Supporting information

Two-step method to prepare P2-type layered oxide materials for stable sodium-ion batteries via precursor and sintering temperature control

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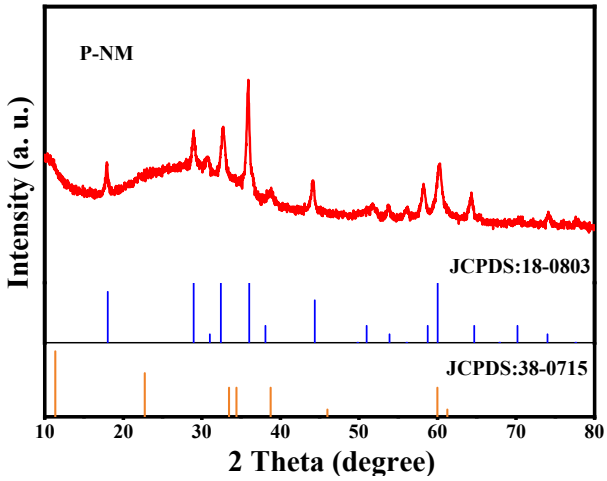

Fig. S1. XRD pattern of P-NM

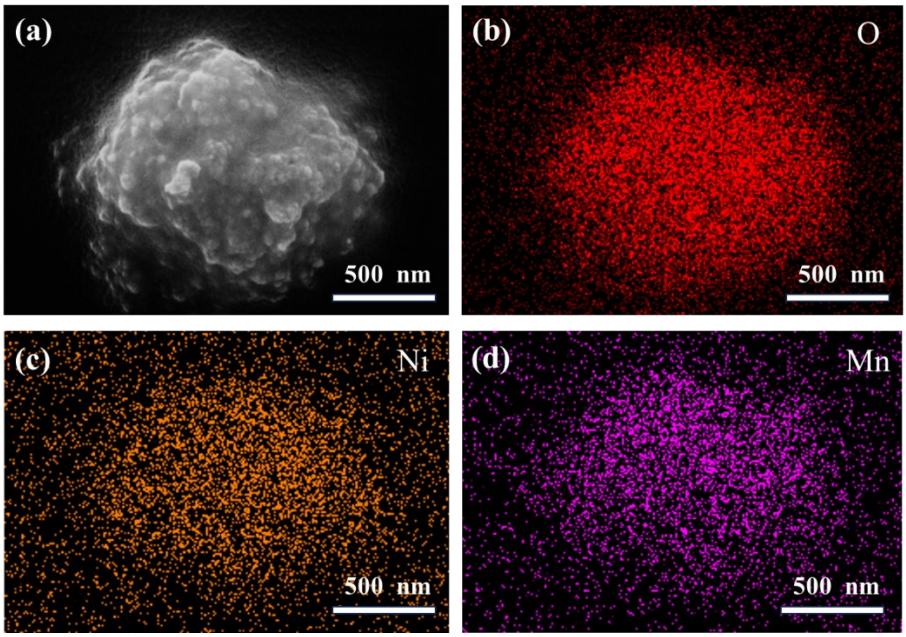

Fig. S2. SEM image and O, Ni, Mn element mappings of P-NM.

Table S1. The relative intensity (R.I.) of different (h k l) in different XRD patterns.

R.I. / Sample	(002)/(100)	(002)/(012)	(002)/(104)
PS-850	2.94	2.85	3.16
PS-900	2.30	1.32	1.45
PS-950	2.11	1.33	1.44
PS-100	2.16	1.54	1.73
S-900	2.99	2.25	2.83

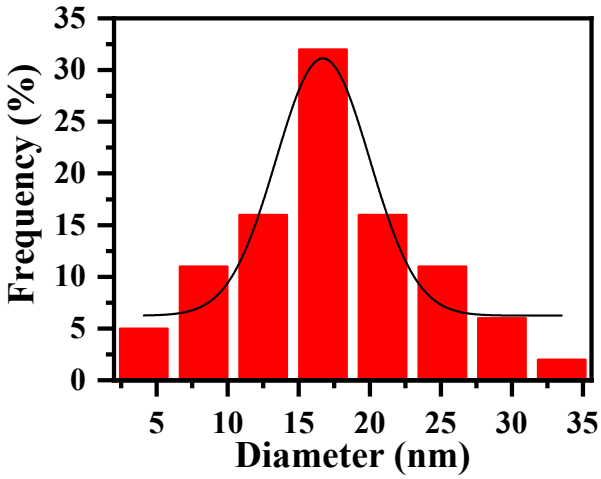

Fig. S3. Particle size analysis statistics of P-NM

Table S2. The detail rate properties of all cells (the data of the capacities collected from the last discharge process)

Rate \ Cells	PS-850 (mAh g^{-1})	PS-900 (mAh g^{-1})	PS-950 (mAh g^{-1})	PS-1000 (mAh g^{-1})	S-900 (mAh g^{-1})
0.1 C	162.9	149.8	139.6	138.5	154.5
0.2 C	140.5	140.7	131.6	125.8	138.4
0.5 C	117.8	130.0	121.1	114.6	120.6
1 C	97.7	117.2	110.0	105.7	104.1
2 C	68.0	98.3	91.7	91.5	86.6
5 C	23.5	64.8	52.2	61.1	56.1

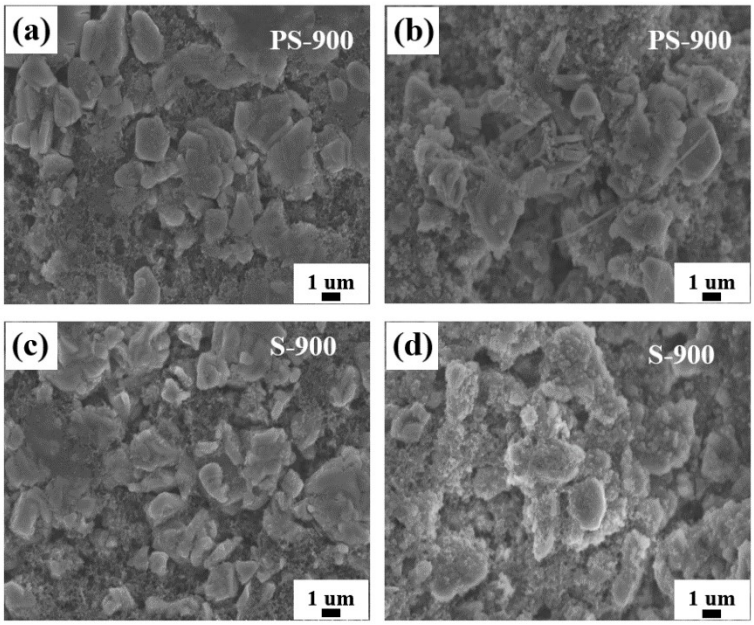

Fig. S4. SEM images of PS-900 (a) before and (b) after cycles,(c) SEM imagesof S-900 (c) before and (d) after cycles