Supporting Information

Potassium manganese hexacyanoferrate/graphene as high-performance cathode for potassium-ion batteries

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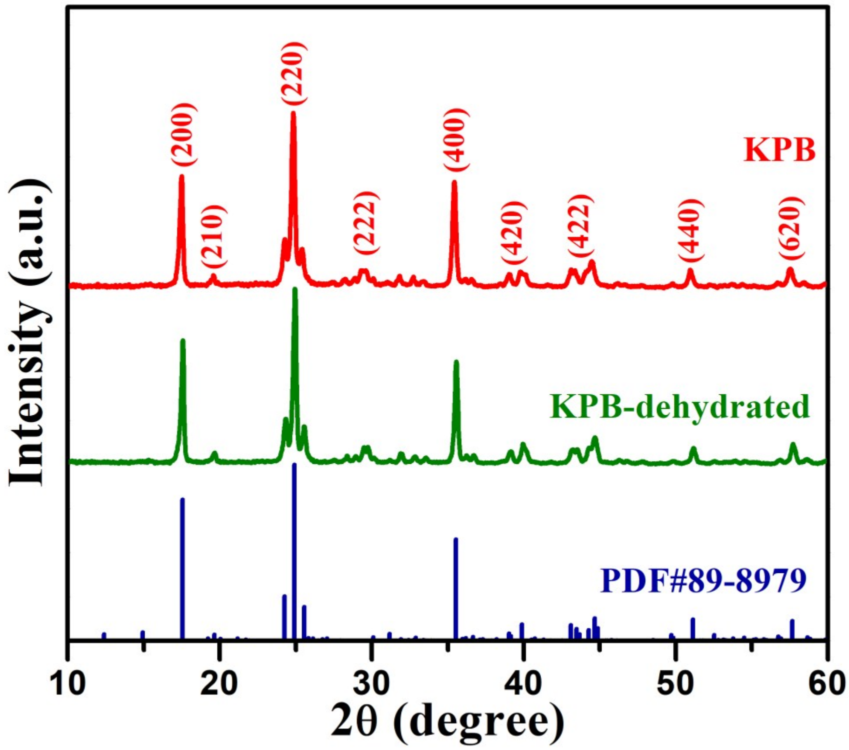

Fig. S1 XRD patterns of pristine and dehygrated KPB.

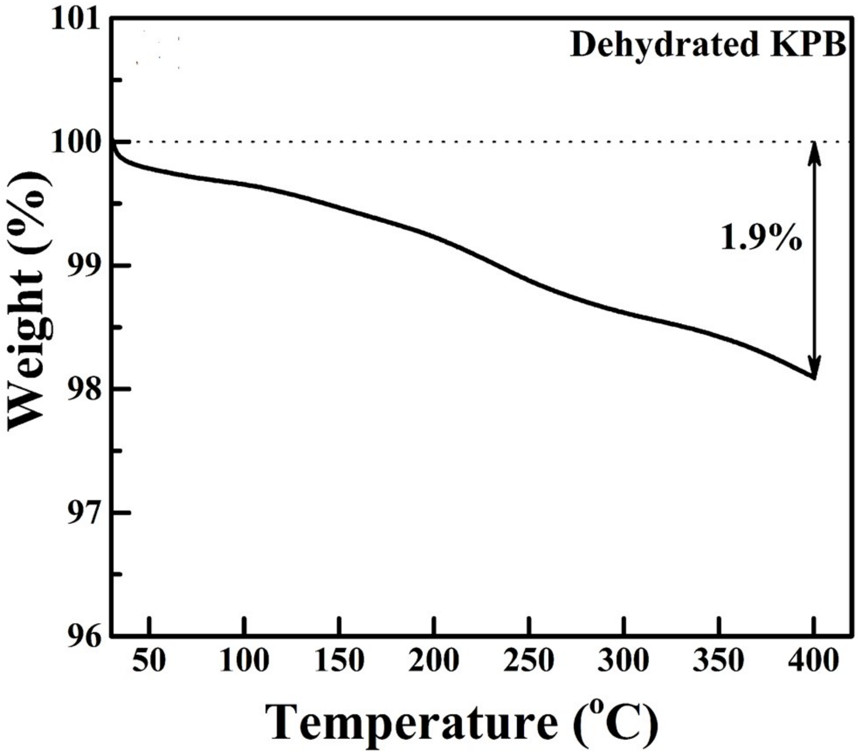

Fig. S2 TG of dehydrated KPB.

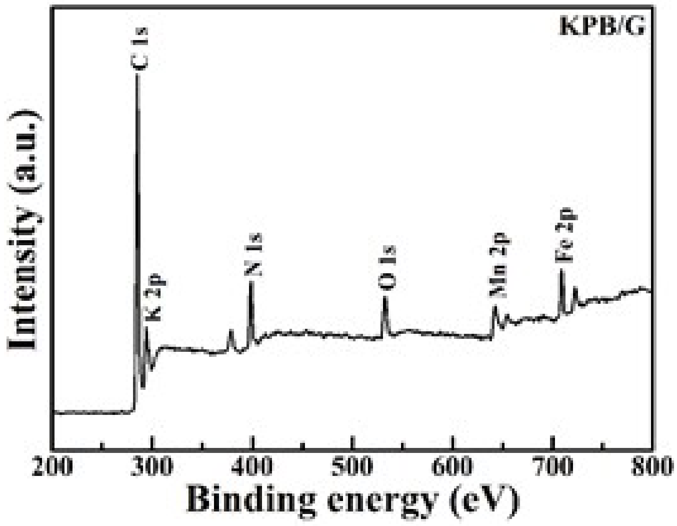

Fig. S3 XPS survey spectrum of KPB/G sample.

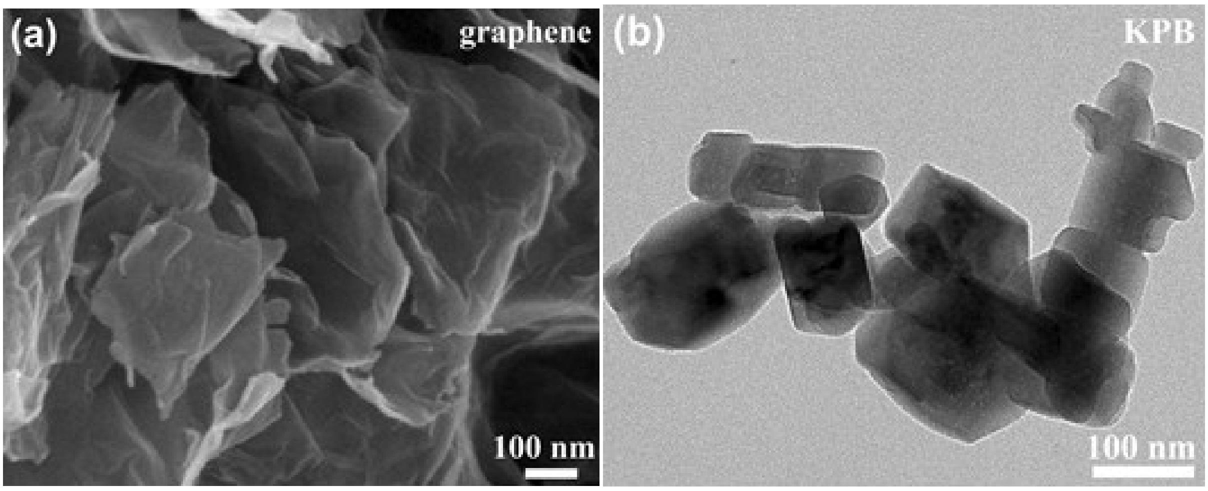

Fig. S4 (a) SEM image of the graphene and (b) TEM image of bare KPB.

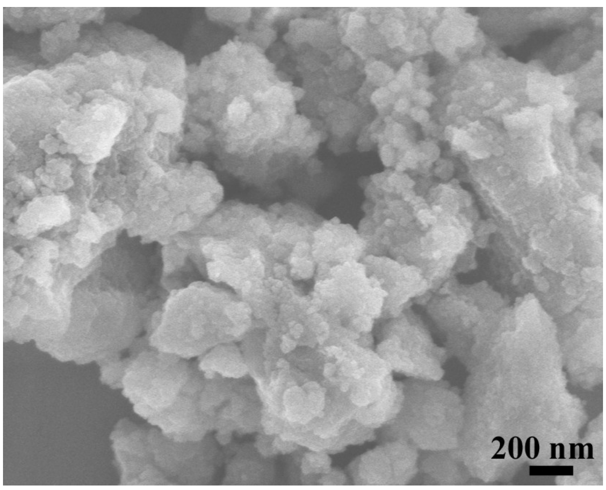

Fig. S5 SEM image of bare KPB after ball milling.

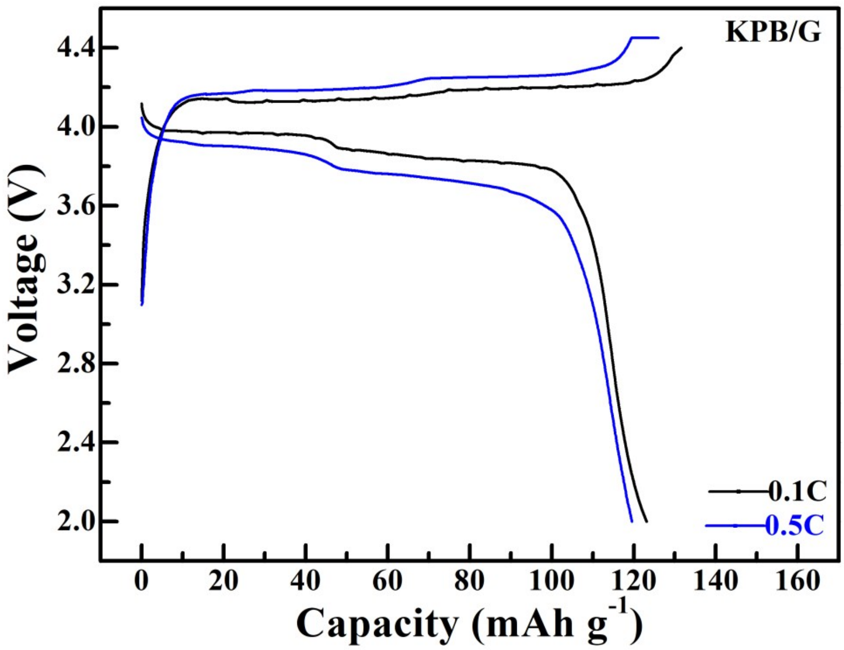

Fig. S6 Voltage profiles of KPB/G after high-vacuum dehydration.

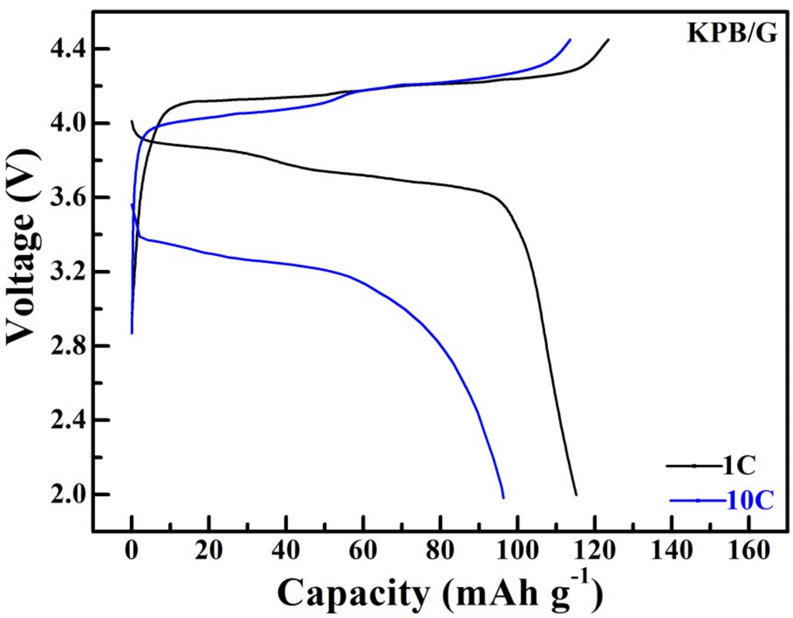

Fig. S7 Voltage profiles of KPB/G at a higher active material loading.

Table S1. Fitting results of the Nyquist plots using the equivalent circuit.

Sample	R_e (Ω)	R_f (Ω)	Q_1		R_{ct} (Ω)	Q_2	
			Y	n		Y	n
KPB	50.3	427.5.	5.5×10^{-6}	0.84	1167.0	2.4×10^{-5}	0.88
KPB/G	30.1	76.8.	5.3×10^{-6}	0.83	506.7	3.7×10^{-5}	0.90

Table S2. Comparison of electrochemical performance of potassium Prussian blue cathodes.

Material	**Current density (mA g^{-1})**	**Initial capacity (mAh g^{-1})**	**Cycle number**	**Capacity retentio n**	**Reference**
KPB/G	**75**	**124.0**	**120**	**96.9%**	**This work**
KPB/G	**750**	**115.6**	**500**	**89.3%**	**This work**
KPB/G	**1500**	**99.3**	**300**	**82.4%**	**This work**
$K_2Mn[Fe(CN)_6]$	50	~100	30	~84%	[1]
$K_{1.89}Mn[Fe(CN)_6]_{0.92}\cdot0.75H_2O$	150	~110	100	~77%	[2]
$K_{1.68}Fe_{1.09}Fe(CN)_6\cdot2.1H_2O$	20	110.5	100	81%	[3]
$K_{1.88}Zn_{2.88}[Fe(CN)_6]_2\cdot5\ H_2O$	13.8	55.6	100	~95%	[4]
$K_{0.3}Ti_{0.75}Fe_{0.25}[Fe(CN)_6]_{0.95}\cdot2.8H_2O$	100	113	100	64.7%	[5]

References

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