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一种有助于稳定锂金属循环的富氟化位点框架结构

王木钦[1,2]，彭哲[2,*]，林欢[1,2]，李振东[2]，刘健[1,2]，任重民[1,2]，何海勇[2,*]，王德宇[1,2,3,*]

[1] 江汉大学，光电化学材料与器件教育部重点实验室，武汉 430056

[2] 中国科学院宁波材料技术与工程研究所，浙江 宁波 315201

[3] 天目湖先进储能技术研究院，江苏 溧阳 213300

A Framework with Enriched Fluorinated Sites for Stable Li Metal Cycling

Muqin Wang [1,2], Zhe Peng [2,*], Huan Lin [1,2], Zhendong Li [2], Jian Liu [1,2], Zhongmin Ren [1,2], Haiyong He [2,*], Deyu Wang [1,2,3,*]

[1] Key Laboratory of Optoelectronic Chemical Materials and Devices of Ministry of Education, Jianghan University, Wuhan 430056, China.

[2] Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo 315201, Zhejiang Province, China.

[3] Tianmu Lake Institute of Advanced Energy Storage Technologies, Liyang 213300, Jiangsu Province, China.

[*]Corresponding authors. Emails: pengzhe@nimte.ac.cn (Z.P.); hehaiyong@nimte.ac.cn (H, H); wangdeyu@aesit.com.cn (D.W.).

Table S1 Mass ratio of F, C and O elements obtained from the EDS and XPS measurements for CF_x and CF_x-400 before/after lithiation.

EDS data

	pristine CF_x	pristine CF_x-400	lithiated CF_x	lithiated CF_x -400
F	59.8%	57.5%	37.7%	39.7%
C	40.2%	42.5%	34.1%	27.4%
O	–	–	28.2%	32.9%

XPS data

	pristine CF_x	pristine CF_x-400	lithiated CF_x	lithiated CF_x-400
F	66.1%	64.5%	36.1%	39.4%
C	33.4%	35.1%	33.2%	24.8%
O	0.5%	0.4%	30.7%	35.8%

Table S2 Specific lithiation capacity ($mAh \cdot mg^{-1}$) of CF_x and CF_x-400.

	CF_x			CF_x-400		
Samples	1#	2#	3#	1#	2#	3#
Individual	1.16	1.14	1.18	1.62	1.65	1.65
Average	1.16			1.64		

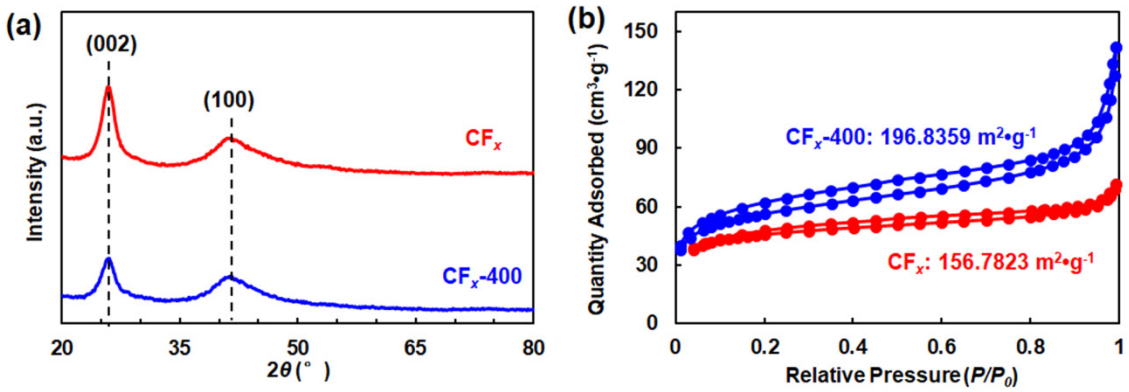

Fig. S1 (a) XRD patterns and (b) N*2* absorption/desorption curves of pristine CF_x and CF_x-400.

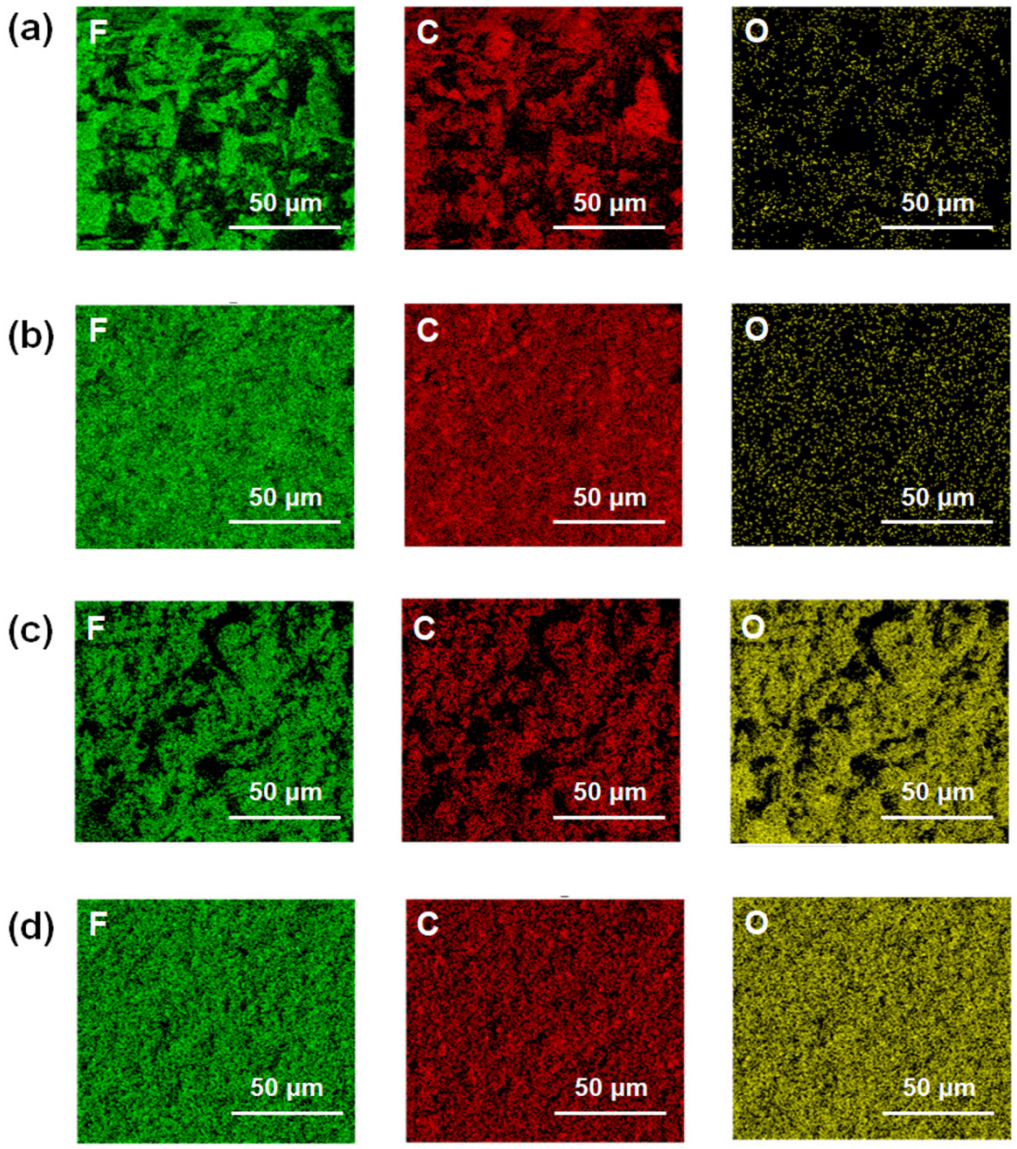

Fig. S2 F, C and O element distributions of pristine (a) CF_x, (b) CF_x-400, and lithiated (c) CF_x, (d) CF_x-400.

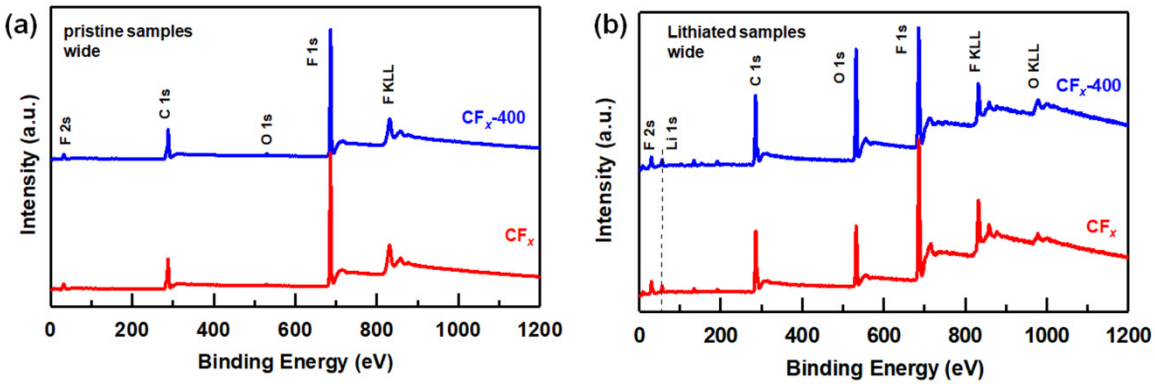

Fig. S3 XPS wide scans of CF_x and CF_x-400 (a) before and (b) after lithiation.

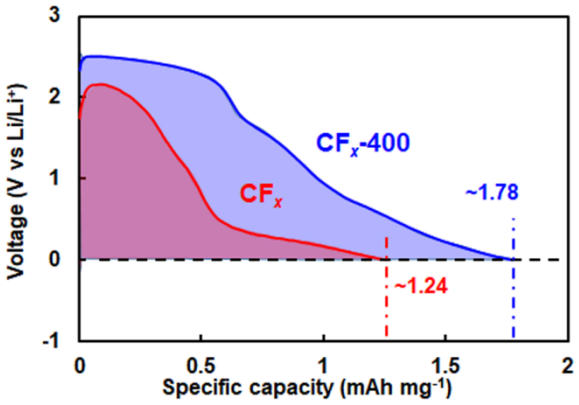

Fig. S4 The 1st discharge curves of CF_x and CF_x-400 with a mass loading ~1 mg·cm^{-2}.

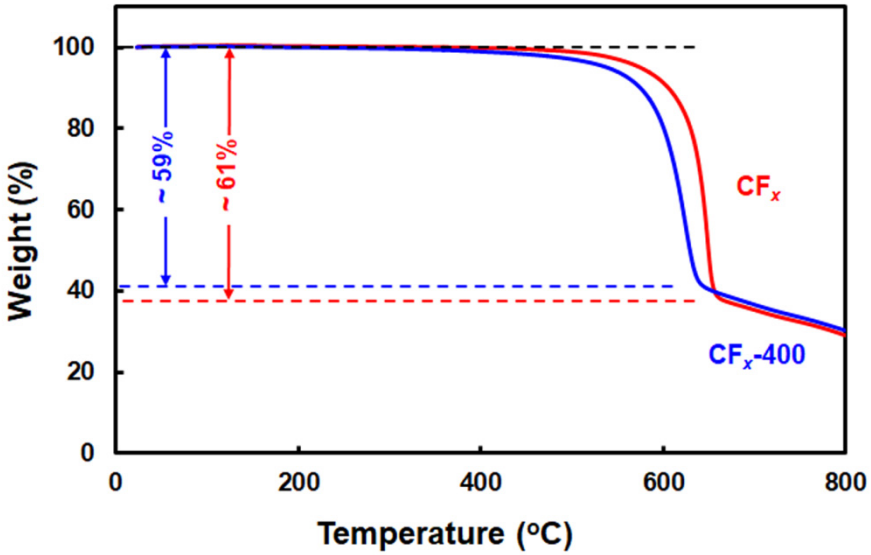

Fig. S5 TG curves of pristine CF_x and CF_x-400 powders.

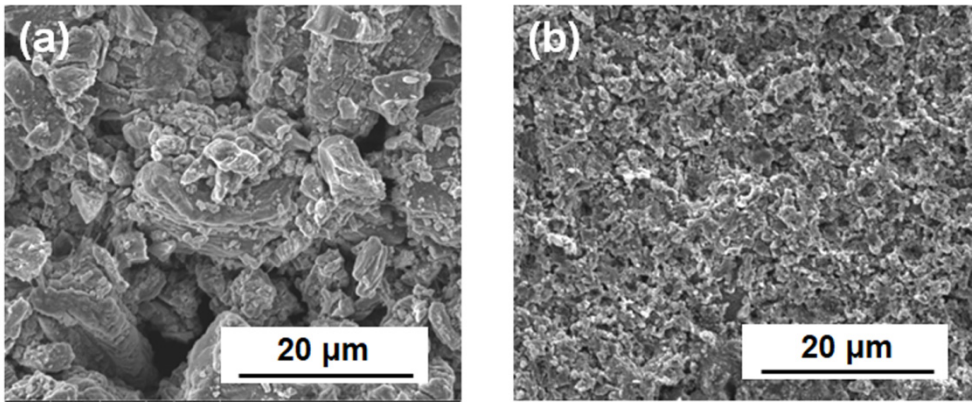

Fig. S6 SEM images of lithiated (a) CF_x and (b) CF_x-400.

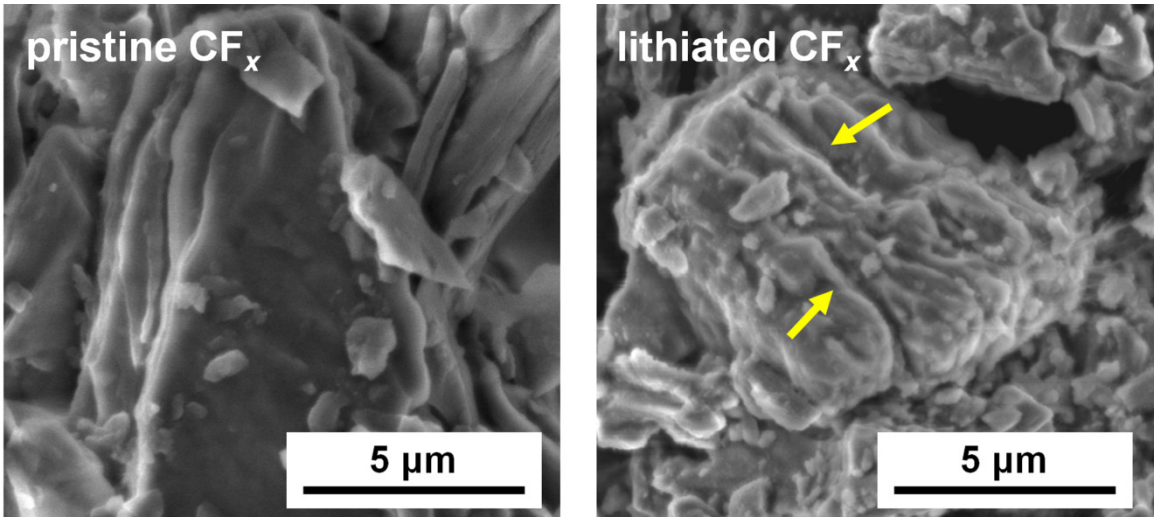

Fig. S7 Amplified SEM images of pristine and lithiated CF_x flakes.

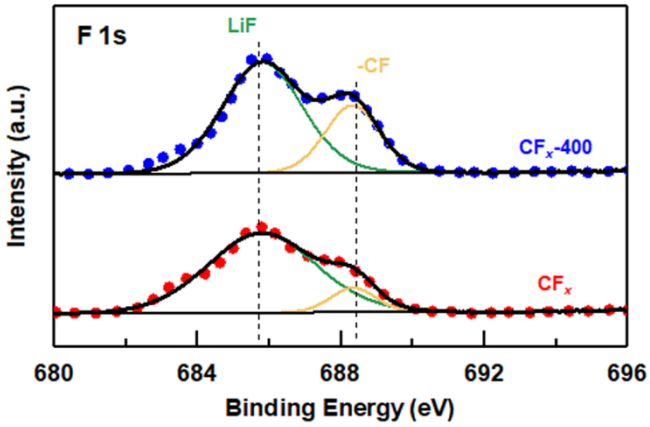

Fig. S8 F 1*s* XPS spectra of lithiated CF_x and CF_x-400 in a FEC-free electrolyte (1 mol·L^{-1} $LiPF_6$ in EC:DEC 1 : 2 by vol.).