Ultrathin NiO Nanosheets Anchored to A Nitrogen-Doped Dodecahedral

Carbon Framework for Aqueous Potassium-Ion Hybrid Capacitors

Supporting Figures
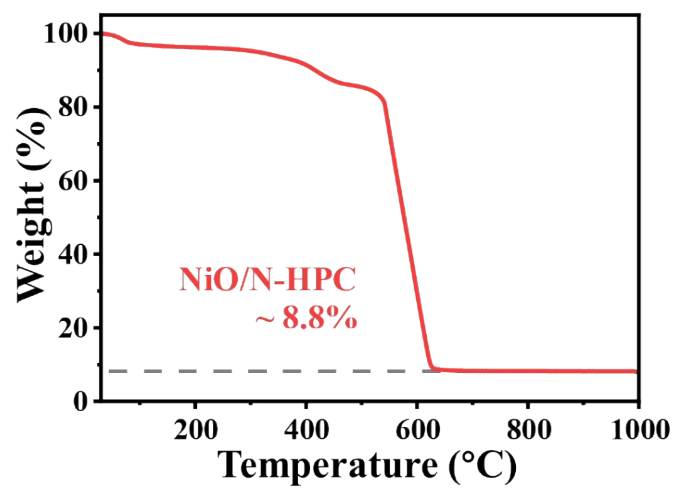

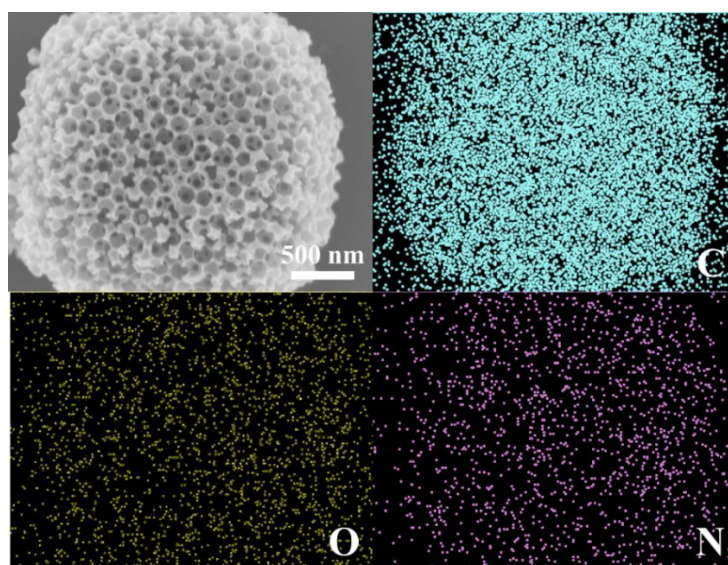**Fig. S1.** TGA curve of NiO/N-HPC under oxygen atmosphere.

Fig. S2. SEM image and corresponding EDS mappings of N-HPC.
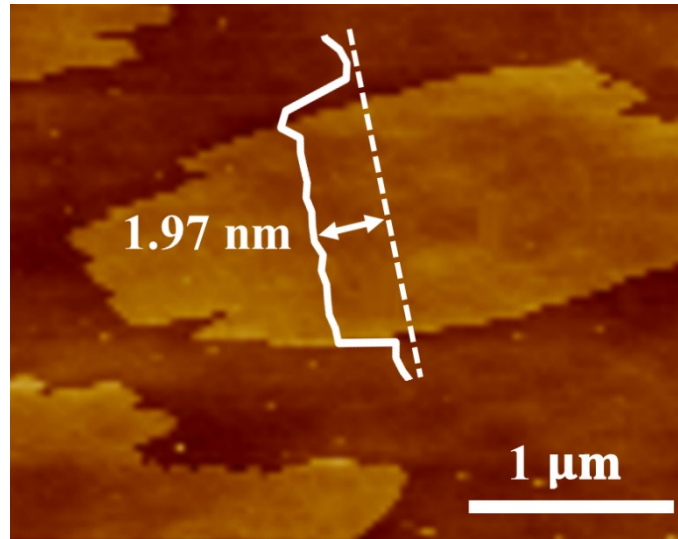
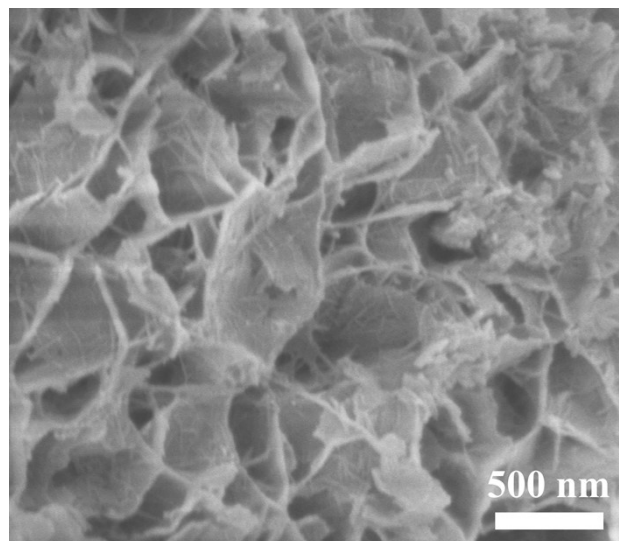**Fig. S3.** AFM image of the NiO nanosheet from NiO/N-HPC and its corresponding height profile.
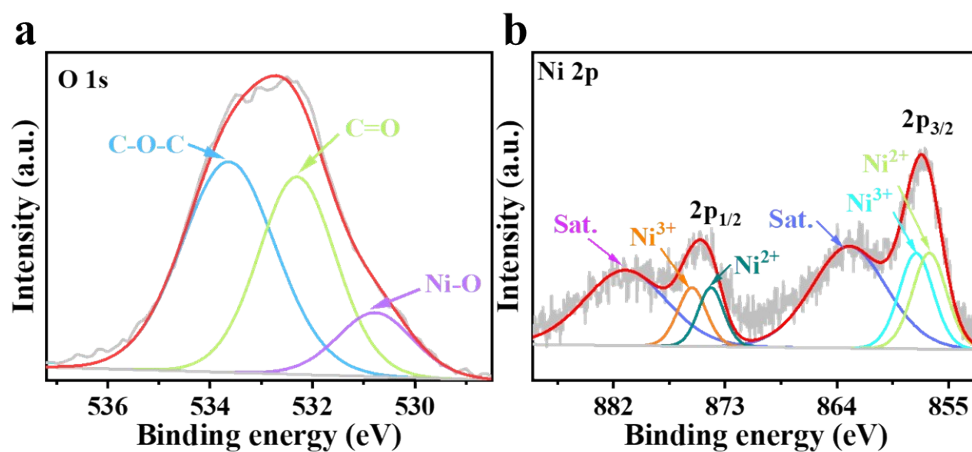

Fig. S4. SEM image of bulk NiO.

Fig. S5. High resolution XPS survey spectra of a) O 1s and b) Ni 2p in Ni(OH)$_2$/N-HPC.
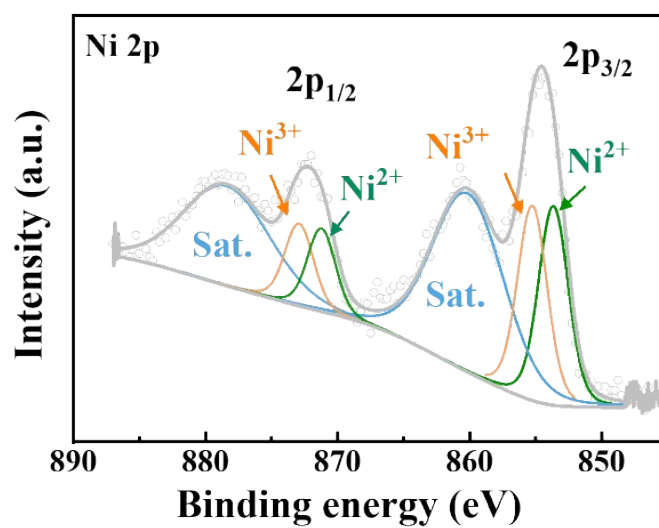

Fig. S6. High-resolution XPS spectrum for Ni 2p of NiO/N-HPC after cycling process.

Table S1. Comparison of energy and power density of the NiO/N-HPC//N-HPC APIHC with other reported works.

	Energy density (Wh kg^{-1})	Power density (W kg^{-1})	Ref.
SC//Zn-NiHCF	9.16	153	*J. Energy Storage* 2020, **31**, 101667.
Co$_9$S$_8$@Ni(OH)$_2$//AC	12.5	252.8	*J. Mater. Chem. A* 2017, **5**, 22782-22789.
NiCo$_2$O$_4$@MnO$_2$//AG	9.4	175	*J. Power Sources* 2014, **270**, 426-433.
MnO$_2$/MGC//MGC	6.8	62	*ACS Nano* 2013, **7**, 174-182.
AC//PB	28	214	*Electrochim. Acta* 2017, **232**, 106-113.
CoMn$_2$O$_4$//graphene	7.4	1900	*Electrochim. Acta* 2014, **146**, 429-436.
α-Co(OH)$_2$/Co$_3$O$_4$//AC	22.4	290	*Electrochim. Acta* 2014, **141**, 234-240.
NiCo$_2$O$_4$//FeSe$_2$	22.4	163	*J. Mater. Chem. A* 2017, **5**, 5568-5576.
NiO/N-HPC//N-HPC	21.95	9000	This work