

Supporting Information for:

**Electrochemical activity of Fe- MIL-100 as a positive electrode for Na-ion
batteries**

Dorina F. Sava Gallis,^a Harry D. Pratt III,^b Travis M. Anderson,^b and Karena W. Chapman^c

^a Nanoscale Sciences Department, Sandia National Laboratories, Albuquerque, NM 87185, USA.

^b Power Sources R&D Department, Sandia National Laboratories, Albuquerque, NM 87185, USA.

^c X-ray Science Division, Advanced Photon Source, Argonne National Laboratory, Argonne, IL 60439 USA.

Fig. S1 Images of coin cell components and of assembled 2032 coin cell.

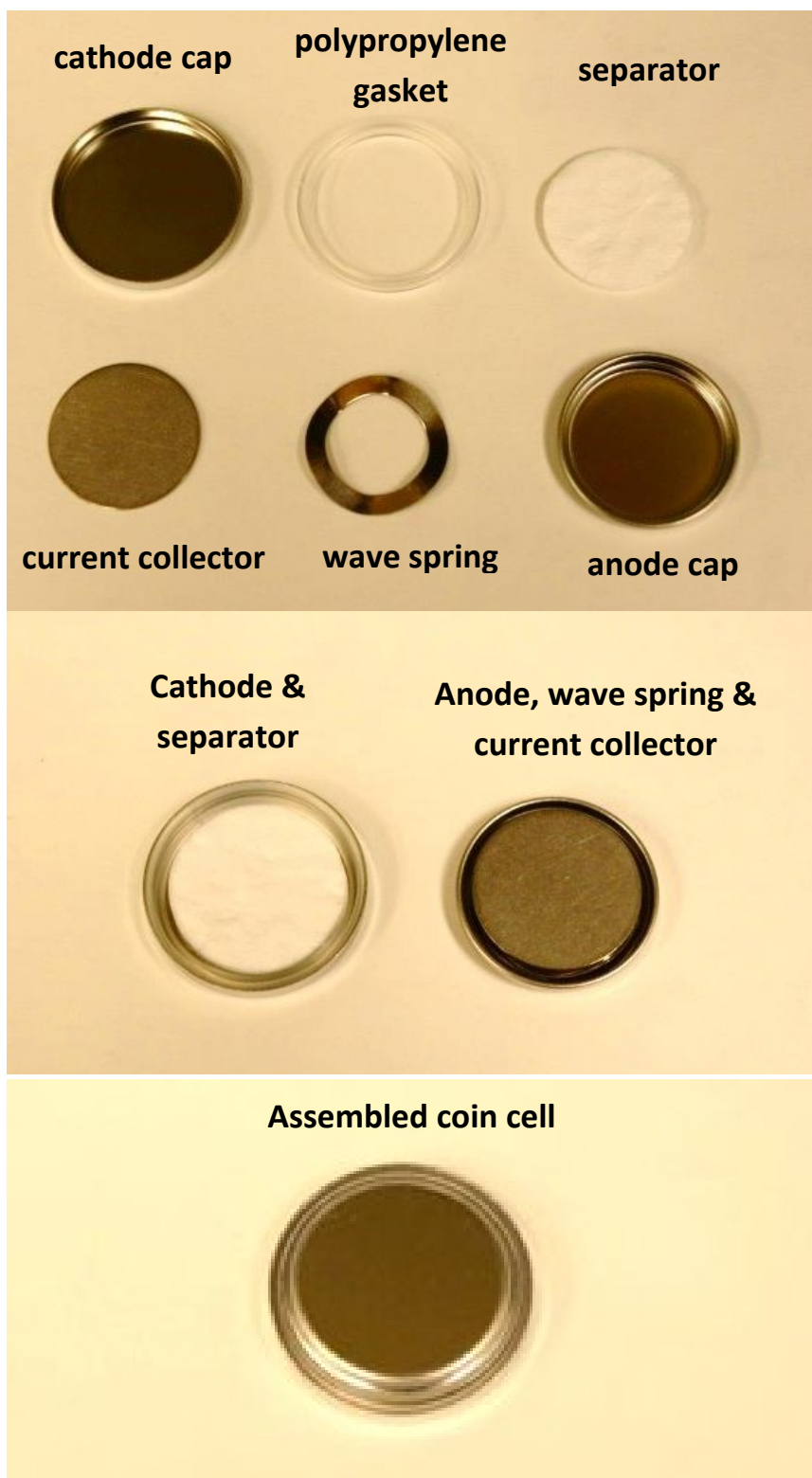


Fig. S2 Electrochemical activity of the Fe-MIL-100 cathode after the 5th cycle in 1M NaPF₆ in EC:PC, PC, and EC:DMC at 0.1C rate. Top: voltage profile between 4.00- 1.5 V (versus Na⁺/Na). Bottom: differential capacity (dQ/dV).

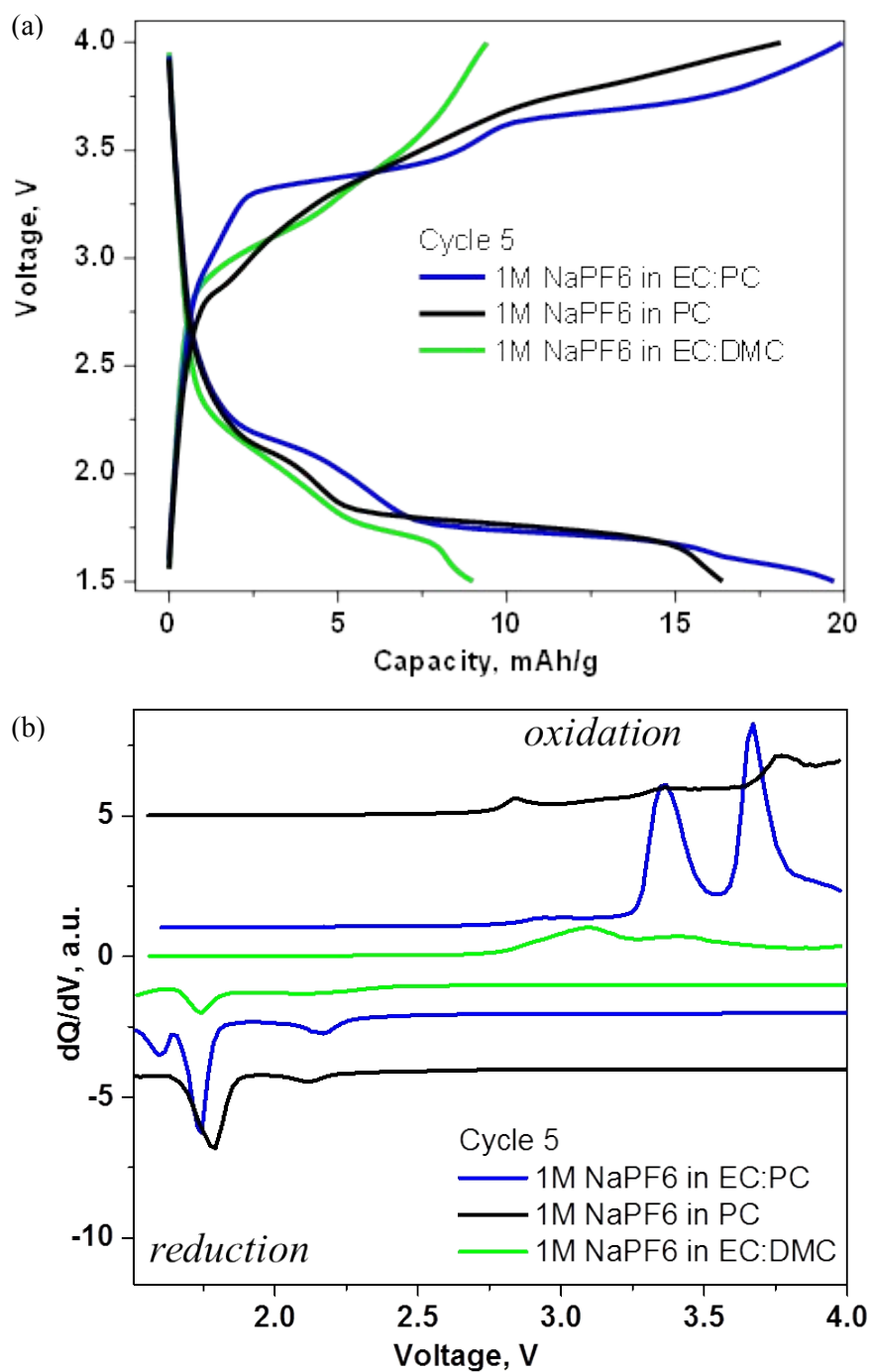


Fig. S3 Electrochemical activity of the Fe-MIL-100 cathode after the 20th cycle in 1M NaPF₆ in EC:PC, PC, and EC:DMC at 0.1C rate. Top: voltage profile between 4.00- 1.5 V (versus Na⁺/Na). Bottom: differential capacity (dQ/dV) .

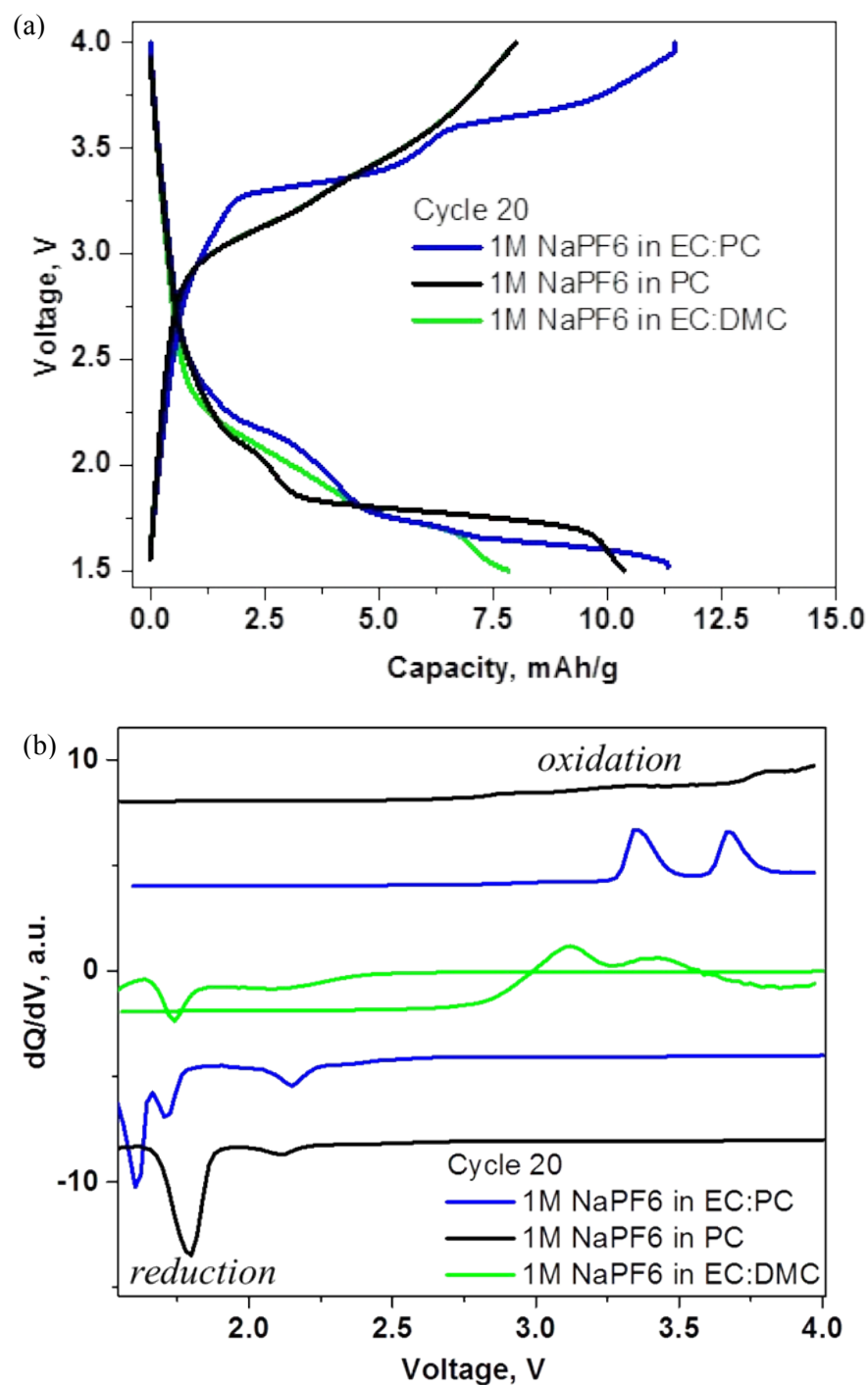


Fig.S4 Powder X-ray diffraction of as-made, cycled and washed cycled electrodes.

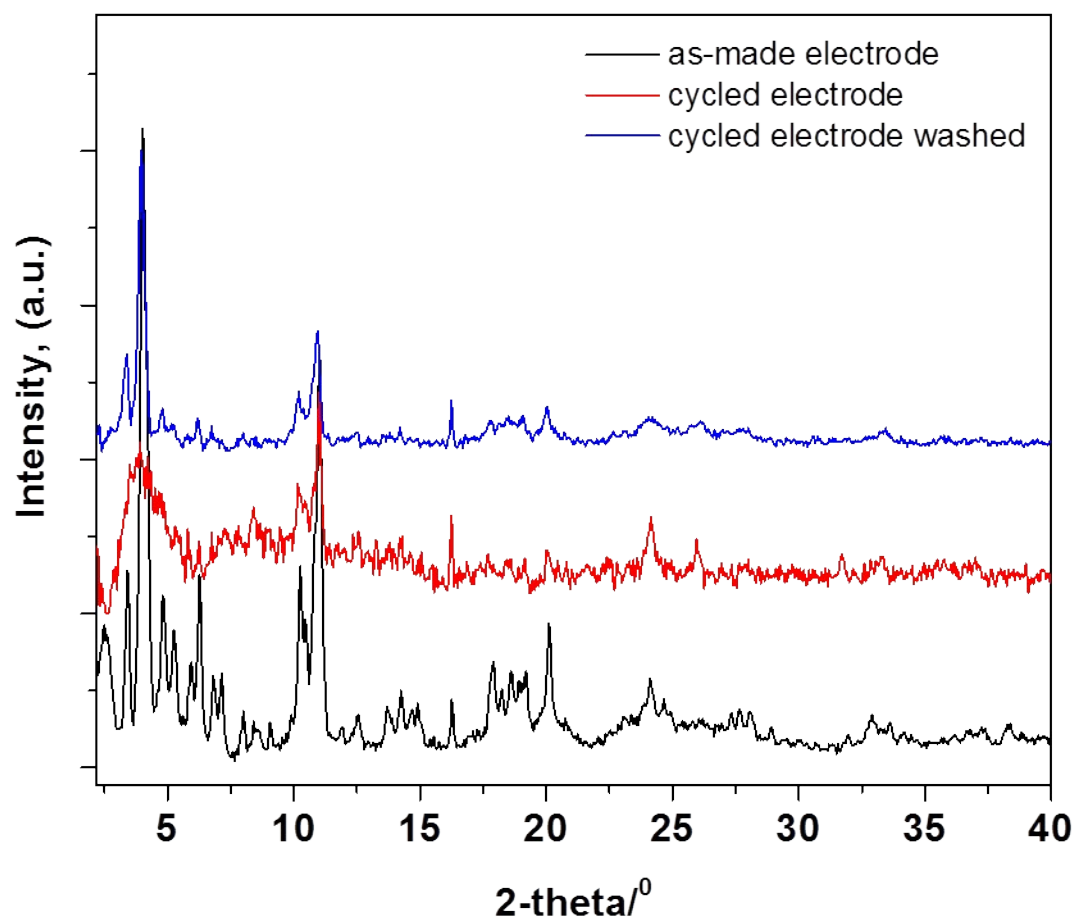


Fig.S5 PDF analysis of the as-made electrode, and electrodes after the first discharge (as cycled and after washing with DME).

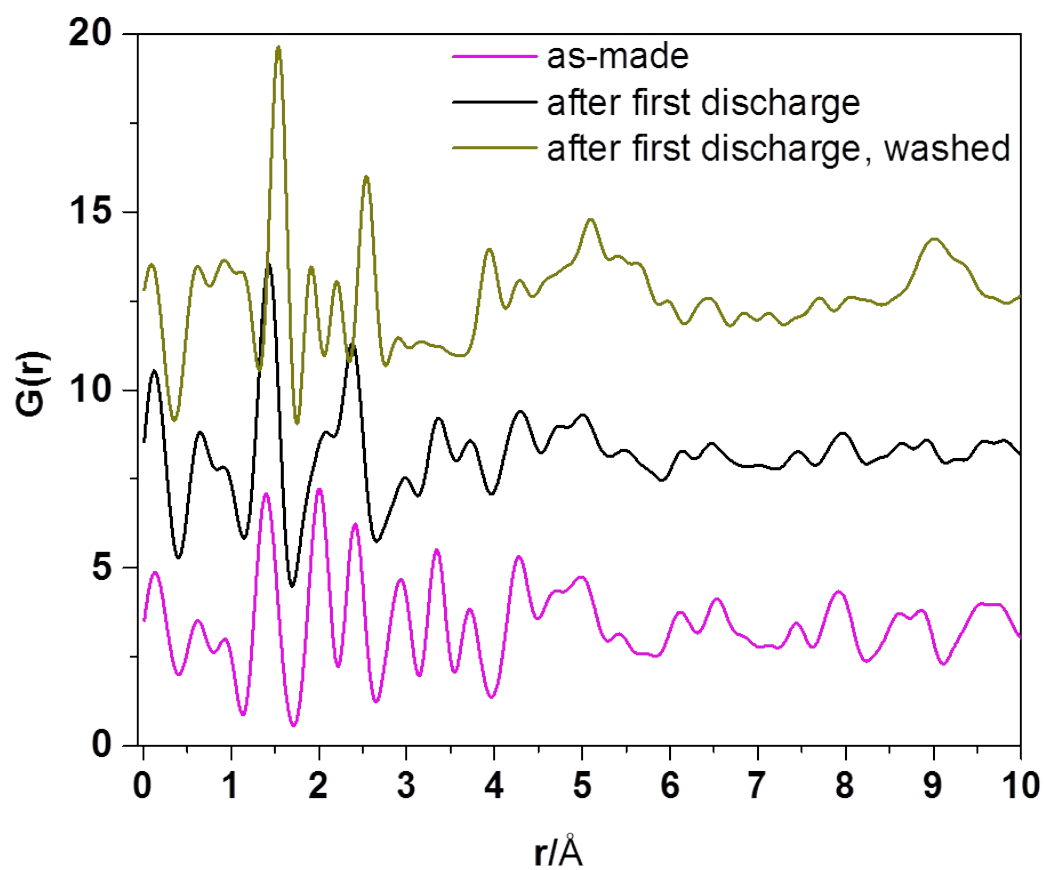


Fig.S6 Representative large area SEM and elemental mapping analysis of the cycled Fe-MIL-100 cathode, after the first discharge.

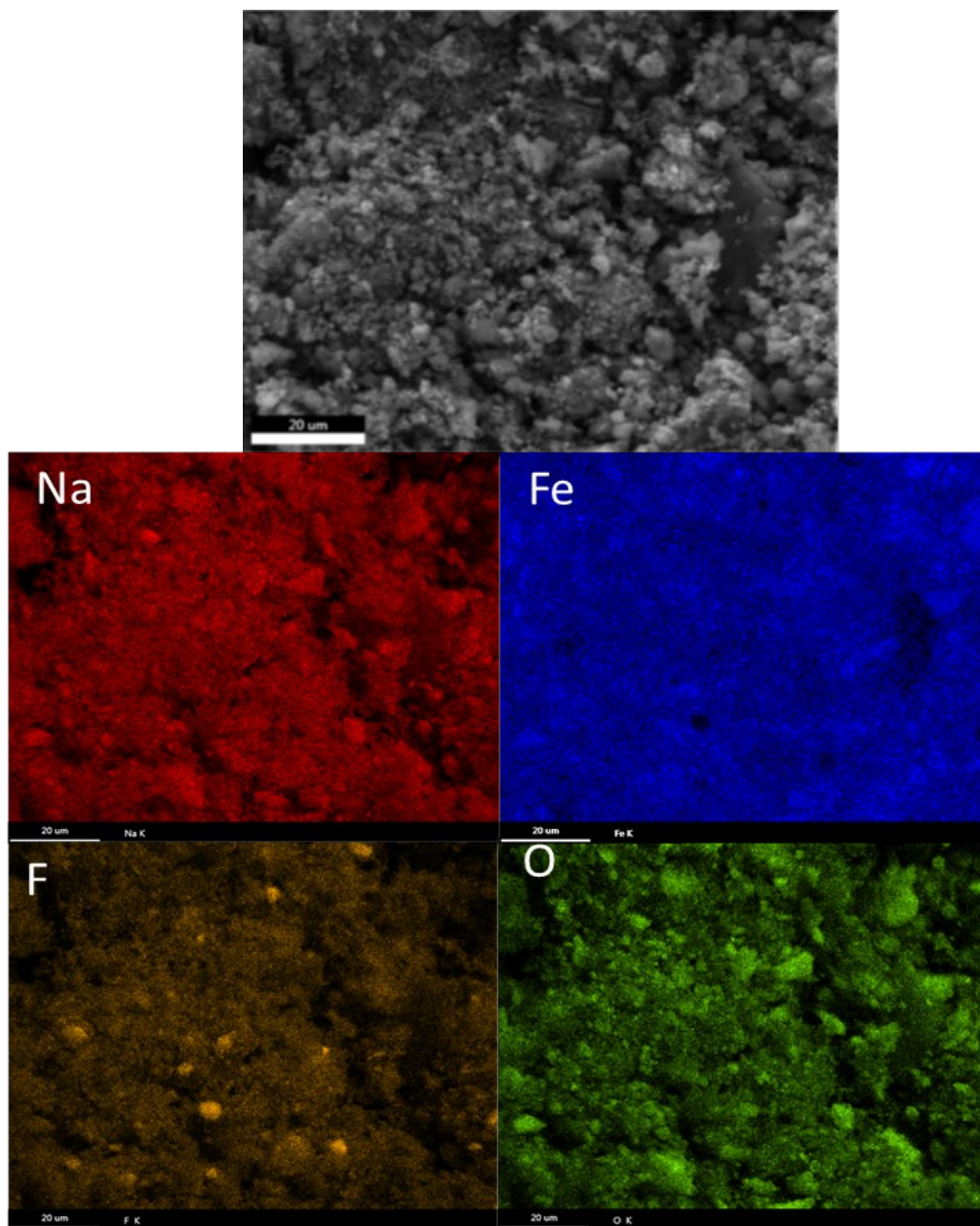
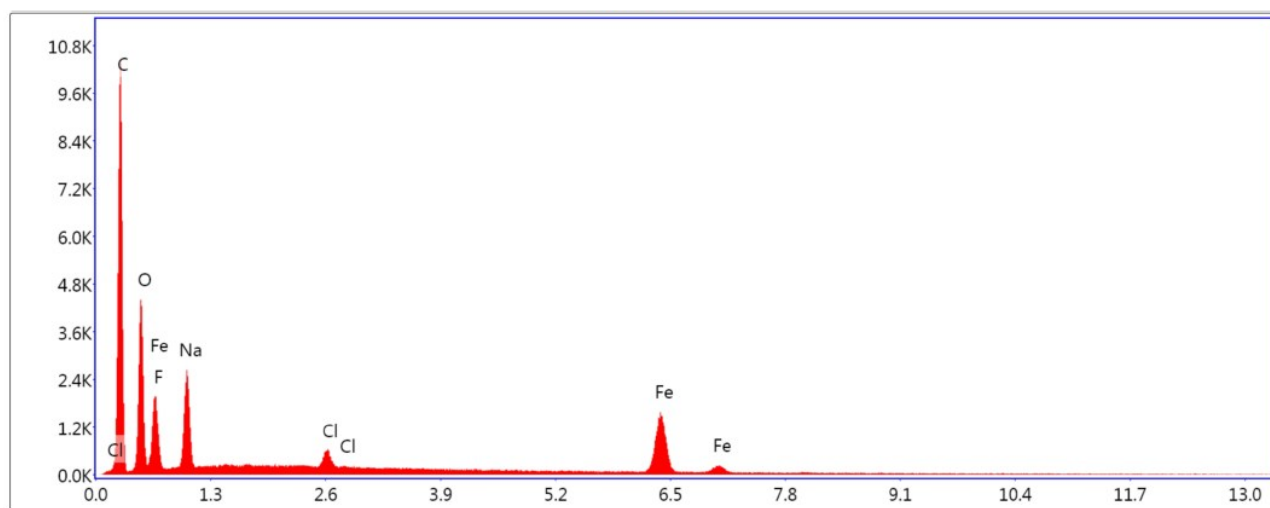


Fig.S7 SEM-EDS analysis of the cycled Fe-MIL-100 cathode after the first discharge.



Lsec: 30.0 0 Cnts 0.000 keV Det: Octane Plus Det

eZAF Smart Quant Results

Element	Weight %	Atomic %	Net Int.	Error %	Kratio	Z	R	A	F
C K	55.99	67.28	1975.91	6.67	0.2719	1.0423	0.9799	0.4659	1.0000
O K	23.91	21.57	899.53	9.79	0.0421	0.9967	0.9994	0.1766	1.0000
F K	8.01	6.09	437.17	10.62	0.0134	0.9262	1.0079	0.1813	1.0000
NaK	5.04	3.16	600.96	8.21	0.0165	0.9047	1.0230	0.3605	1.0015
ClK	0.51	0.21	149.45	6.83	0.0043	0.8429	1.0575	0.9702	1.0245
FeK	6.54	1.69	680.08	3.07	0.0554	0.7610	1.0860	1.0228	1.0883