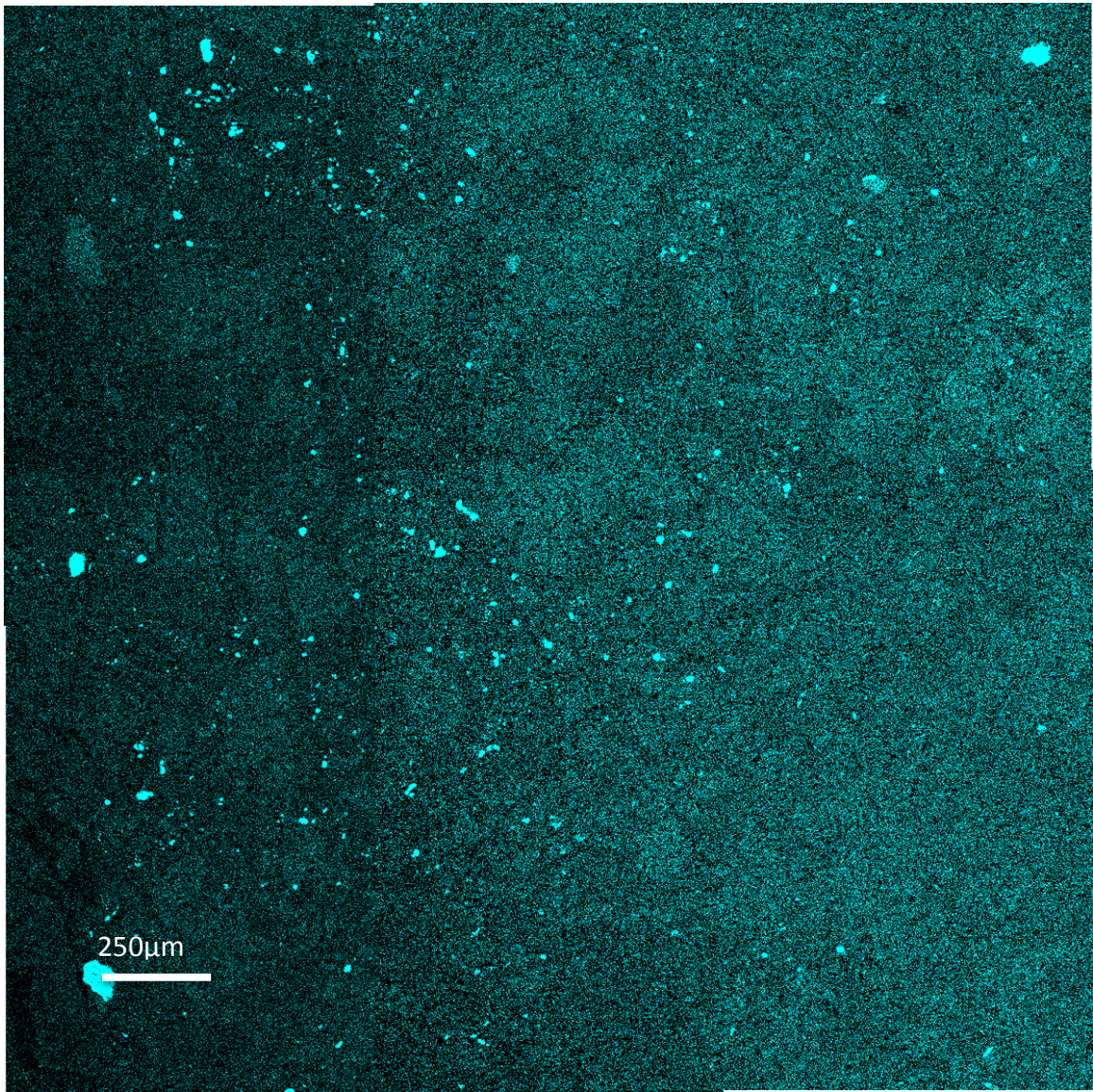
Cr



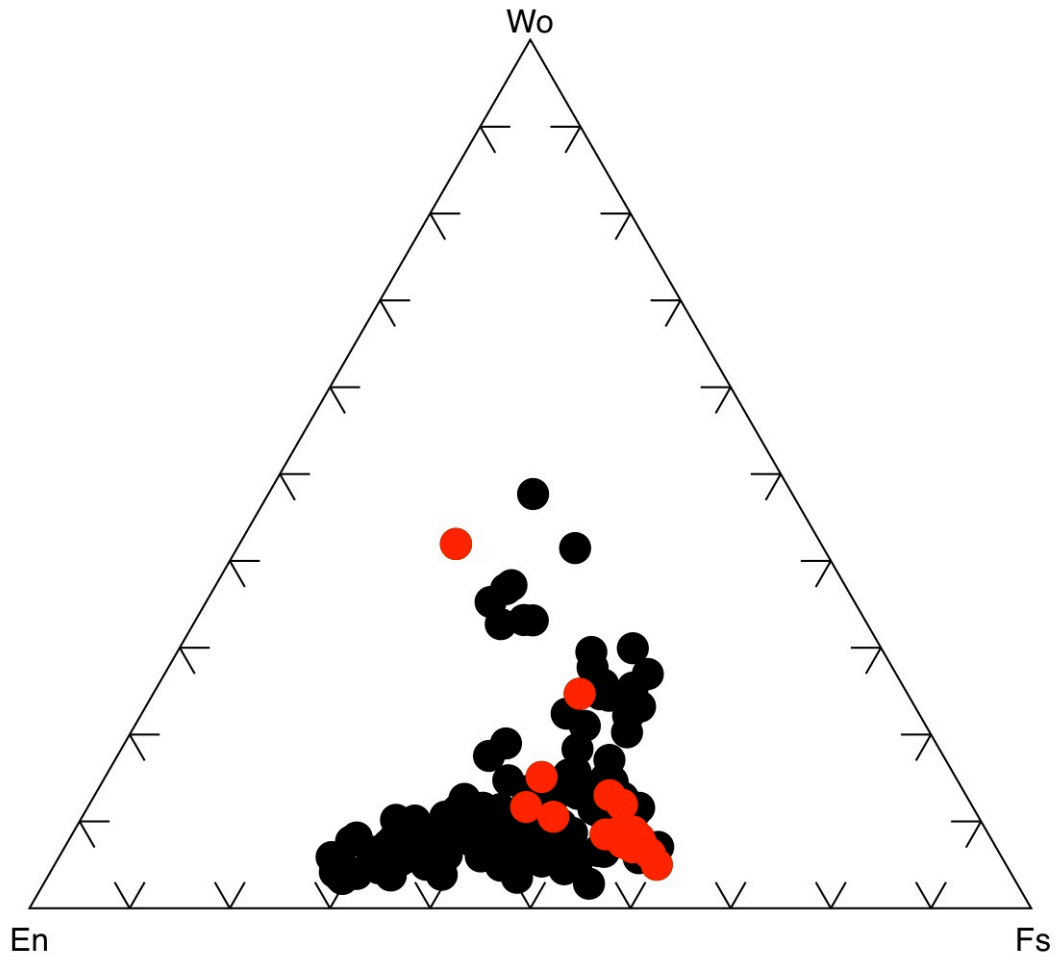
S



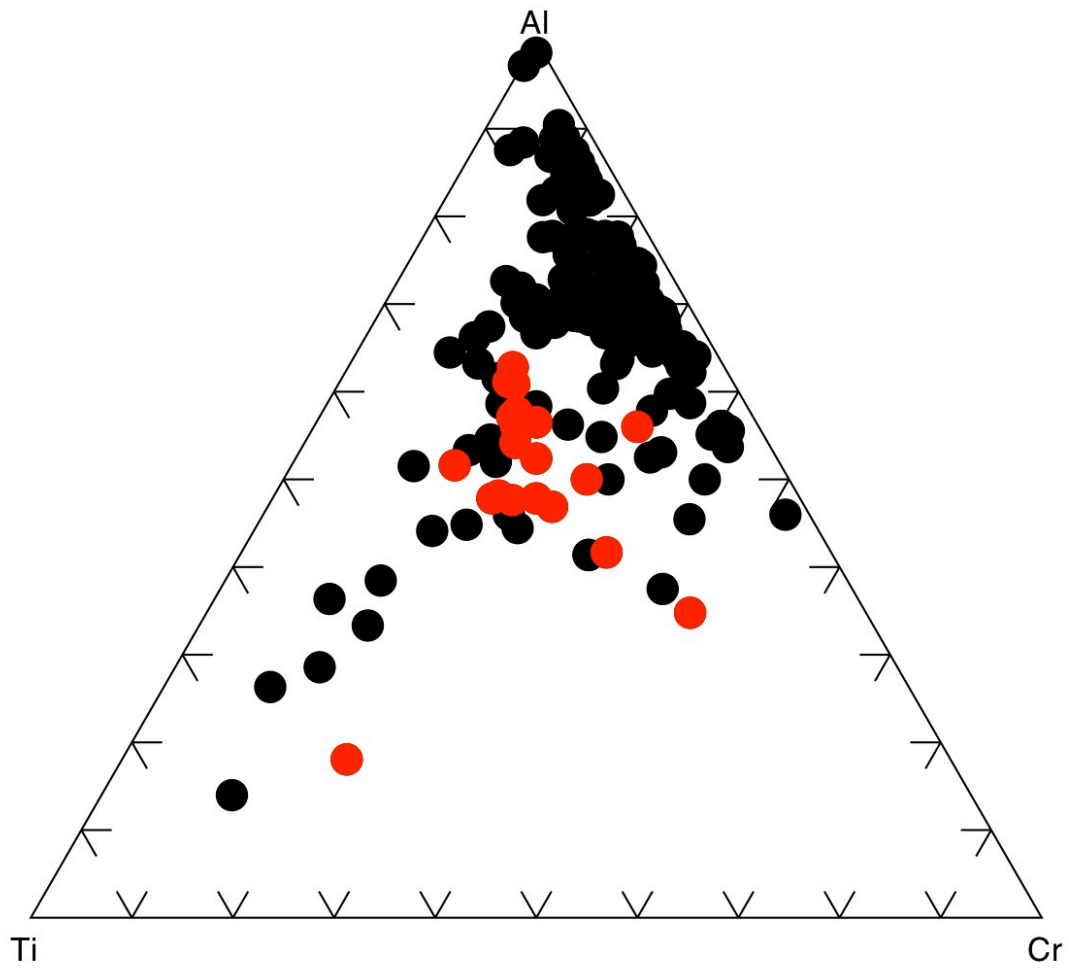
Ti



F3. Major element data of pyroxene (red) compared to all other samples



F4. Minor element data of pyroxene (red) compared to all other samples



F5. Pyroxene analyses

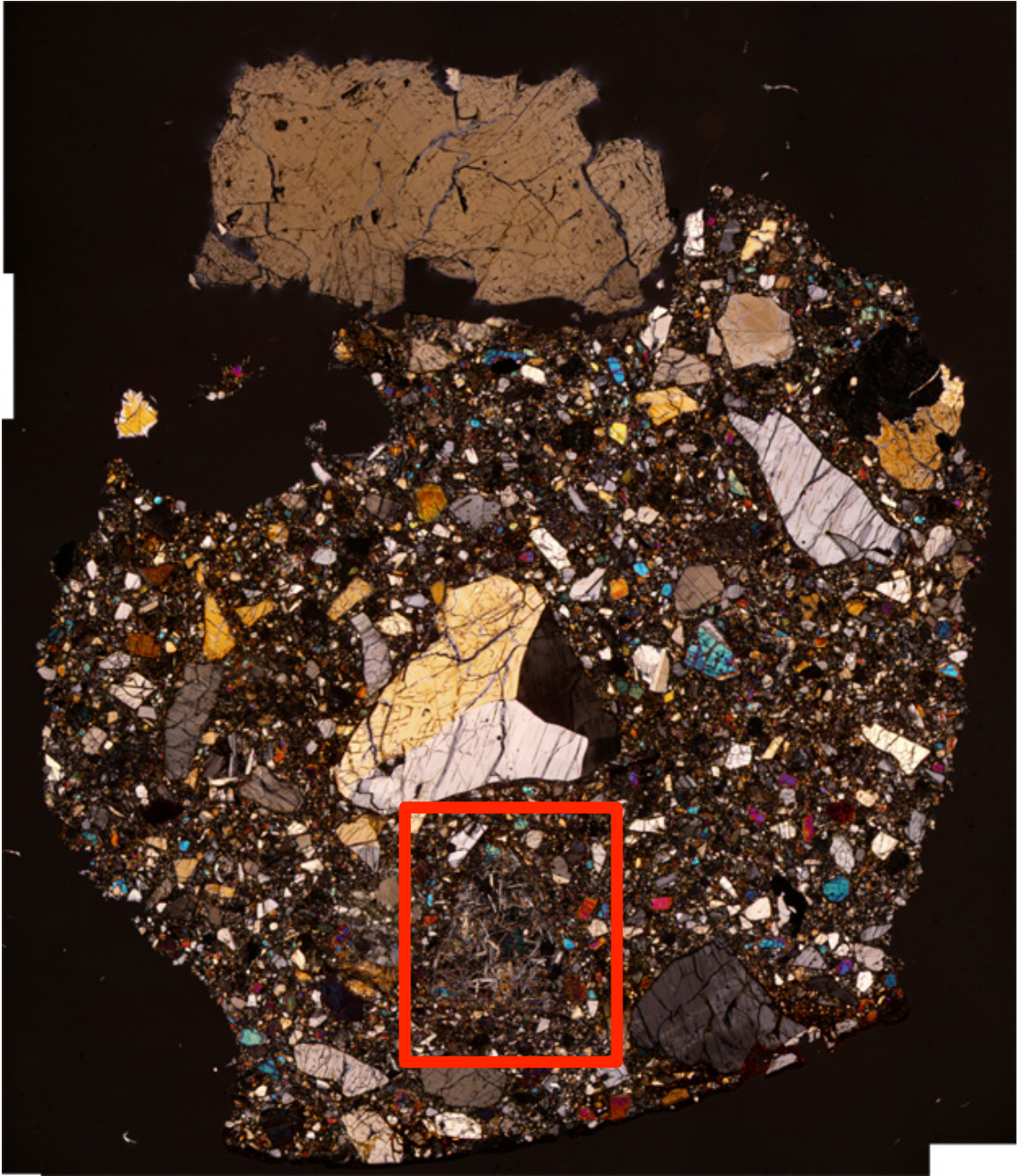
SiO ₂	49.17	49.09	51.34	48.23	49.14	47.91	48.57	50.15	49.24	50.51	48.00
CaO	4.07	3.23	20.53	2.30	4.14	2.94	5.56	11.78	3.52	4.96	3.51
Na ₂ O	0.06	0.02	n.d.	n.d.	n.d.	0.02	0.01	0.03	n.d.	n.d.	0.03
MgO	12.04	12.02	12.82	11.53	11.92	11.78	11.69	11.22	12.38	14.34	11.76
TiO ₂	0.18	0.19	0.31	0.27	0.20	1.44	0.27	0.27	0.20	0.16	0.26
FeO	33.11	33.45	13.54	35.44	33.58	35.34	31.77	26.04	33.07	28.33	34.11
Al ₂ O ₃	0.29	0.25	0.64	0.37	0.30	0.29	0.34	0.50	0.22	0.27	0.28
K ₂ O	0.01	n.d.	n.d.	n.d.	0.01	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
MnO	1.12	1.12	0.51	1.11	1.15	1.08	1.09	0.88	1.10	1.01	1.06
Cr ₂ O ₃	0.16	0.19	0.22	0.70	0.14	0.50	0.42	0.19	0.17	0.14	0.19
Total	100.19	99.55	99.90	99.93	100.56	101.31	99.72	101.05	99.90	99.71	99.21
Si	1.96	1.97	1.96	1.95	1.96	1.91	1.95	1.96	1.97	1.98	1.95
Ca	0.17	0.14	0.84	0.10	0.18	0.13	0.24	0.49	0.15	0.21	0.15
Na	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Mg	0.72	0.72	0.73	0.70	0.71	0.70	0.70	0.65	0.74	0.84	0.71
Ti	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01
Fe	1.11	1.12	0.43	1.20	1.12	1.18	1.07	0.85	1.11	0.93	1.16
Al	0.01	0.01	0.03	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.01
K	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Mn	0.04	0.04	0.02	0.04	0.04	0.04	0.04	0.03	0.04	0.03	0.04
Cr	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.01	n.d.	0.01
Total	4.02	4.01	4.02	4.03	4.03	4.03	4.03	4.02	4.02	4.01	4.04
Wo	8.72	7.01	41.95	5.02	8.83	6.28	11.93	24.70	7.58	10.53	7.56
En	35.92	36.28	36.45	34.87	35.31	34.93	34.88	32.72	36.98	42.43	35.20
Fs	55.36	56.71	21.60	60.11	55.86	58.79	53.19	42.59	55.44	47.04	57.24
SiO ₂	49.28	48.63	48.35	49.83	48.86	50.12	49.84	48.78	48.84	48.83	48.83
CaO	6.04	3.34	3.75	4.02	3.81	5.58	7.17	3.95	4.17	3.50	3.50
Na ₂ O	0.02	0.04	n.d.	0.03	0.03	n.d.	n.d.	n.d.	0.02	0.02	0.02
MgO	11.87	11.82	11.77	13.01	12.50	15.34	14.10	12.09	12.30	12.29	12.29
TiO ₂	0.27	0.16	0.20	0.17	0.24	0.09	0.34	0.20	0.16	0.14	0.14
FeO	30.52	33.95	33.99	32.32	32.85	26.82	26.52	32.15	32.75	33.80	33.80
Al ₂ O ₃	0.34	0.25	0.32	0.32	0.25	0.33	0.36	0.32	0.28	0.23	0.23
K ₂ O	0.01	n.d.	n.d.	0.01	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.01
MnO	1.03	1.06	1.06	1.12	1.11	0.97	0.96	1.06	1.05	1.09	1.09
Cr ₂ O ₃	0.29	0.16	0.16	0.13	0.15	0.25	0.17	0.16	0.14	0.20	0.20
Total	99.66	99.42	99.60	100.95	99.81	99.50	99.47	98.72	99.71	100.11	100.11
Si	1.97	1.96	1.95	1.96	1.96	1.96	1.96	1.97	1.96	1.96	1.96
Ca	0.26	0.14	0.16	0.17	0.16	0.23	0.30	0.17	0.18	0.15	0.15
Na	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Mg	0.71	0.71	0.71	0.76	0.75	0.90	0.83	0.73	0.74	0.73	0.73
Ti	0.01	0.01	0.01	0.01	0.01	n.d.	0.01	0.01	0.01	n.d.	n.d.
Fe	1.02	1.15	1.15	1.07	1.10	0.88	0.87	1.09	1.10	1.13	1.13
Al	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01
K	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Mn	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.04
Cr	0.01	0.01	0.01	n.d.	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	4.01	4.02	4.03	4.02	4.03	4.02	4.02	4.02	4.03	4.03	4.03
Wo	13.02	7.20	8.02	8.50	8.11	11.66	15.11	8.61	8.90	7.44	7.44
En	35.59	35.53	35.12	38.22	37.13	44.59	41.32	36.68	36.53	36.41	36.41
Fs	51.39	57.27	56.86	53.28	54.75	43.75	43.57	54.71	54.57	56.15	56.15

F6. Plagioclase analyses

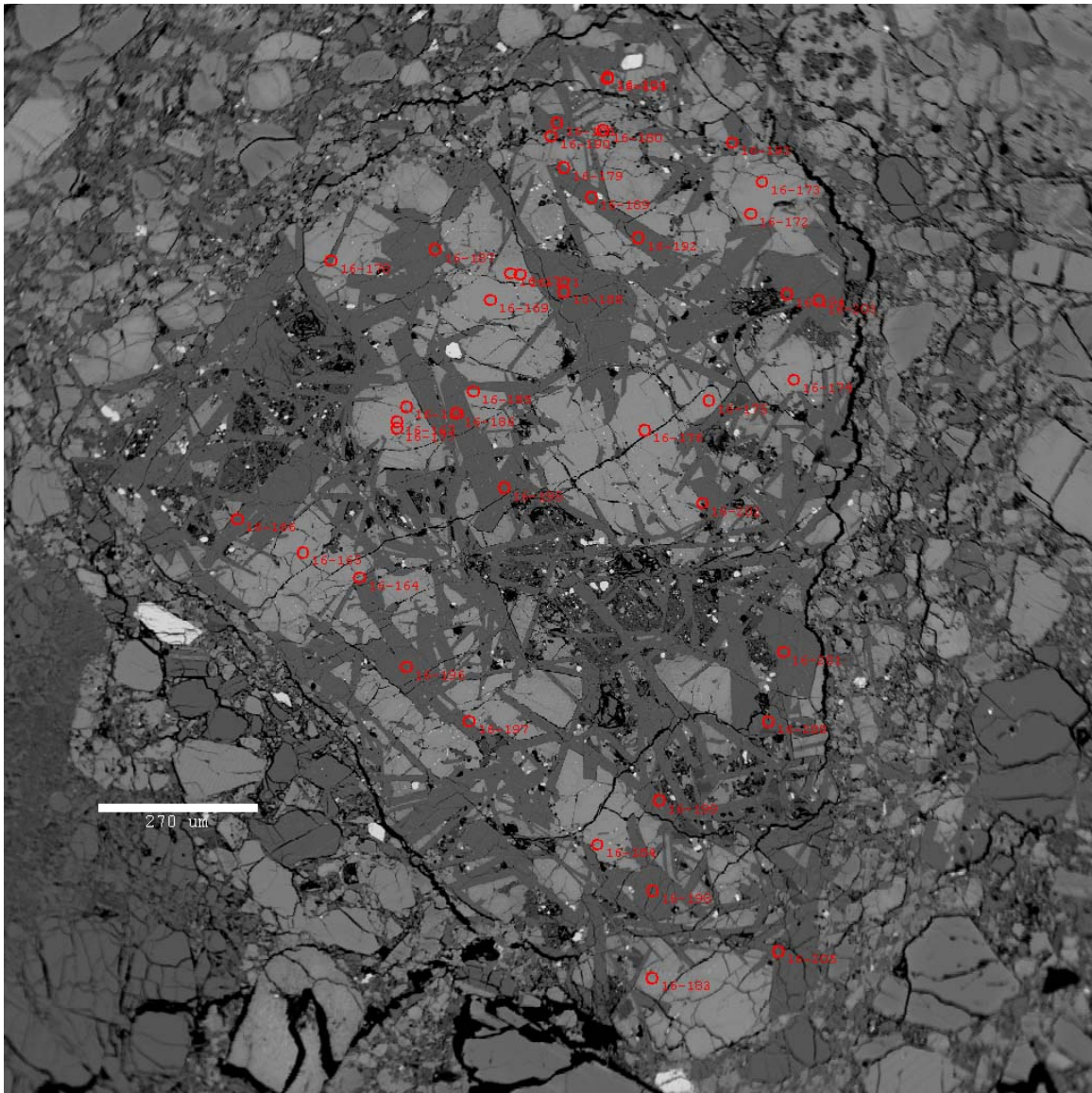
SiO ₂	45.16	45.05	43.98	44.90	44.55	45.38	45.31	45.11	45.14	44.44	45.02
CaO	18.03	18.17	18.67	17.80	18.63	18.42	17.49	17.93	18.08	18.18	18.19
Na ₂ O	1.35	1.26	0.99	1.45	1.09	1.21	1.60	1.54	1.28	1.24	1.35
MgO	0.01	0.02	0.27	0.05	0.03	0.01	0.04	0.04	0.03	0.03	0.03
TiO ₂	0.07	n.d.	0.06	n.d.	0.04	0.01	0.03	n.d.	0.04	0.01	0.03
FeO	0.61	0.36	0.57	0.35	0.44	0.42	0.51	0.50	0.48	0.28	0.22
Al ₂ O ₃	34.00	34.13	33.87	34.02	35.09	34.50	33.50	33.76	34.25	34.23	33.82
K ₂ O	0.05	0.05	0.04	0.05	0.04	0.05	0.07	0.06	0.06	0.05	0.05
MnO	0.02	n.d.	0.01	0.01	n.d.	0.01	0.03	0.01	0.01	0.03	n.d.
Cr ₂ O ₃	0.01	n.d.	0.03	n.d.	0.02	0.02	0.01	n.d.	0.01	n.d.	n.d.
Total	99.31	99.04	98.48	98.63	99.93	100.02	98.59	98.95	99.38	98.49	98.70
Si	2.10	2.10	2.07	2.10	2.06	2.10	2.12	2.11	2.10	2.09	2.11
Ca	0.90	0.91	0.94	0.89	0.93	0.91	0.88	0.90	0.90	0.91	0.91
Na	0.12	0.11	0.09	0.13	0.10	0.11	0.15	0.14	0.12	0.11	0.12
Mg	n.d.	n.d.	0.02	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Ti	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fe	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Al	1.87	1.88	1.88	1.88	1.92	1.88	1.85	1.86	1.88	1.89	1.87
K	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Mn	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Cr	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Total	5.02	5.02	5.03	5.02	5.02	5.01	5.02	5.03	5.01	5.02	5.02
An	87.80	88.59	91.10	86.87	90.24	89.15	85.49	86.26	88.33	88.74	87.86
Ab	11.90	11.12	8.70	12.84	9.56	10.56	14.12	13.45	11.27	10.97	11.85
Or	0.29	0.29	0.19	0.29	0.20	0.29	0.39	0.29	0.39	0.29	0.29
SiO ₂	44.21	44.65	44.18	46.00	45.59	44.10	44.70	45.88	45.25	44.72	
CaO	18.54	18.45	18.34	17.68	17.65	18.30	17.99	17.37	17.43	17.98	
Na ₂ O	1.13	1.13	1.29	1.33	1.51	1.26	1.38	1.56	1.54	1.42	
MgO	0.14	0.07	0.02	0.15	0.01	0.07	0.04	0.08	0.04	0.04	
TiO ₂	n.d.	n.d.	0.02	0.06	0.03	0.02	0.04	0.04	0.04	0.03	
FeO	0.47	0.76	0.14	0.51	0.22	0.20	0.33	0.25	1.04	0.24	
Al ₂ O ₃	34.29	34.50	34.21	33.60	33.98	34.09	33.93	33.53	33.54	33.90	
K ₂ O	0.03	0.04	0.05	0.06	0.05	0.05	0.06	0.08	0.09	0.06	
MnO	0.02	0.02	0.01	0.02	0.01	n.d.	0.01	0.01	0.01	n.d.	
Cr ₂ O ₃	-0.01	0.04	n.d.	n.d.	n.d.	n.d.	0.01	n.d.	0.02	n.d.	
Total	98.82	99.65	98.25	99.39	99.05	98.09	98.51	98.81	99.00	98.39	
Si	2.07	2.08	2.08	2.13	2.12	2.08	2.10	2.14	2.12	2.10	
Ca	0.93	0.92	0.93	0.88	0.88	0.93	0.91	0.87	0.87	0.91	
Na	0.10	0.10	0.12	0.12	0.14	0.12	0.13	0.14	0.14	0.13	
Mg	0.01	0.01	n.d.	0.01	n.d.	0.01	n.d.	0.01	n.d.	n.d.	
Ti	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	
Fe	0.02	0.03	0.01	0.02	0.01	0.01	0.01	0.01	0.04	0.01	
Al	1.90	1.89	1.90	1.84	1.86	1.90	1.88	1.84	1.85	1.88	
K	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.01	0.01	n.d.	
Mn	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	
Cr	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	
Total	5.03	5.03	5.03	5.00	5.01	5.03	5.02	5.01	5.02	5.02	
An	89.96	89.84	88.43	87.81	86.36	88.69	87.52	85.59	85.76	87.19	
Ab	9.85	9.96	11.28	11.89	13.35	11.03	12.09	13.92	13.75	12.43	
Or	0.19	0.20	0.29	0.30	0.29	0.29	0.39	0.49	0.49	0.39	

F7. EET 96002 in plane polarized and cross-polarized light-1in. round (2.54cm).
(The red box shows which grain this appendix is referring to)

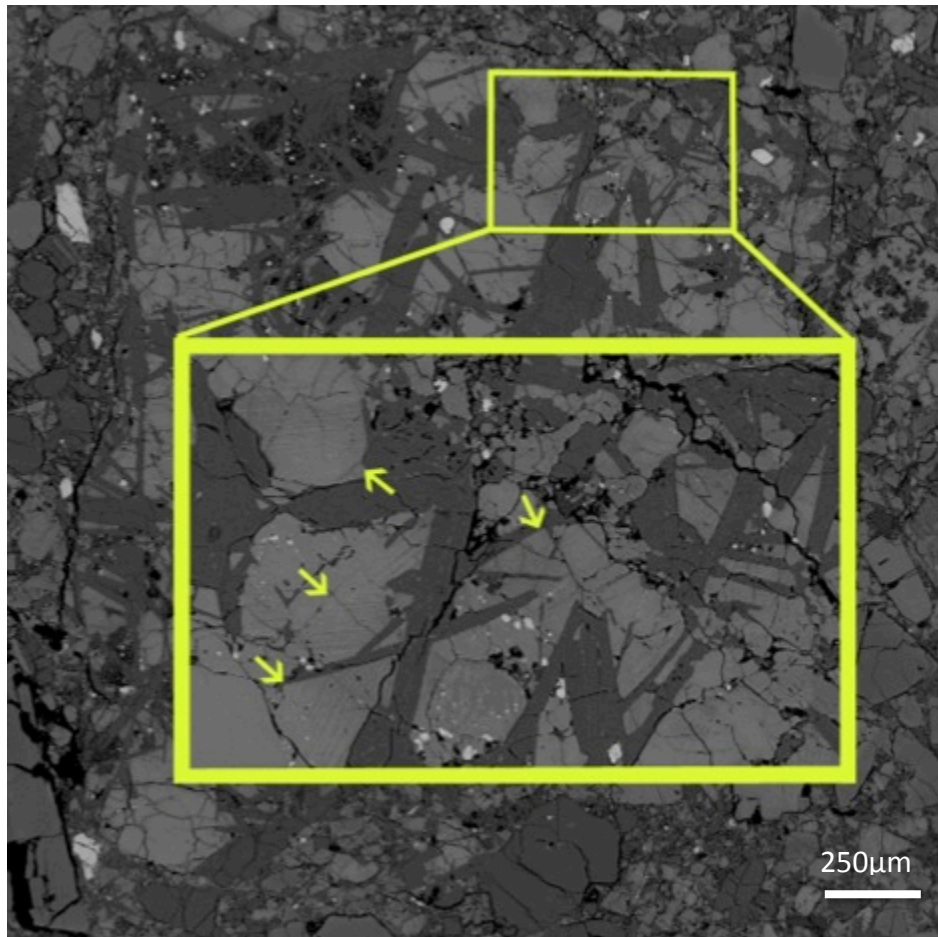




F8. BSE image with microprobe points (rotated $\sim 10^\circ$ clockwise from original SEM map).



F9. BSE image zoomed in to show exsolution lamellae



EET 96002 (BSE image) exhibiting exsolution lamellae of pyroxene. This figure is the same view as the last figure of EET 96002.