Supplementary Information

Preparation and electrochemical performance of porous polymer-derived silicon carbonitride anode by hydrofluoric acid etching for lithium ion batteries

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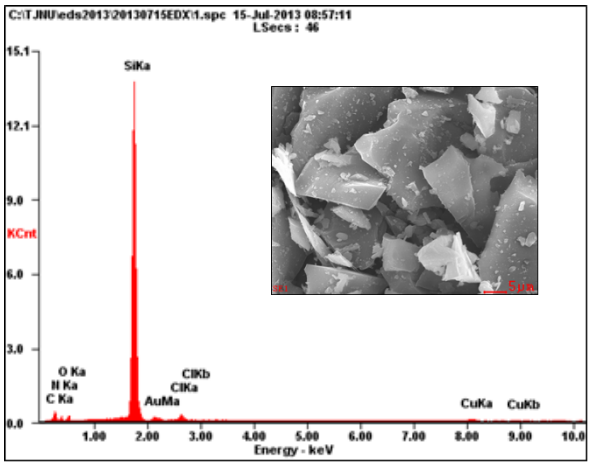
Supplementary Information List:

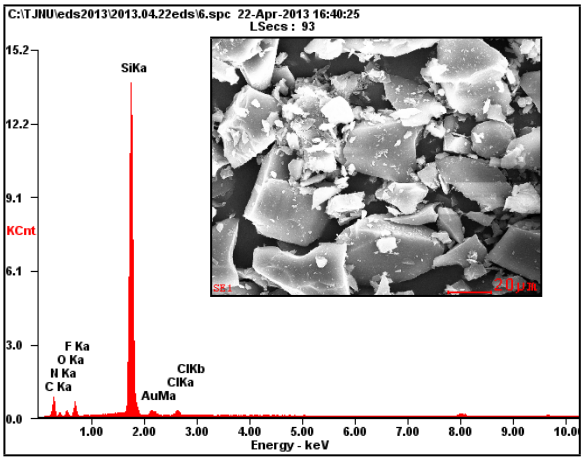
Fig.S1 EDX and element content in unetched SiCN **(a)** and SiCN-10-HF materials **(b)**.

(a)



Element	*Wt%*	*At%*
CK	27.46	42.90
NK	12.35	16.54
OK	05.71	06.70
SiK	48.47	32.38
AuM	03.07	00.29
ClK	01.35	00.72
CuK	01.59	00.47
Matrix	Correction	ZAF

(b)



Element	*Wt%*	*At%*
CK	37.02	53.67
NK	07.99	09.94
OK	04.68	05.10
FK	06.90	06.33
SiK	38.97	24.16
AuM	03.42	00.30
ClK	01.01	00.50
Matrix	Correction	ZAF

Fig.S2 XPS analysis of survey of unetched SiCN **(a)** and SiCN-10-HF materials **(b)**.

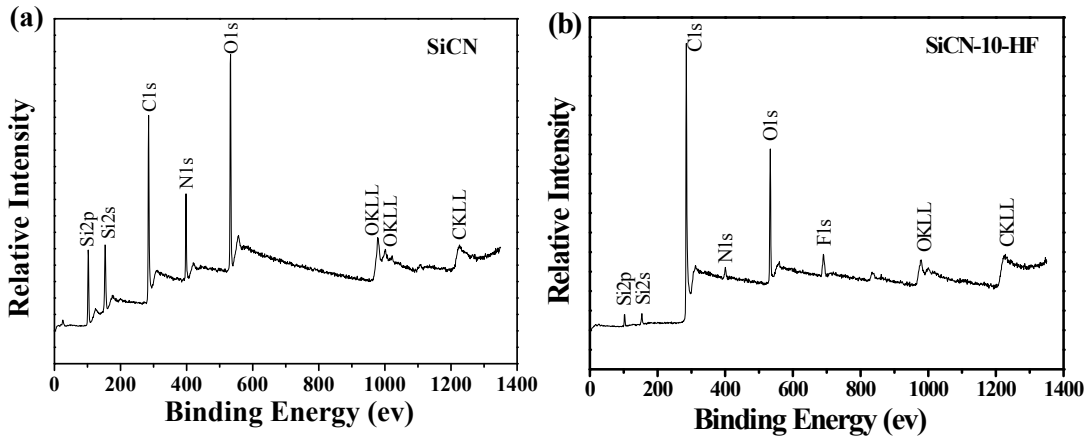
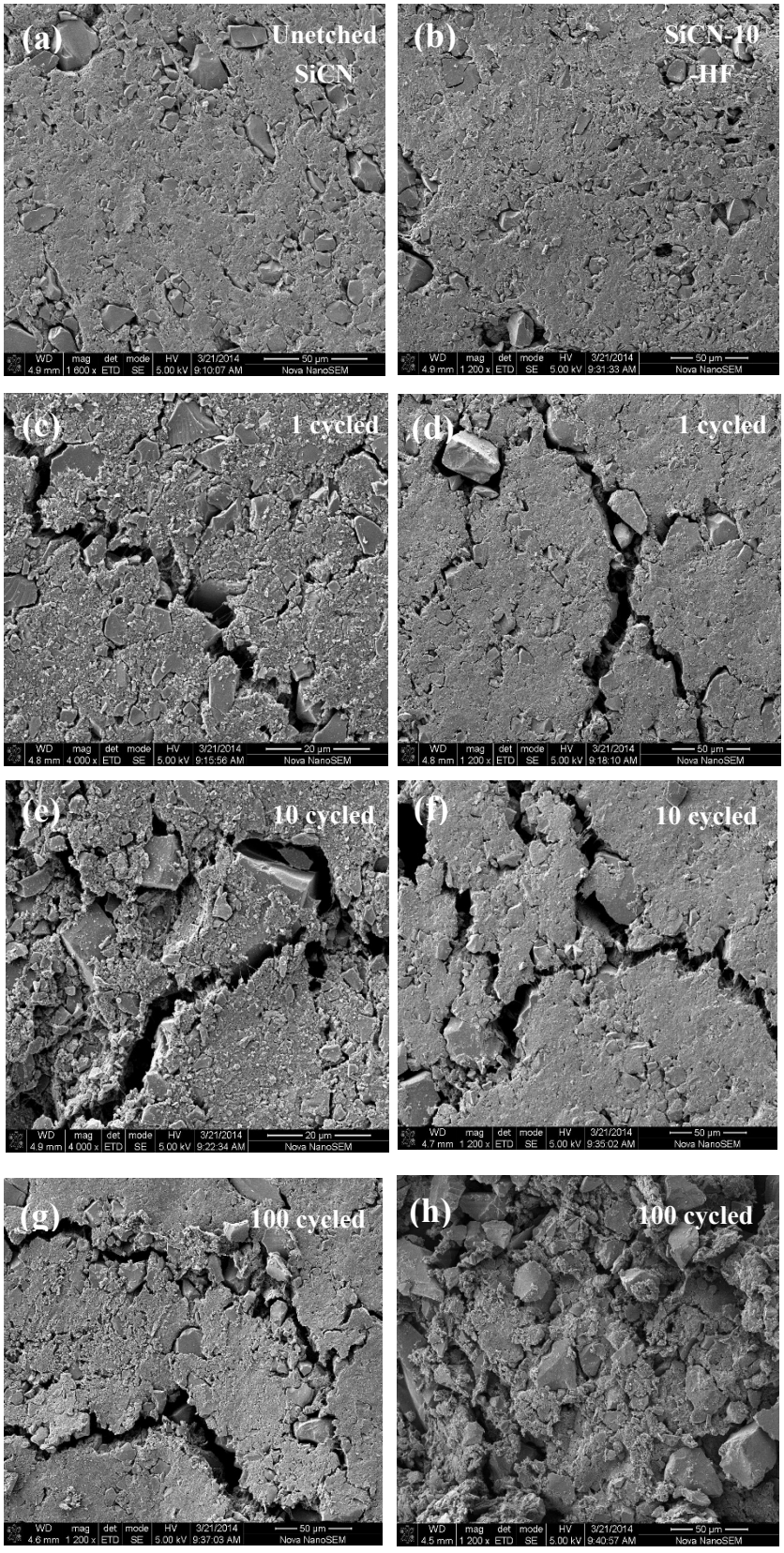


Fig.S3 SEM images of the unetched SiCN anode before cycling **(a)** and after 1 **(c)**, 10 **(e)**, 100 **(g)** cycles; and SiCN-10-HF anode before cycling **(b)**, and after 1 **(d)**, 10 **(f)**, 100 **(h)** cycles.



Tab.S1 Atomic percent of elements on the surface of unetched SiCN and SiCN-10-HF materials determined by XPS analysis.

Sample	In atomic % from XPS				
	Si	C	N	O	F
SiCN	22.13	45.44	11.21	21.22	--
SiCN-10-HF	3.86	74.94	3.74	13.8	3.66