Supplementary Information

**Three-dimensional graphene frameworks wrapped Li3V2(PO4)3 with reversible topotactic sodium-ion storage**

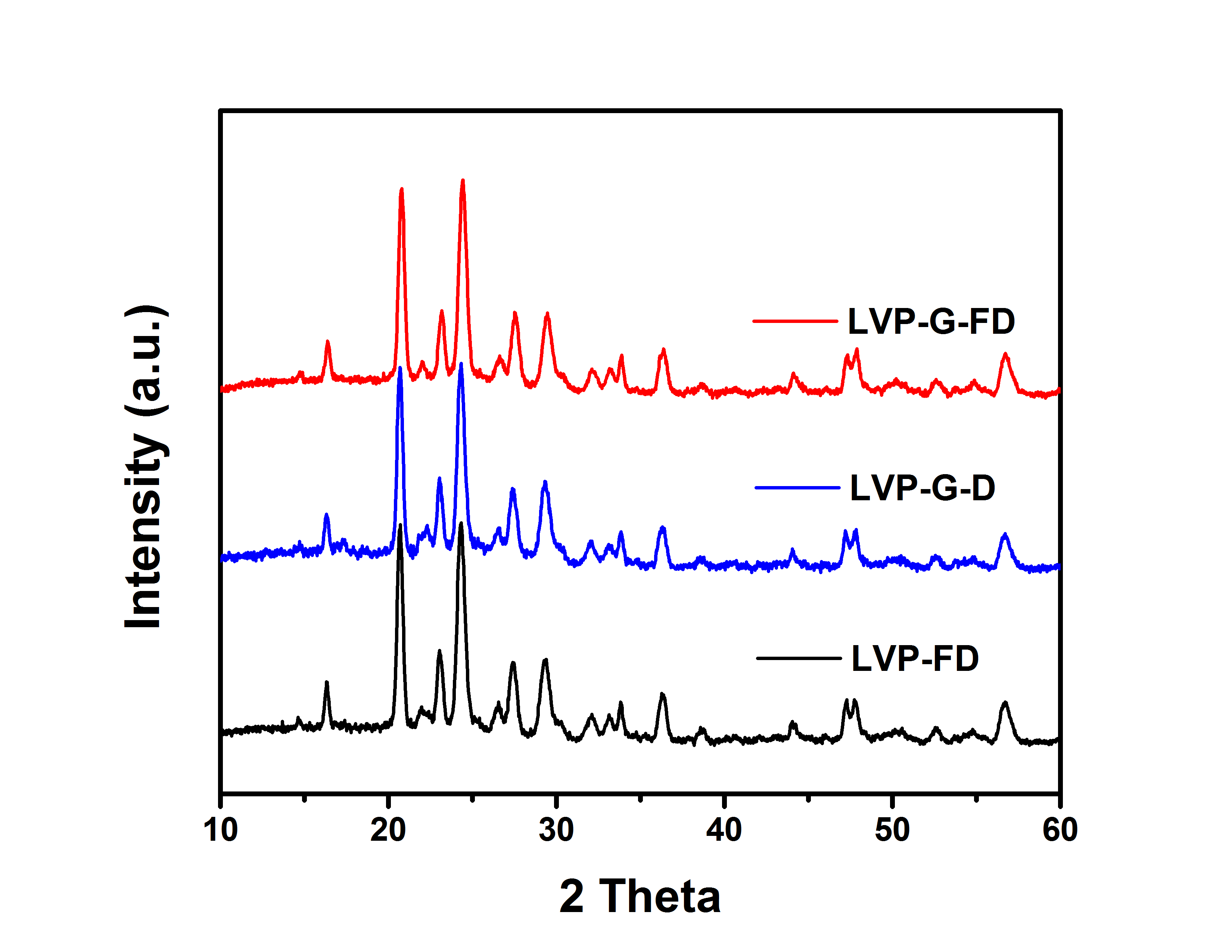
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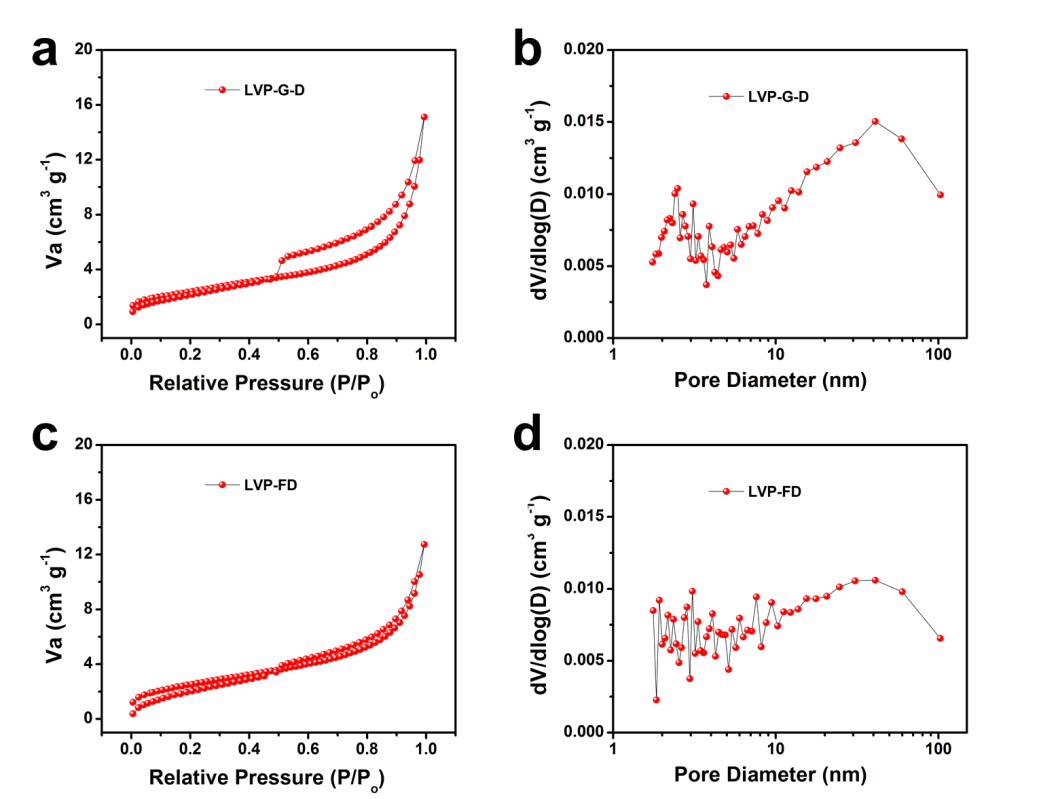
E-mail: (anqinyou86@whut.edu.cn, mlq518@whut.edu.cn)

**Table S1.** The lattice parameters of fresh LVP-G-FD and LVP-G-FD after first charge/discharge process (2.5-4.2 V).

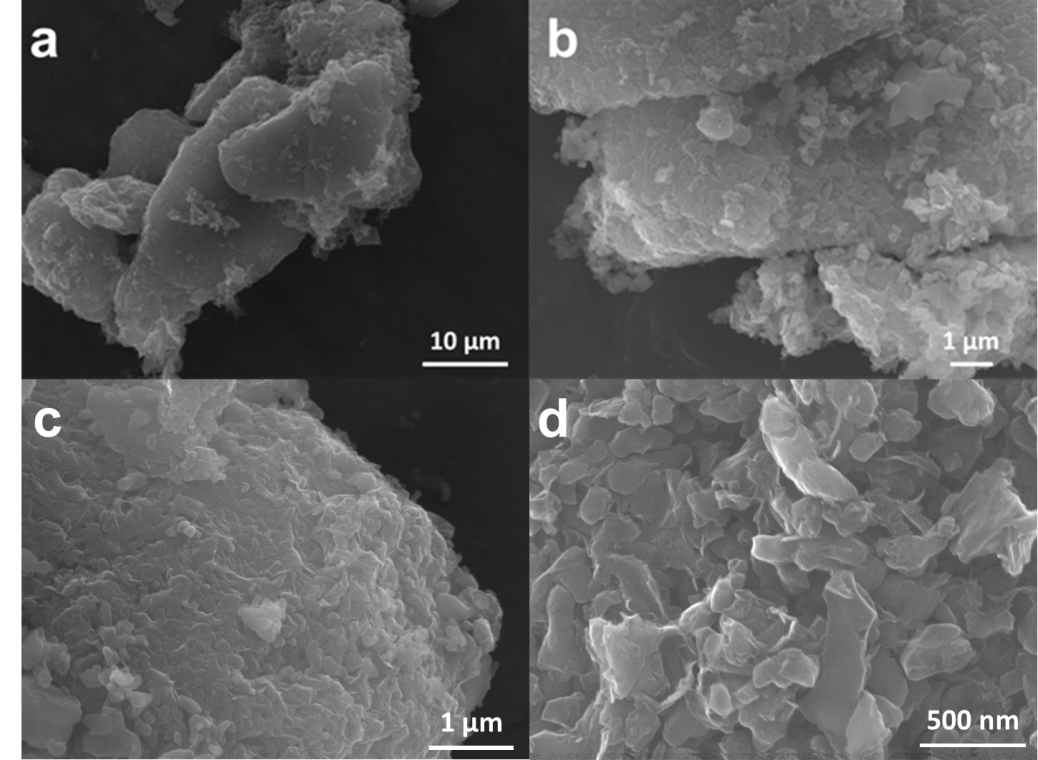
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sample | a [Å] | b [Å] | c [Å] | β [°] |
| Fresh LVP-G-FD | 8.62 | 8.60 | 12.05 | 90.47 |
| LVP-G-FD after first cycle | 8.67 | 8.72 | 12.16 | 91.22 |



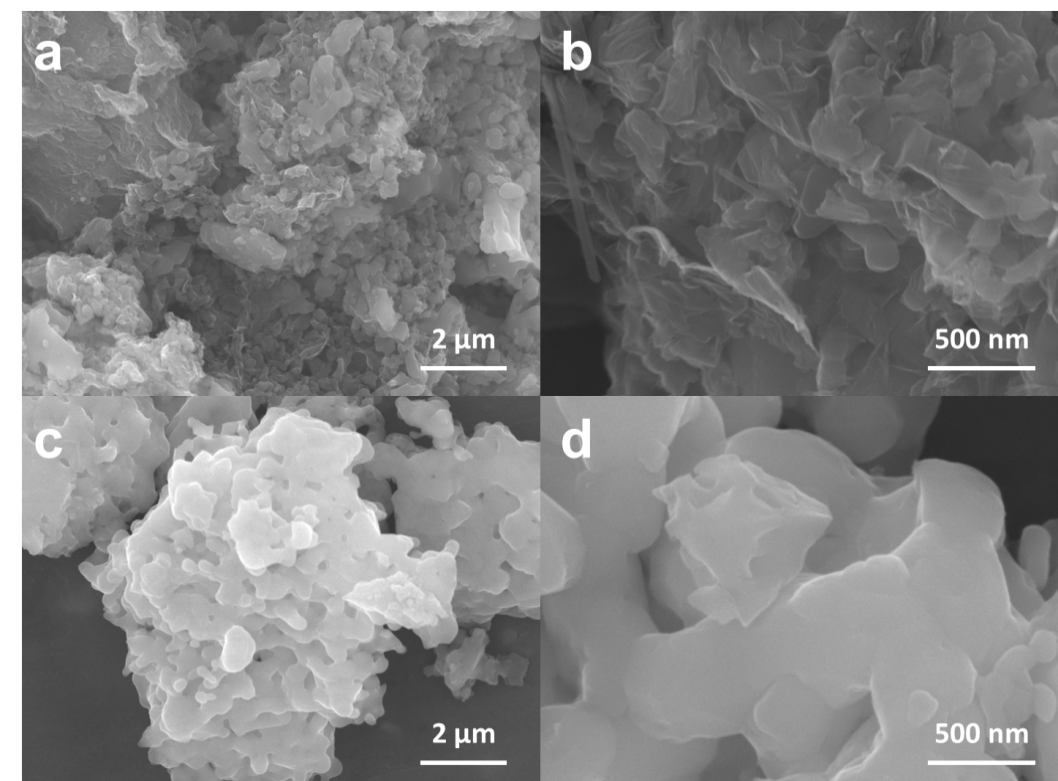
**Fig. S1.** The XRD patterns of LVP-G-FD, LVP-G-D and LVP-FD.



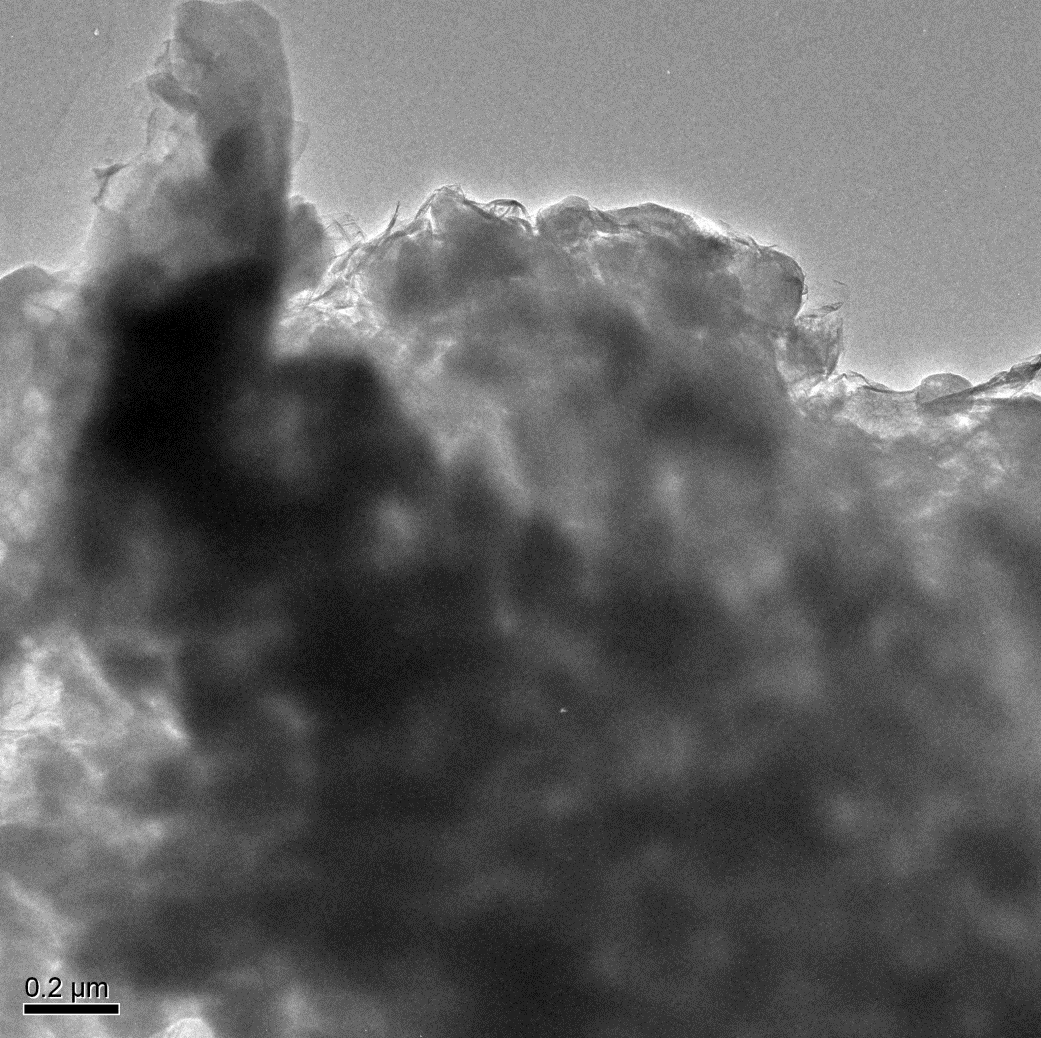
**Fig. S2.** (a) Nitrogen adsorption-desorption isotherms of LVP-G-D and (b) corresponding pore size distribution. (c) Nitrogen adsorption-desorption isotherms of LVP-FD and (d) corresponding pore size distribution.



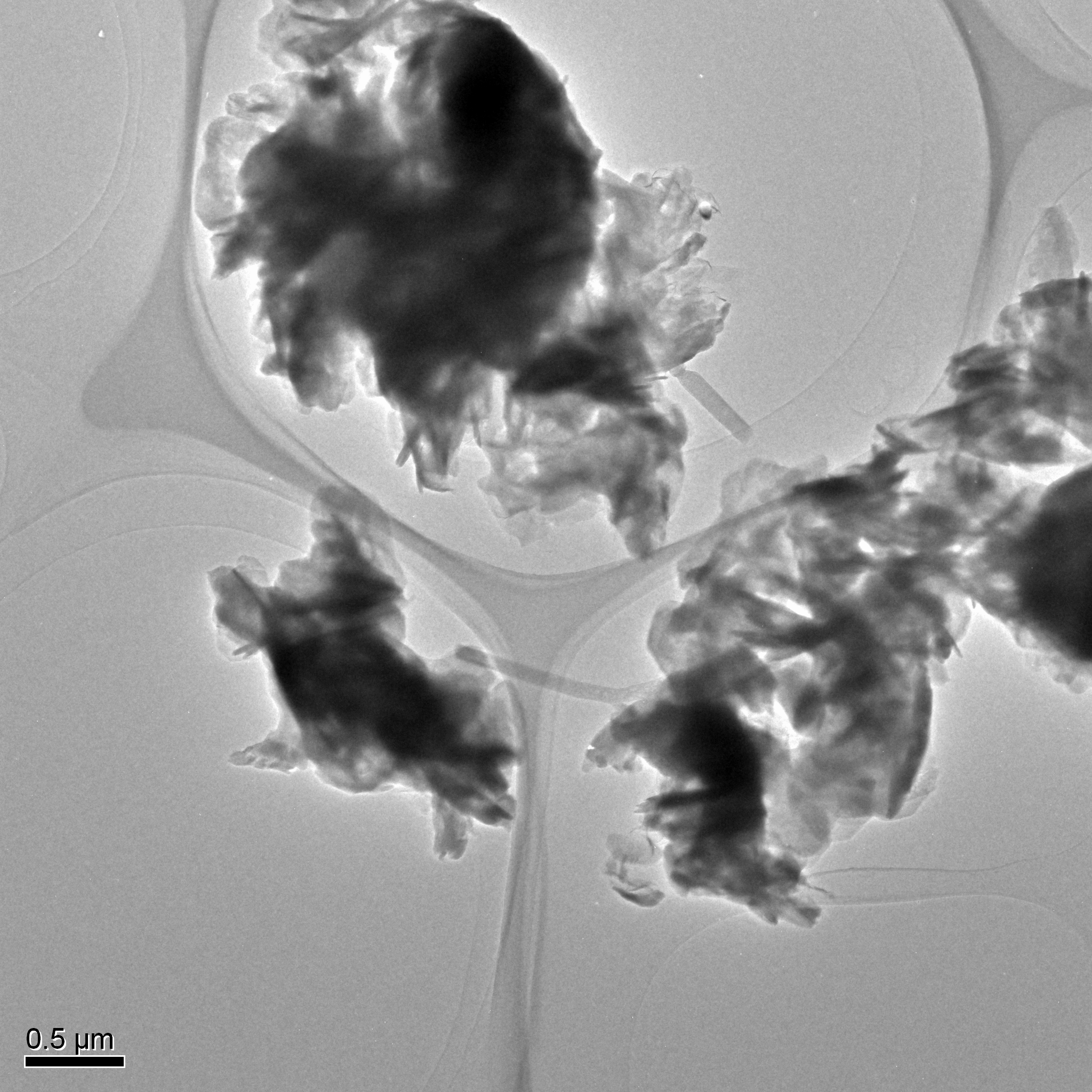
**Fig. S3.** FESEM images of LVP-G-FD.



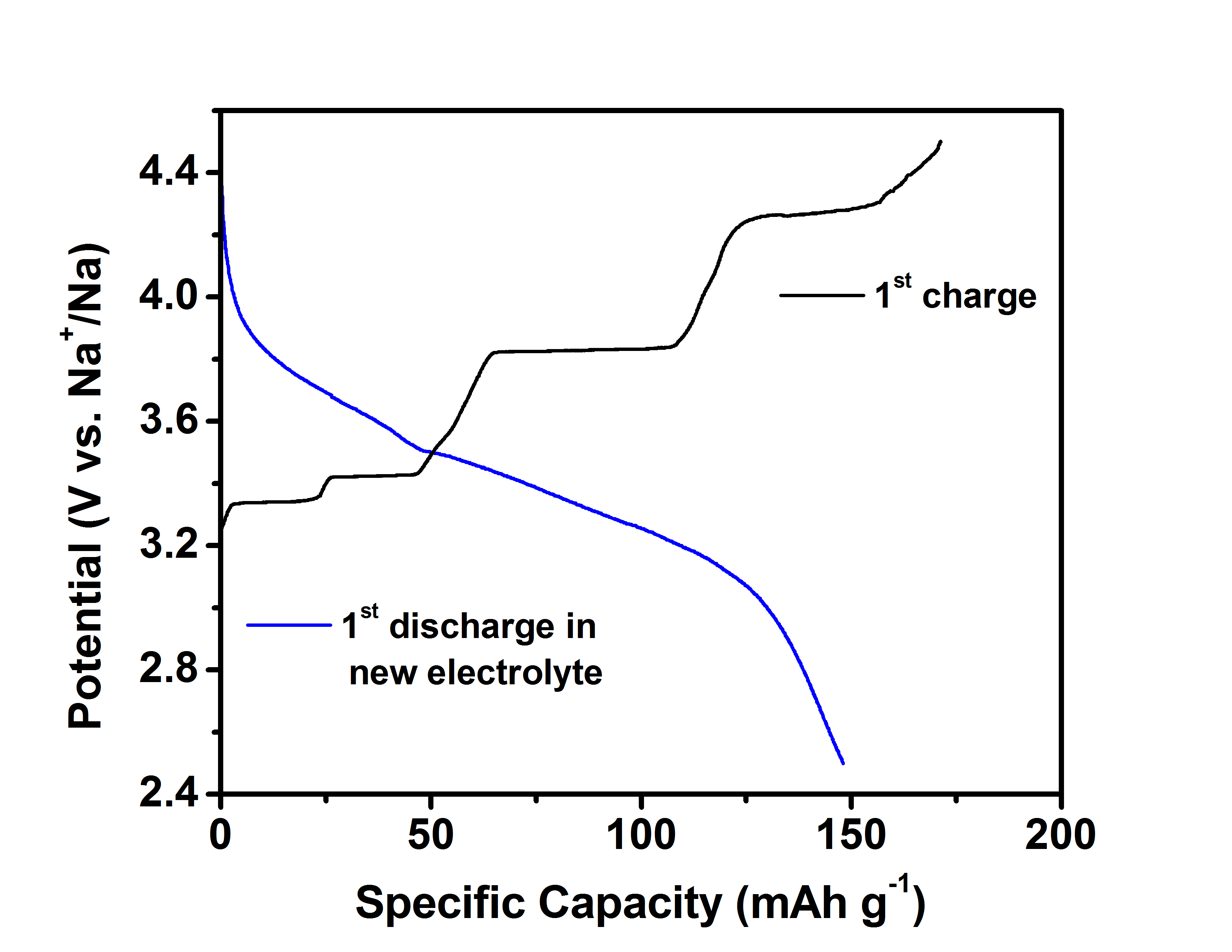
**Fig. S4.** FESEM images of LVP-G-D (a, b) and LVP-FD (c, d).



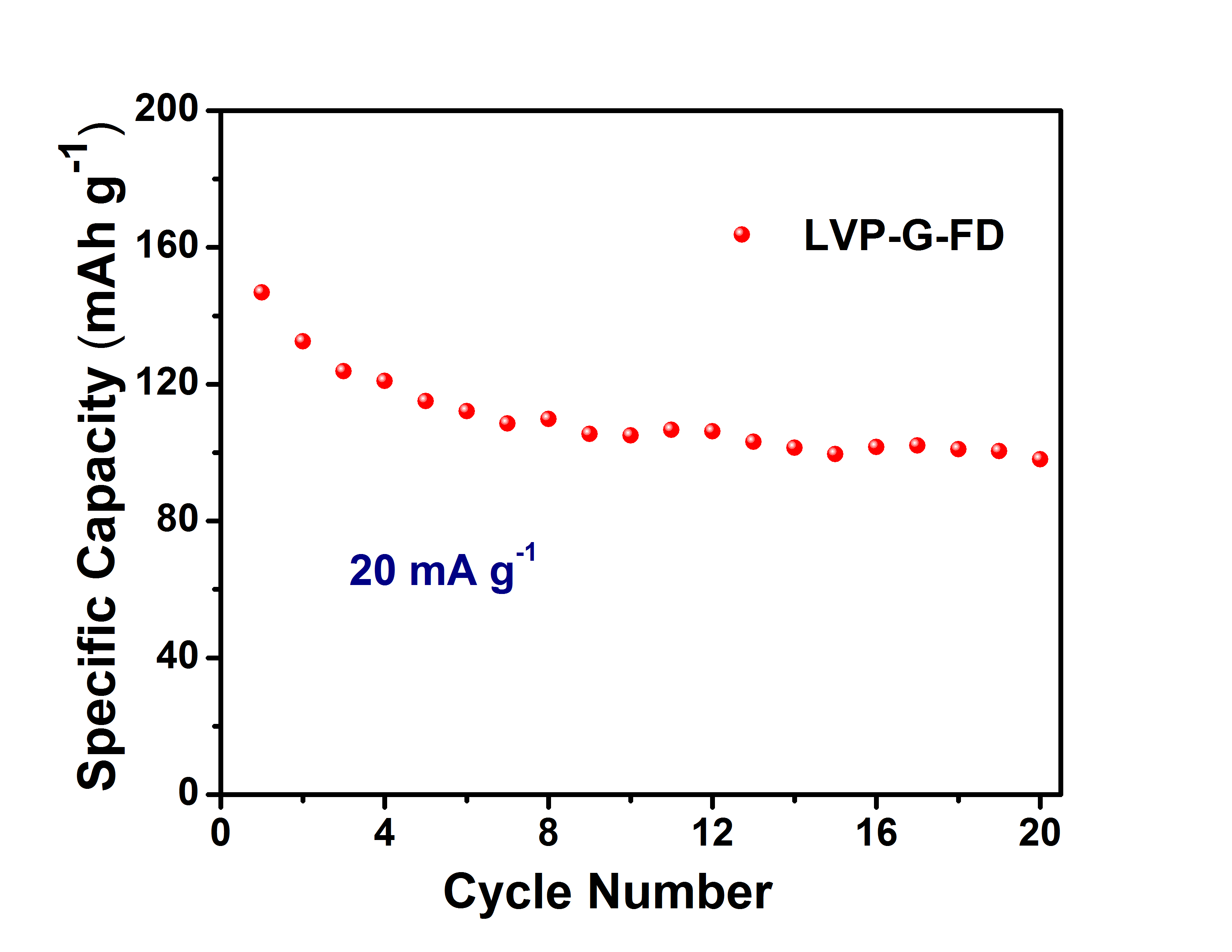
**Fig. S5.** TEM images of LVP-G-FD.



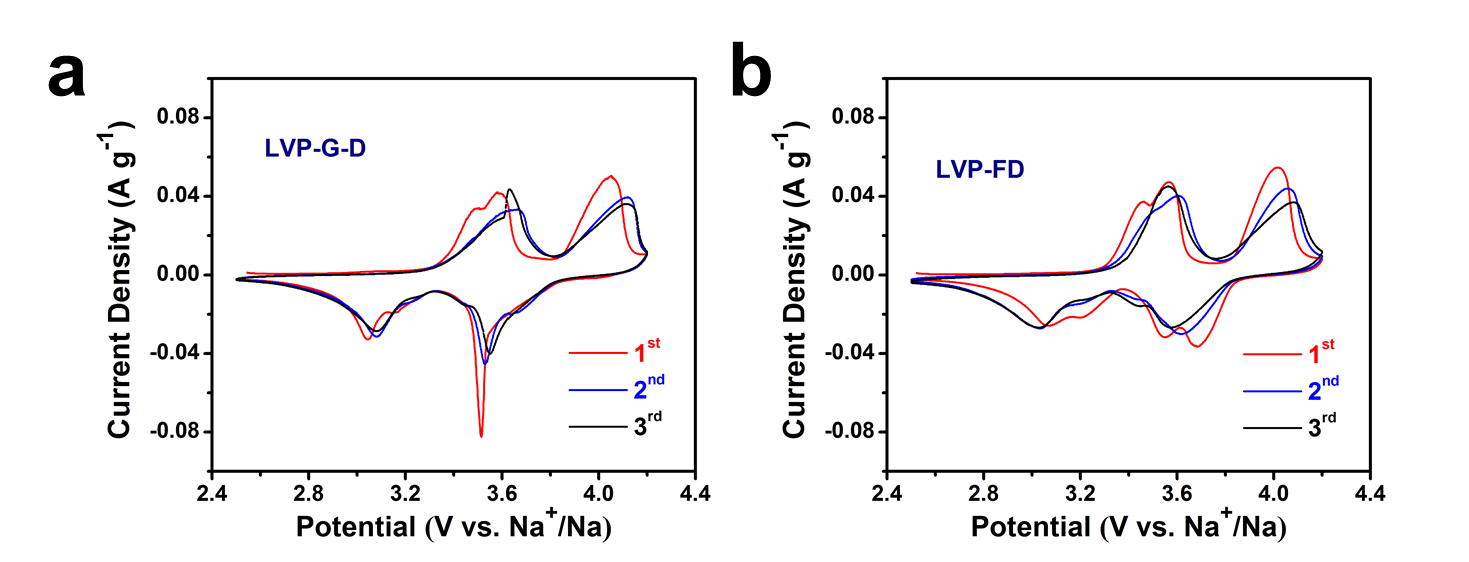
**Fig. S6.** TEM images of LVP-G-D.



**Fig. S7.** Charge/discharge curves of LVP-G-FD at the potential range from 2.5 to 4.5 V.



**Fig. S8.** The cycling performance of LVP-G-FD at 20 mA g-1 in the potential range from 2.5 to 4.5 V.



**Fig. S9.** The CV curves of LVP-G-D (a) and LVP-FD (b) in first three cycles at a scan rate of 0.1 mV s-1 in the potential range from 2.5 to 4.2 V.