Supporting Information for

Enhancement of V_2O_5 Li-ion cathode stability by Ni/Co doped Li-borate base glass

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Figure S1-S12. SEM-EDX elements mapping

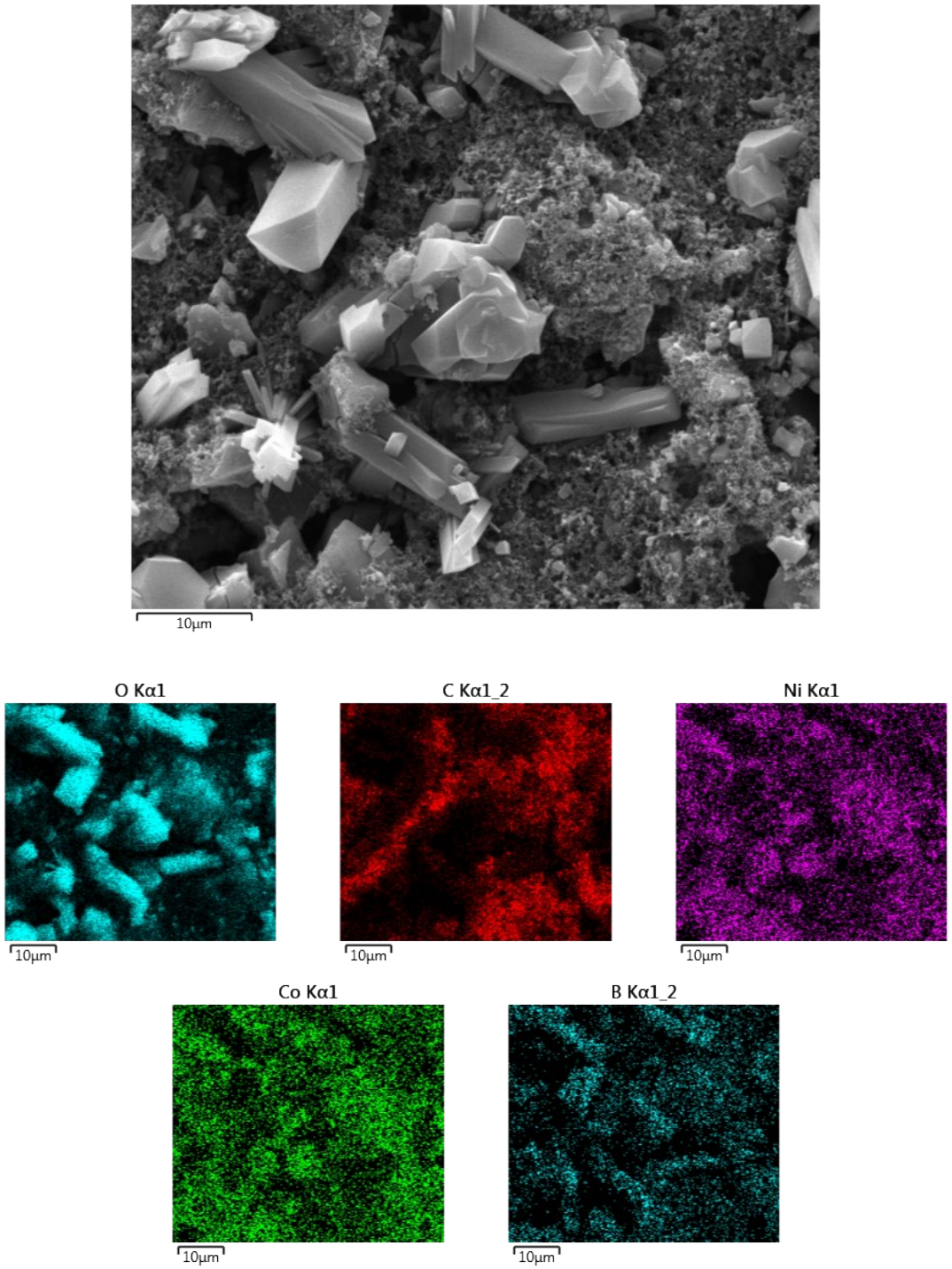

Fig. S1 SEM-EDX mapping of V00i.

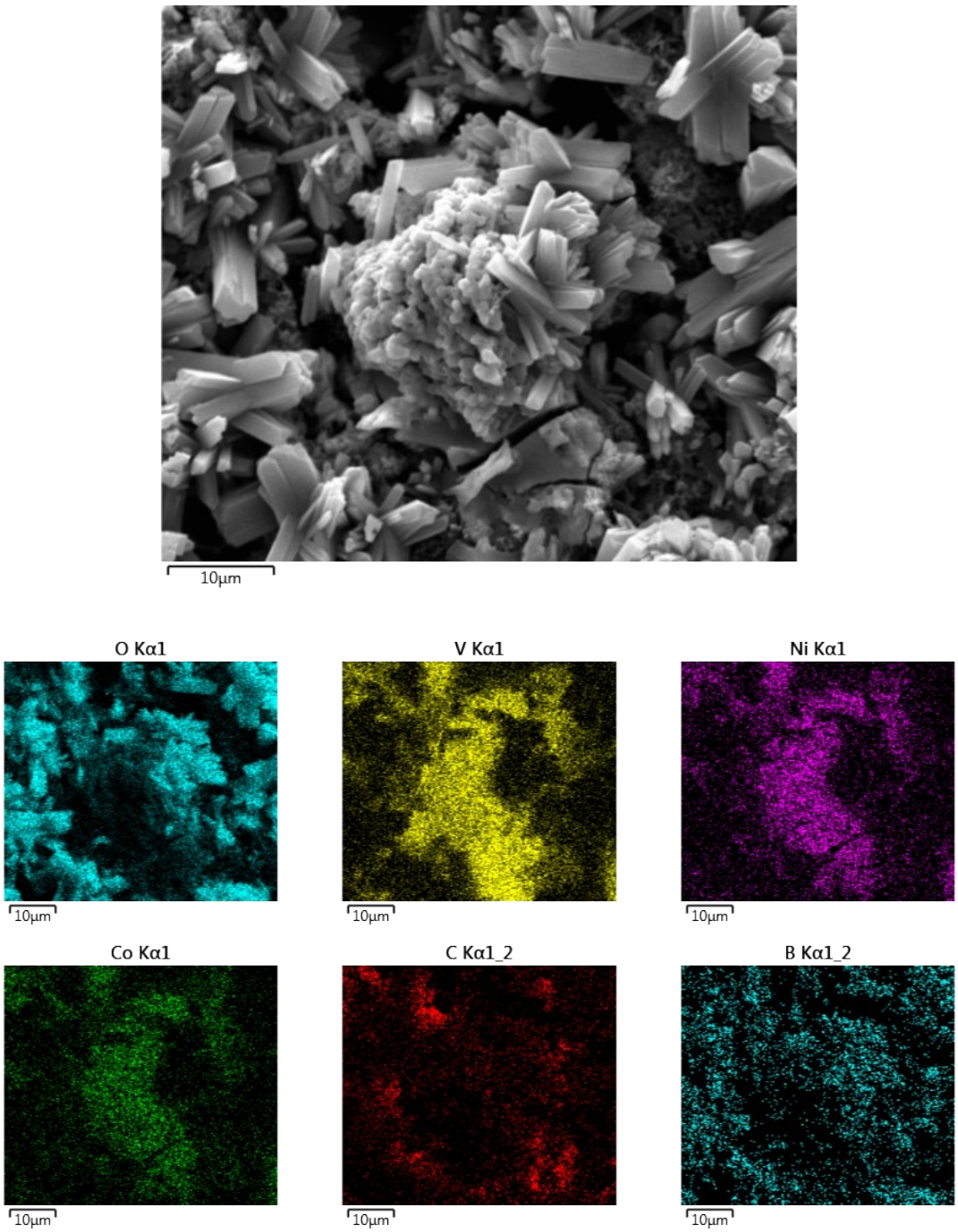

Fig. S2 SEM-EDX mapping of V25i.

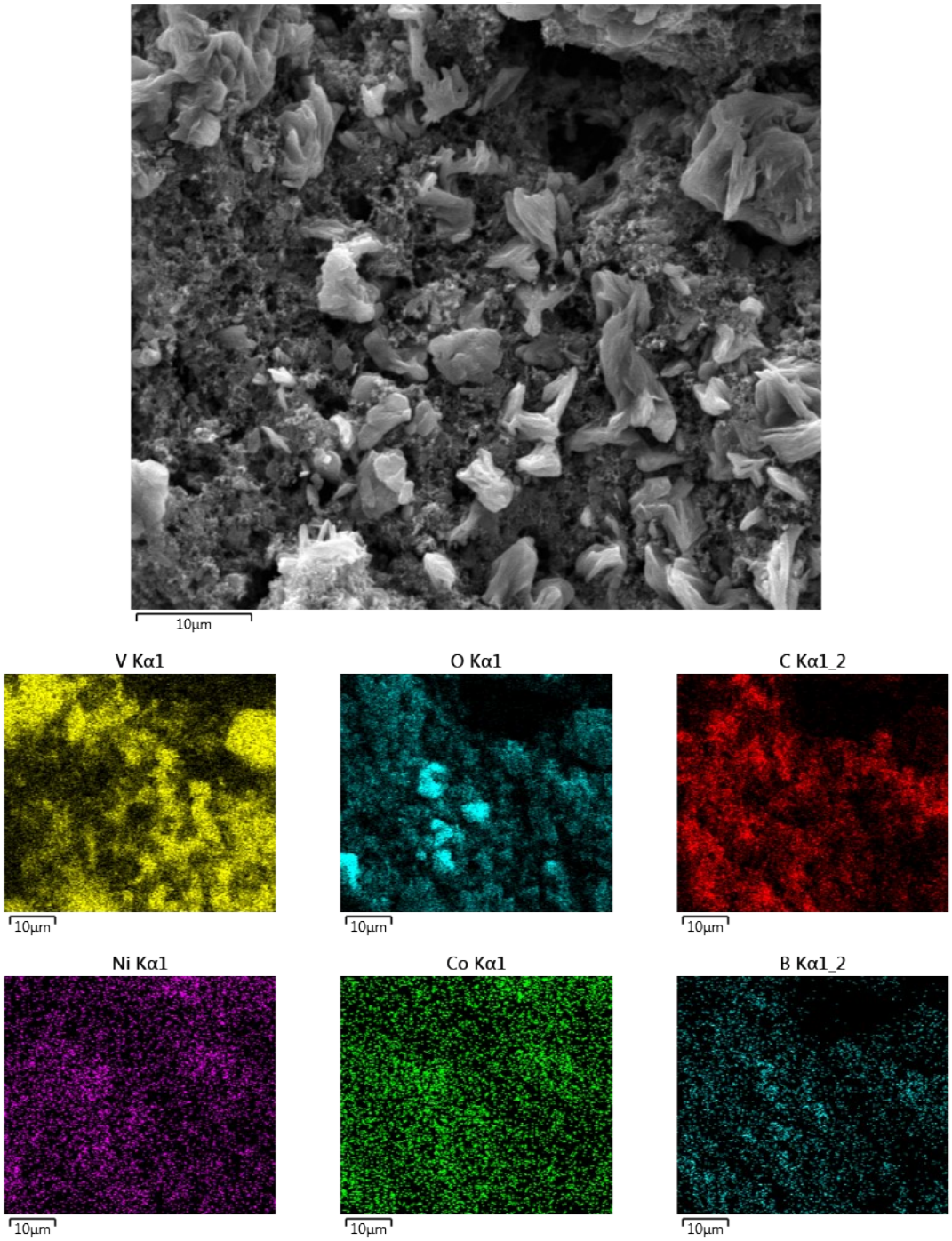

Fig. S3 SEM-EDX mapping of V50i.

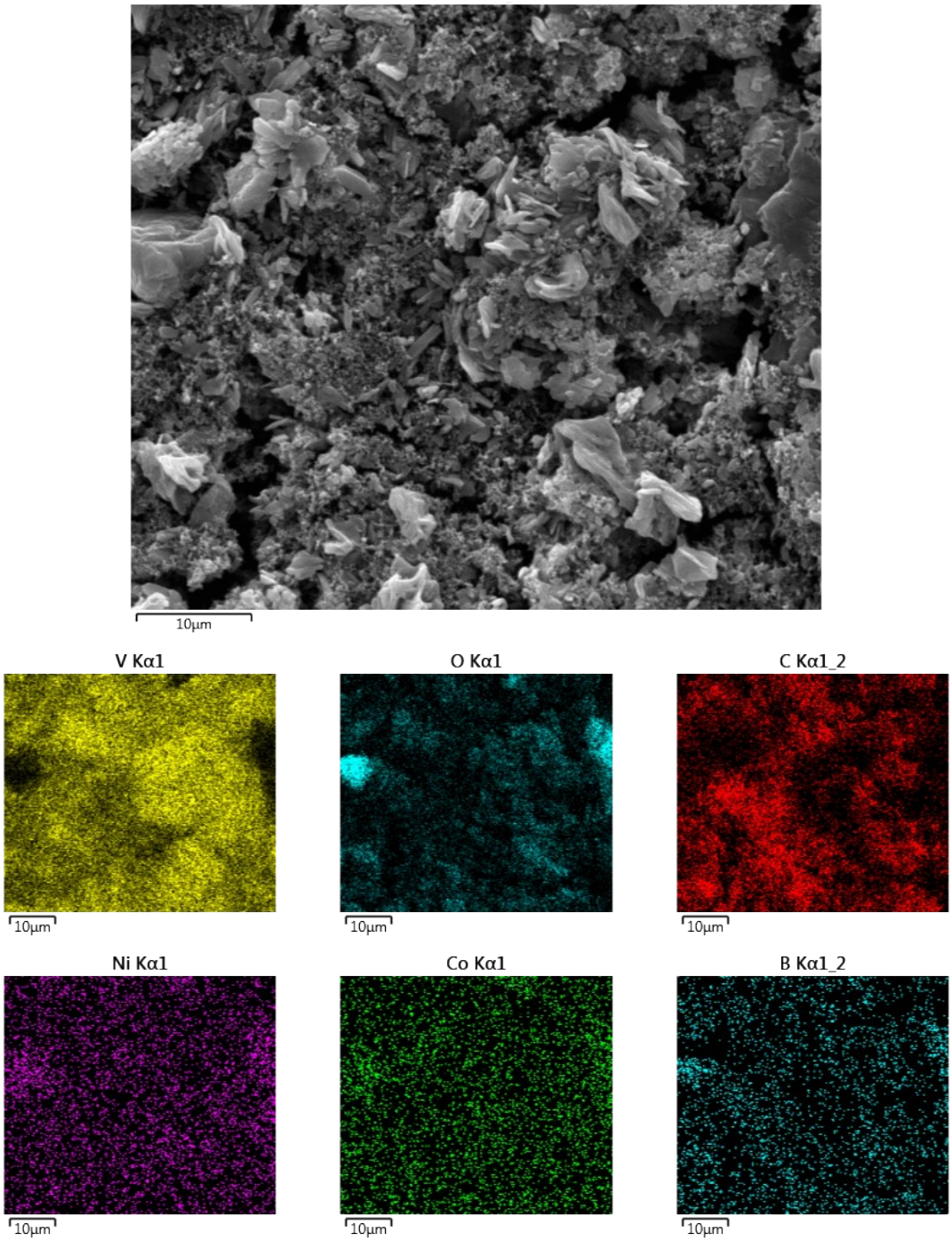

Fig. S4 SEM-EDX mapping of V75i.

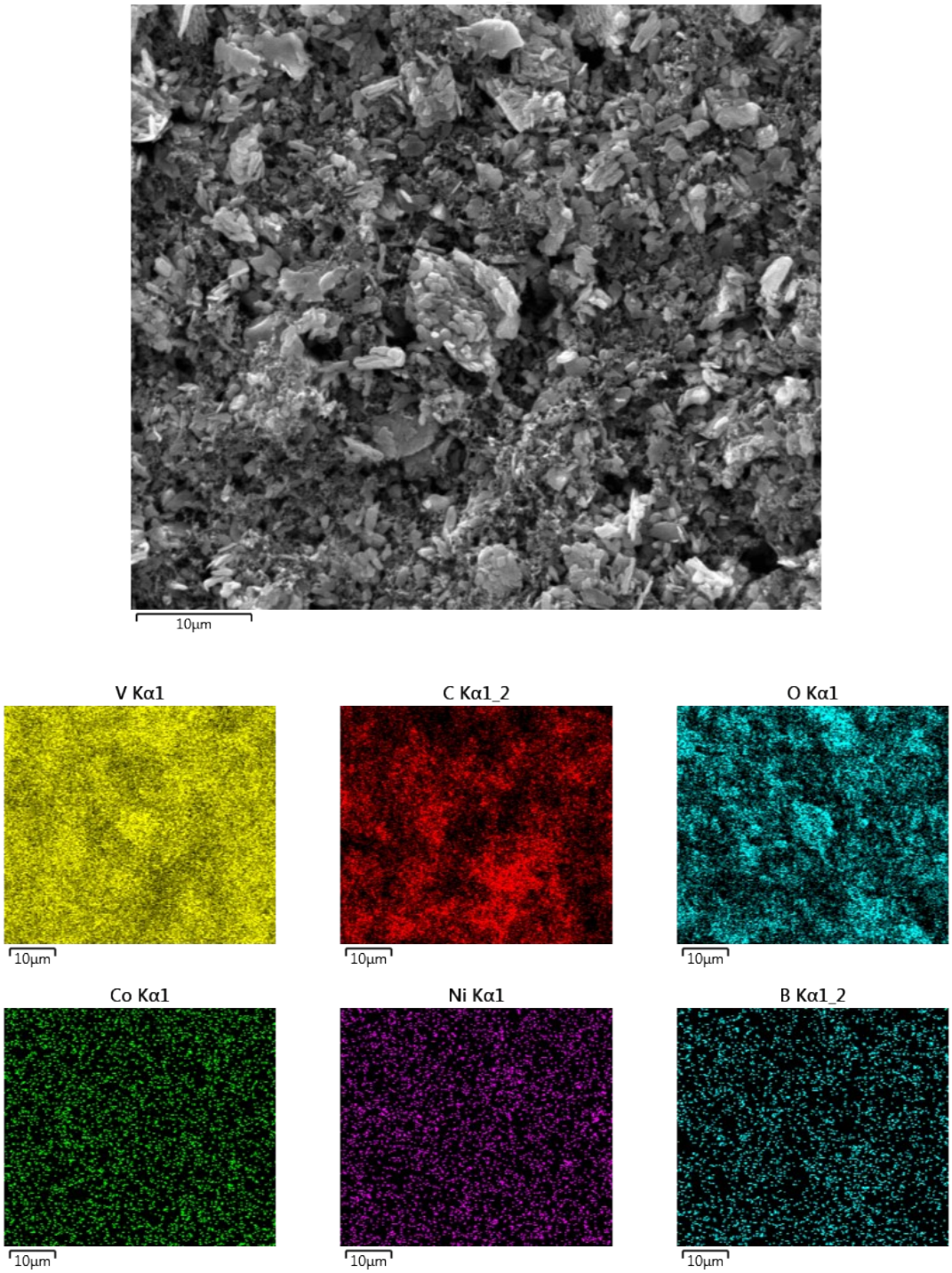

Fig. S5 SEM-EDX mapping of V94i.

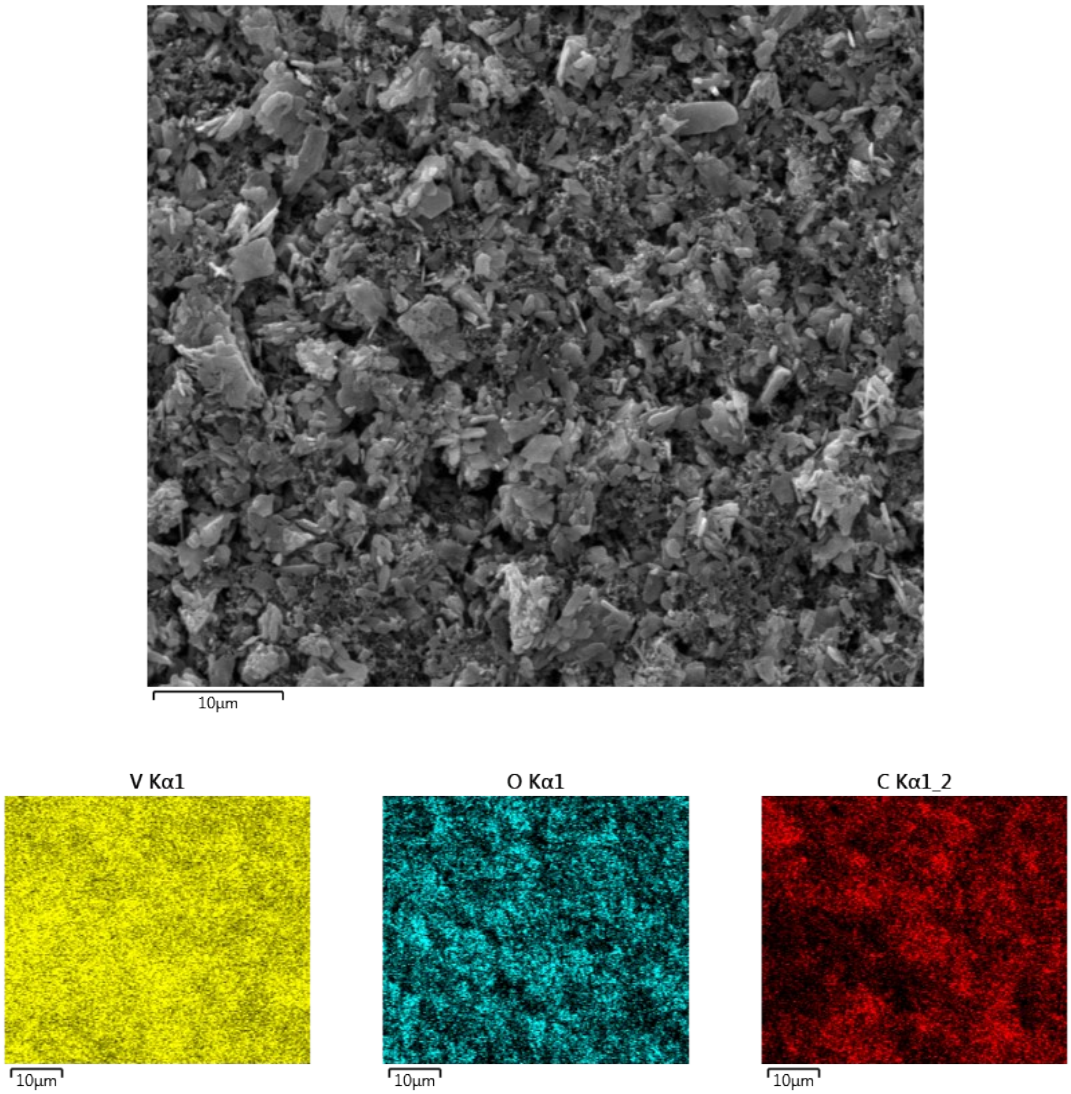

Fig. S6 SEM-EDX mapping of V100i.

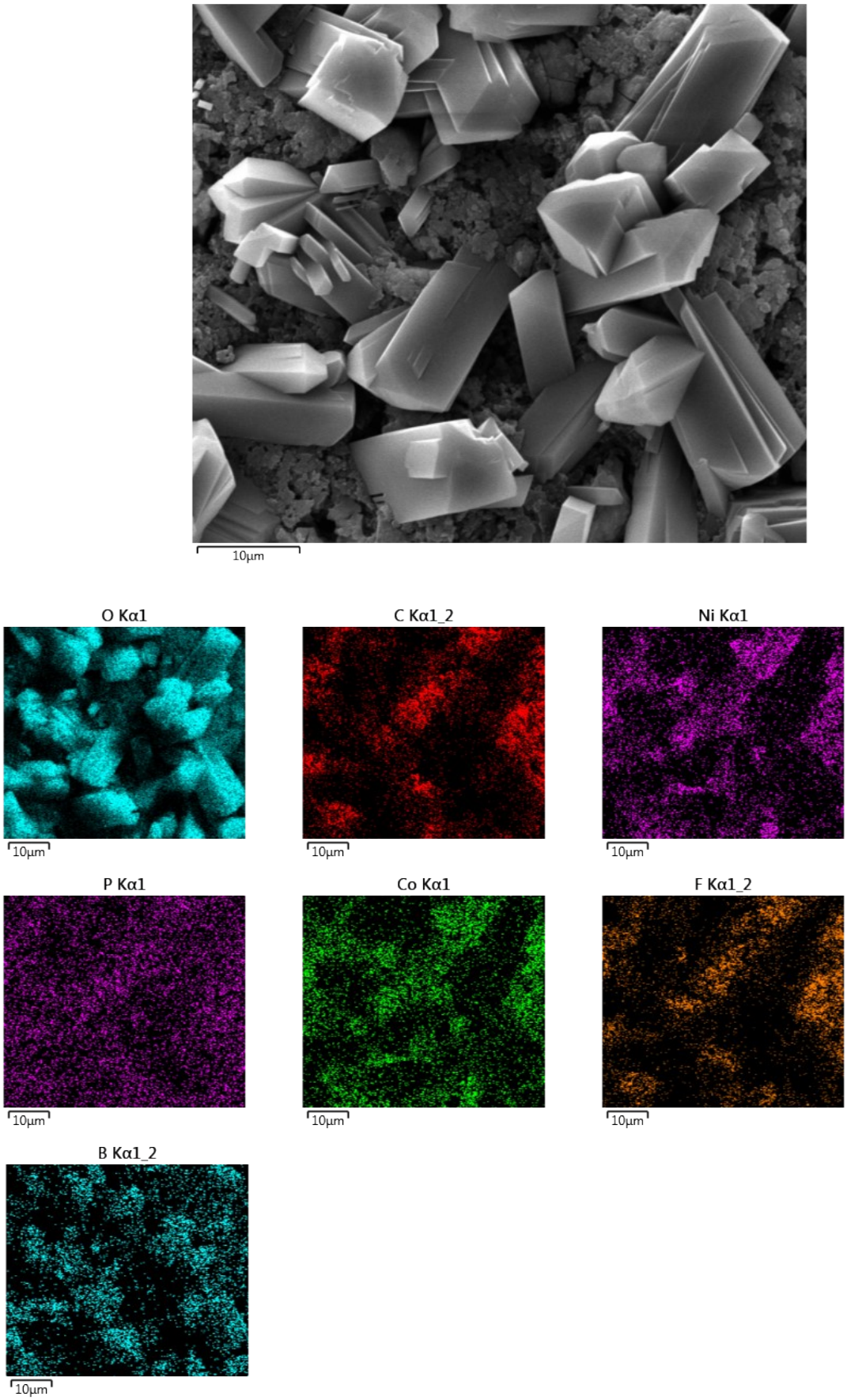

Fig. S7 SEM-EDX mapping of V00f.

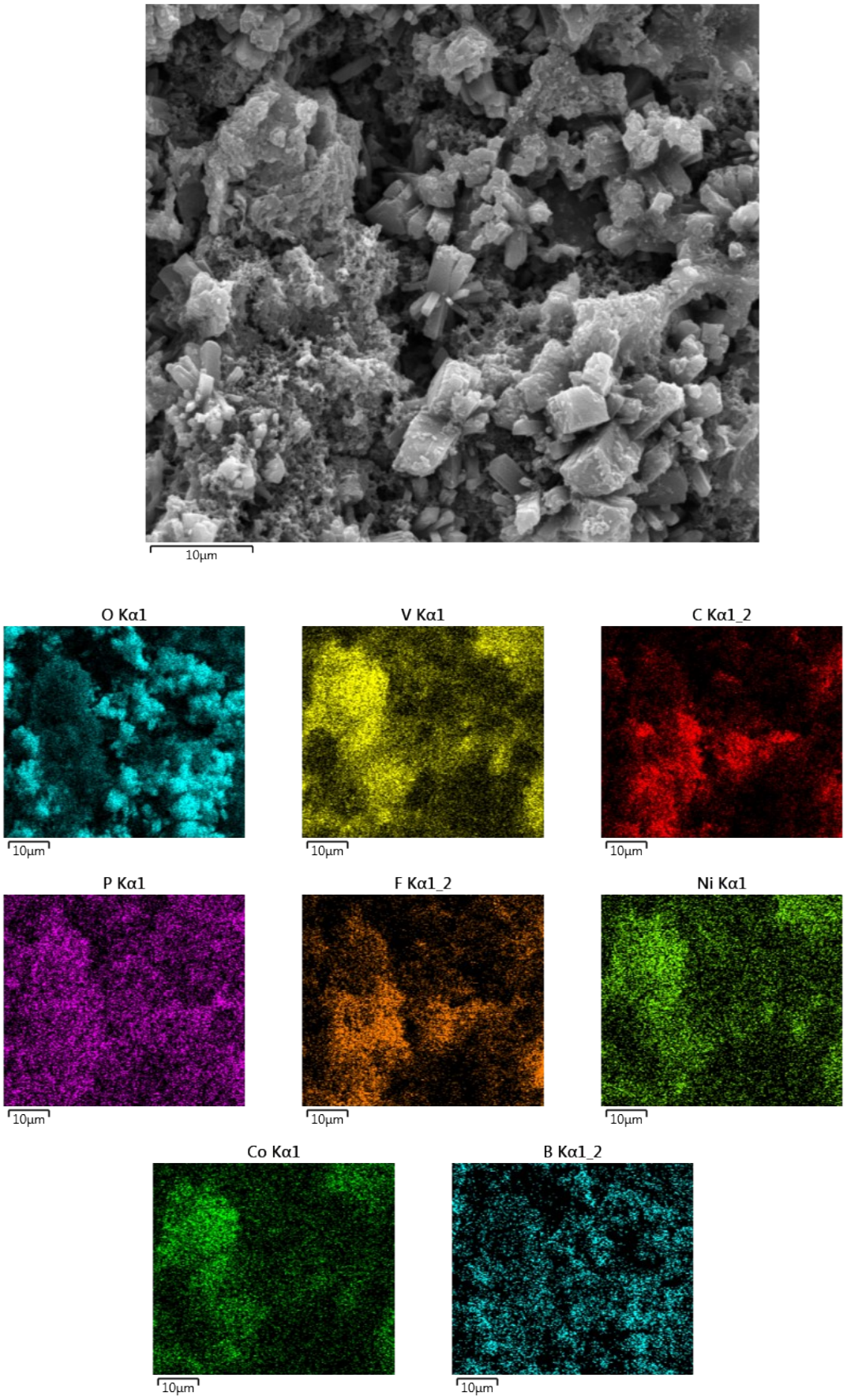

Fig. S8 SEM-EDX mapping of V25f.

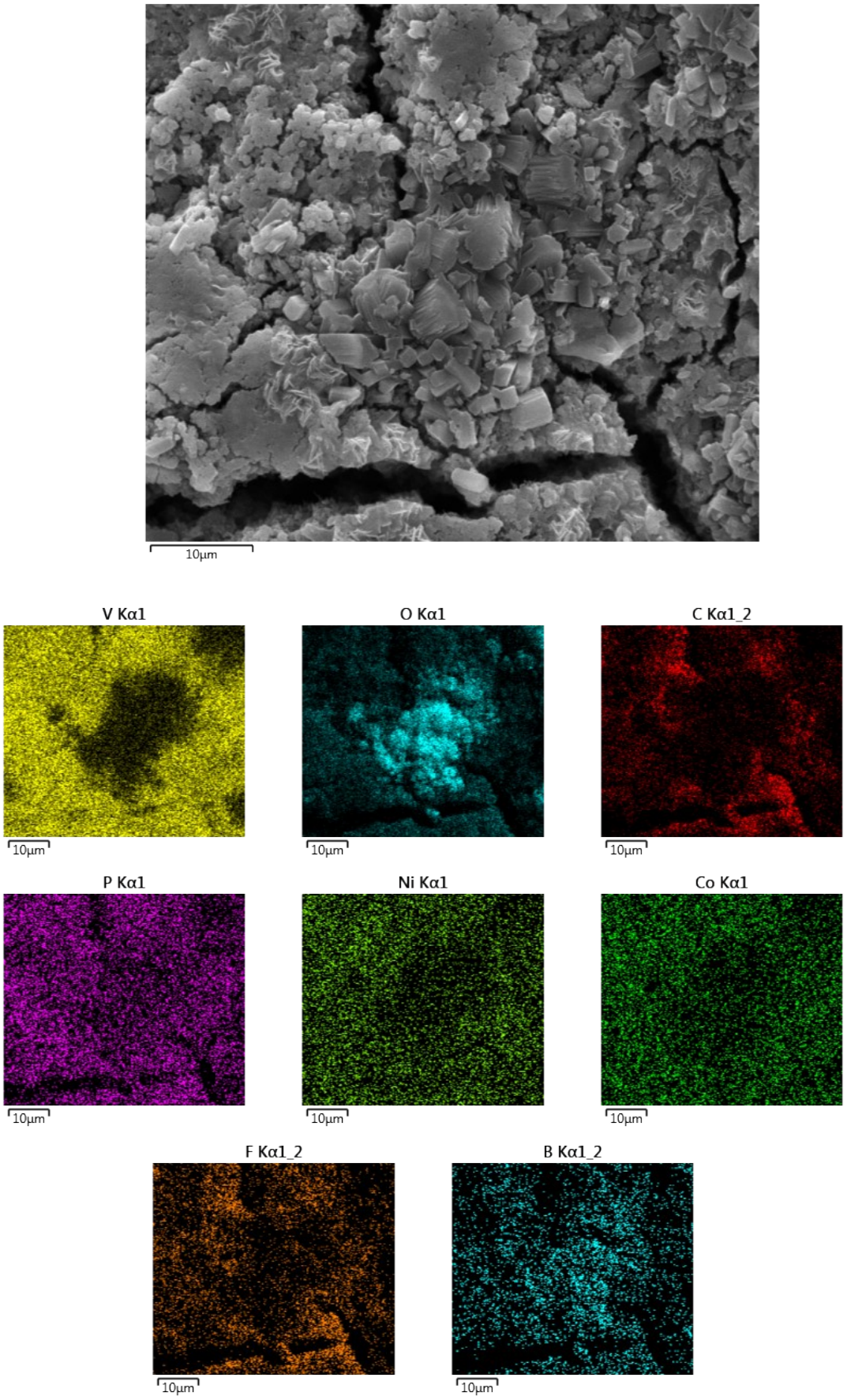

Fig. S9 SEM-EDX mapping of V50f.

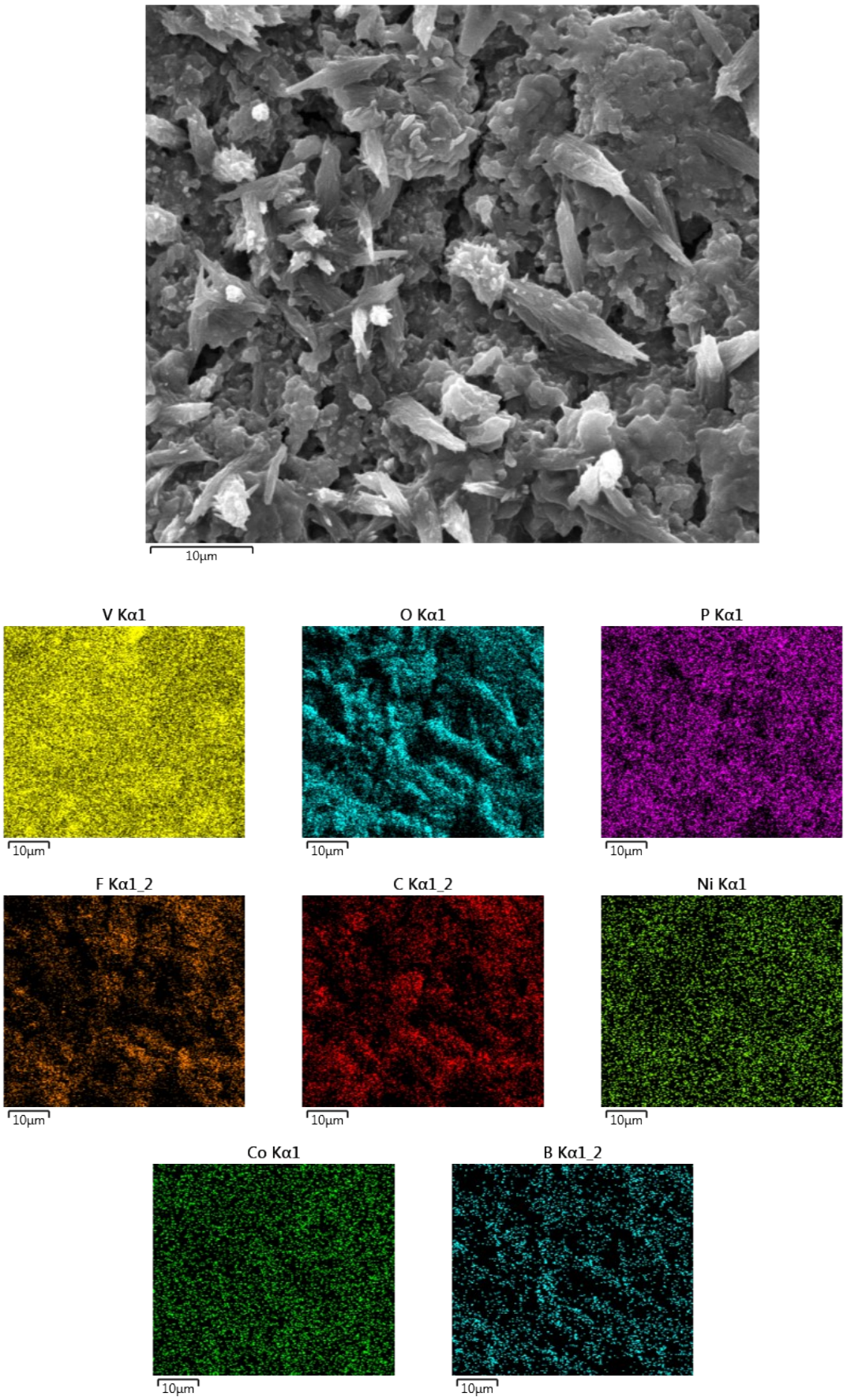

Fig. S10 SEM-EDX mapping of V75f.

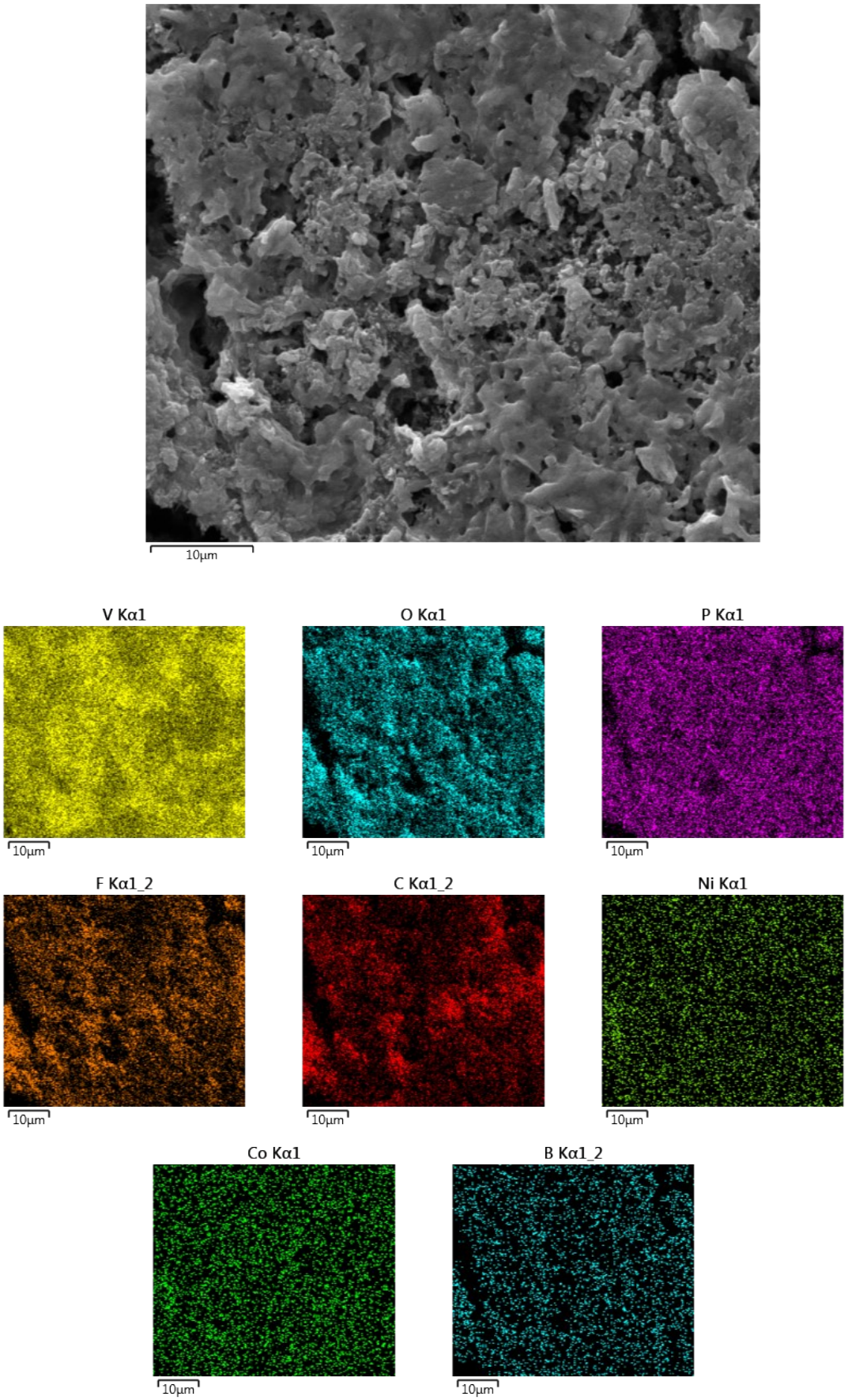

Fig. S11 SEM-EDX mapping of V94f.

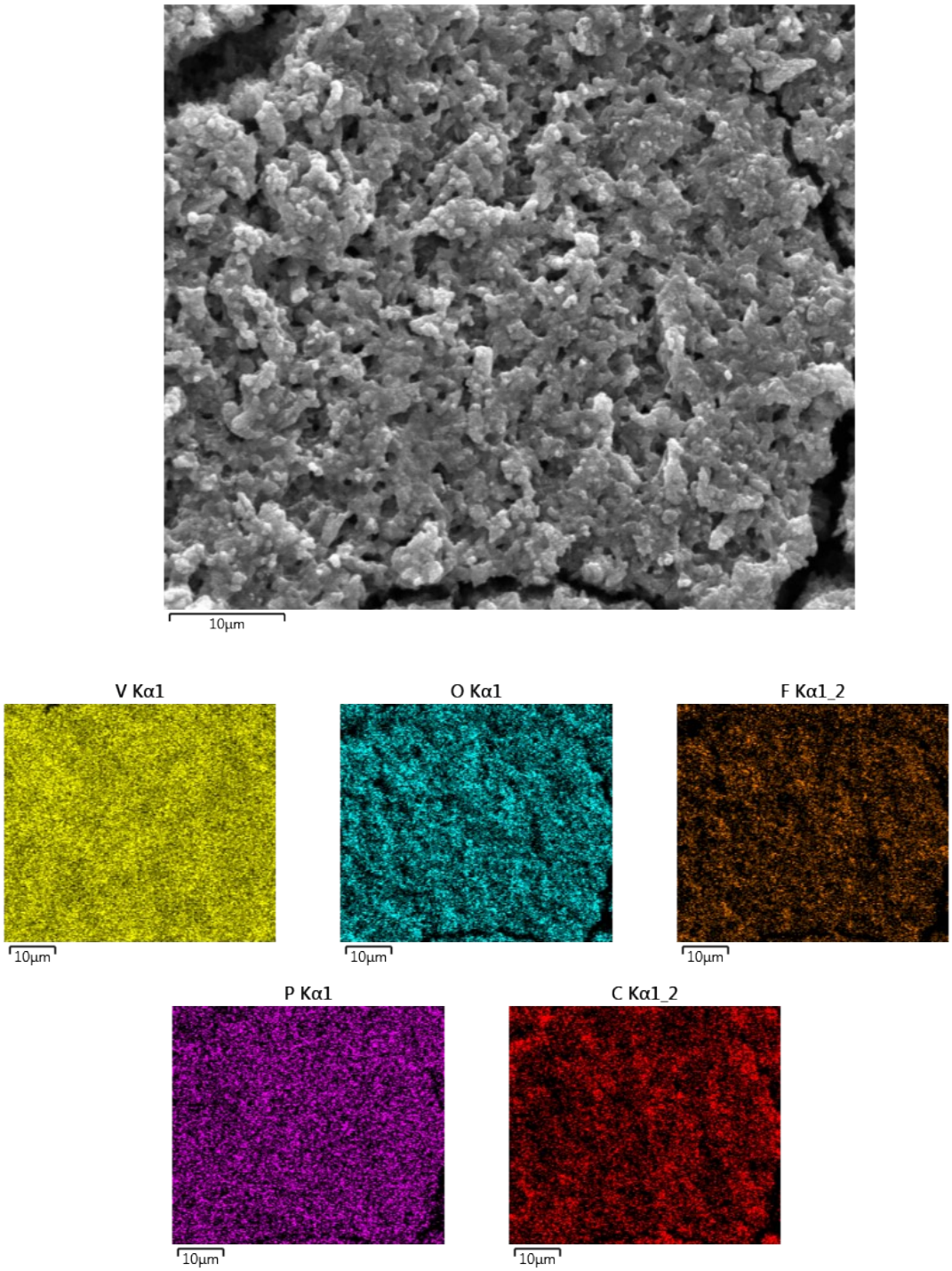

Fig. S12 SEM-EDX mapping of V100f.

Table S1. Composition of elements

Condition	Element (Wt%)								
	O	C	B	V	Ni	Co	F	P	Total
V00i	47.50	35.50	12.90	0.00	2.30	1.80	0.00	0.00	100
V25i	56.10	12.40	17.80	8.10	3.30	2.30	0.00	0.00	100
V50i	36.60	34.50	10.10	16.50	1.30	1.00	0.00	0.00	100
V75i	32.00	29.50	8.10	28.90	0.90	0.60	0.00	0.00	100
V94i	22.40	34.20	6.20	36.60	0.30	0.30	0.00	0.00	100
V100i	26.90	26.80	0.00	46.30	0.00	0.00	0.00	0.00	100
V00f	58.70	15.30	19.20	0.00	1.70	1.30	3.70	0.10	100
V25f	42.70	24.60	16.00	6.30	2.00	1.60	6.40	0.40	100
V50f	43.80	18.10	13.60	16.70	1.90	1.40	4.20	0.30	100
V75f	30.10	17.40	12.30	24.50	1.60	1.10	11.90	1.10	100
V94f	21.10	22.30	7.80	31.30	0.30	0.20	15.50	1.50	100
V100f	28.80	15.70	0.00	35.60	0.00	0.00	19.00	0.90	100

Figure S13. Comparison of V composition

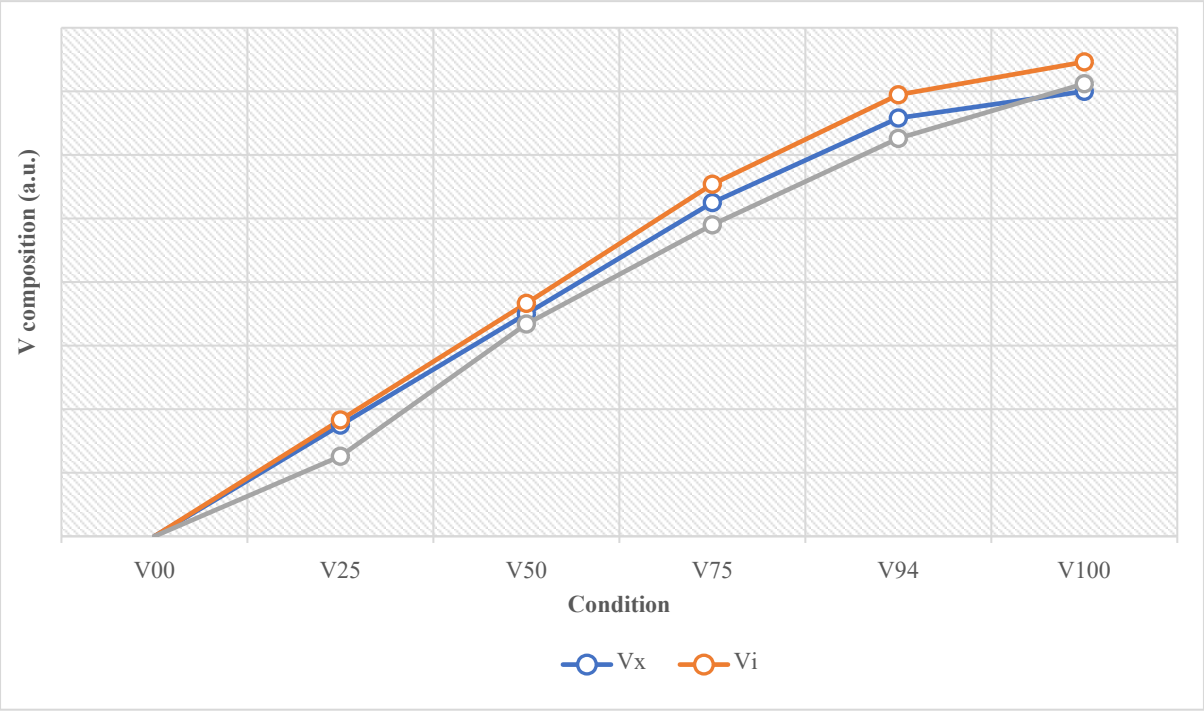

Fig. S13. Composition of V, Vx is setting condition composition, Vi is composition of V on cathode films, and Vf is composition of V after cycling test.

Figure S14. Charge & dis-charge curve

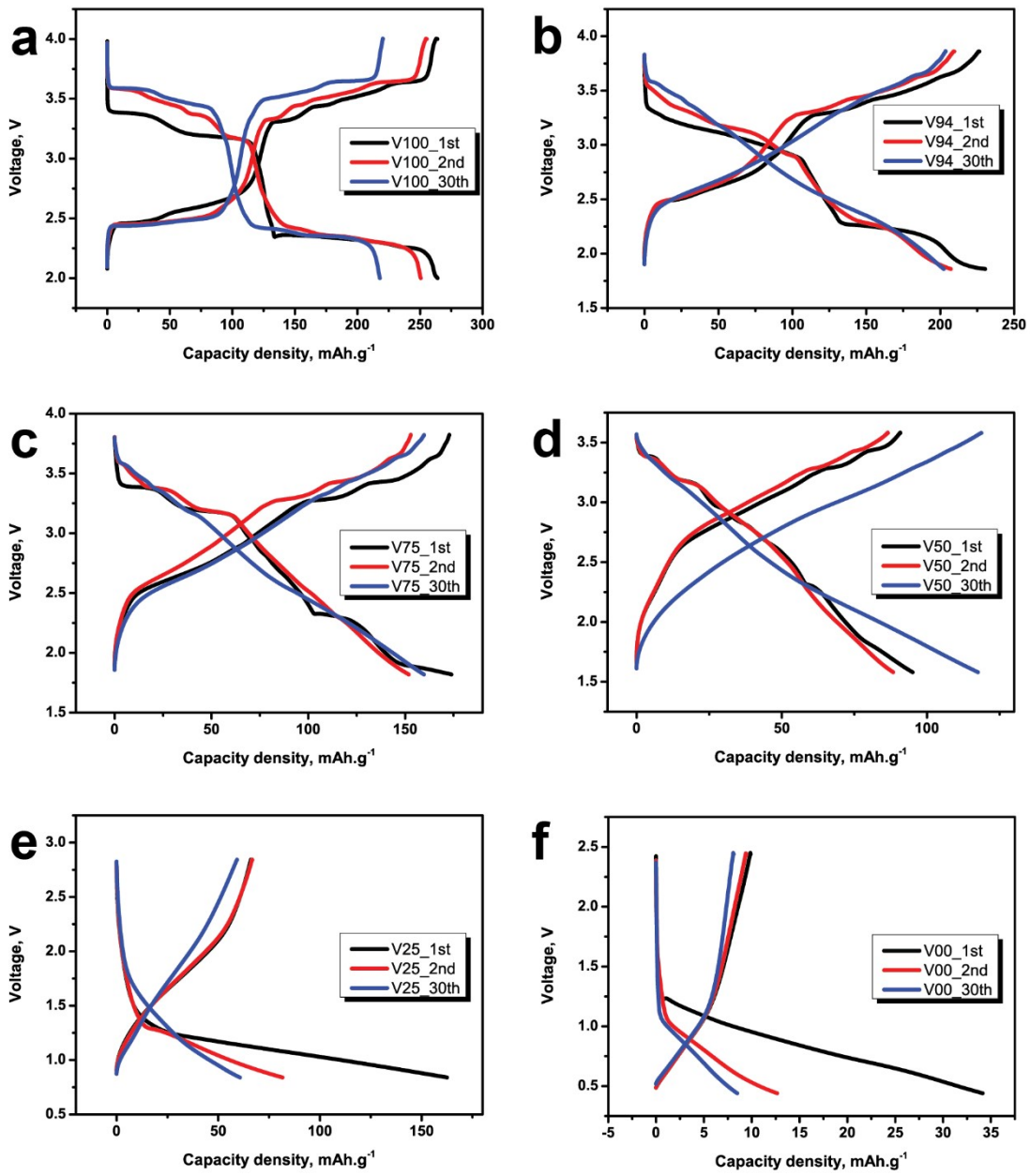

Fig. S14. The capacity - voltage of charge and discharge curve of (a) 0%, (b) 25%, (c) 50%, (d) 75%, (e) 94%, and (f) 100% of V_2O_5.