

## Supplementary Information

### Hydrothermally Synthesized Homogeneous Ni-Mo-S Structure on Ni-Foam Cathode for Thermal Batteries

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Figure S1. TGA thermogram of NiMoS on Ni-foam, NiMoS on Ni-powder, NiS<sub>2</sub>, CoS<sub>2</sub> and FeS<sub>2</sub>.

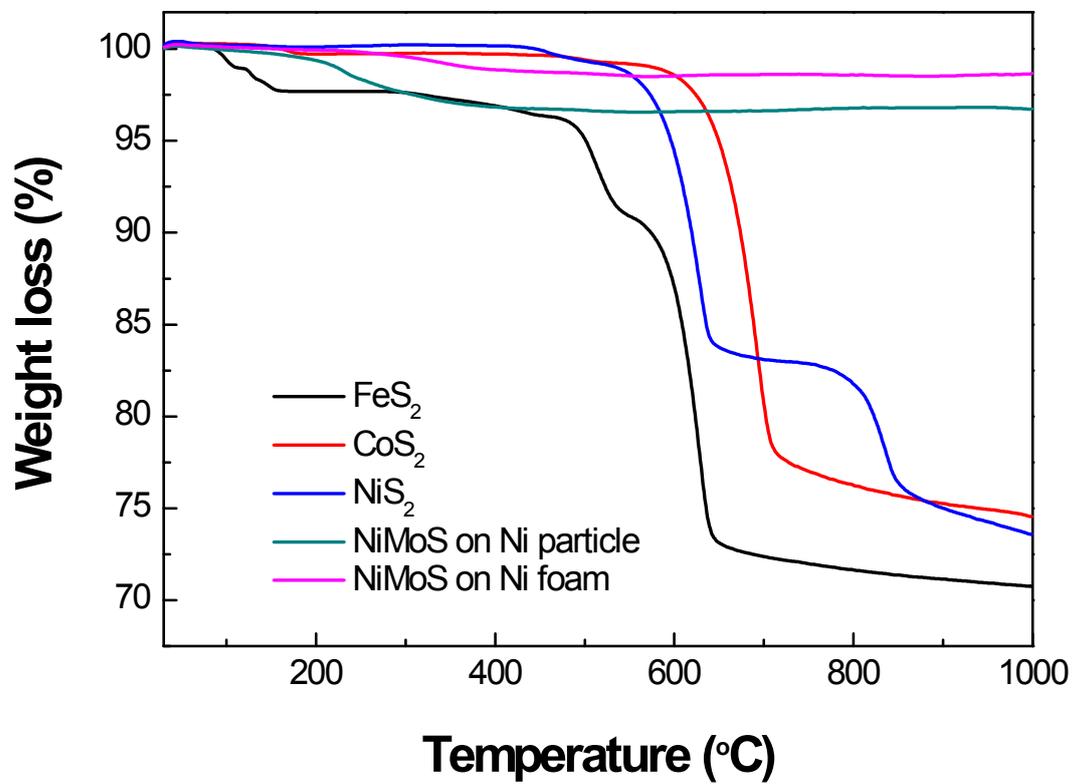


Figure S2. SEM and EDS analysis result of NiMoS-160.

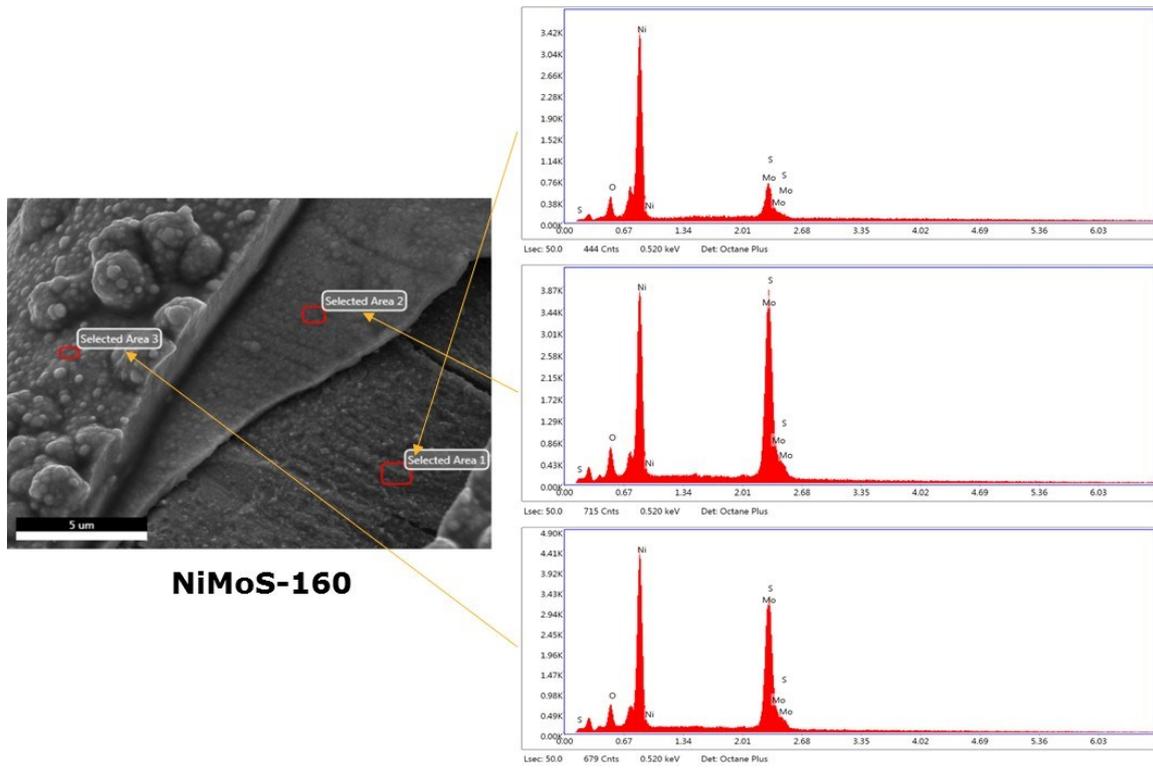


Figure S3. TEM and EDS mapping images of NiMoS-160 on Ni Particle.

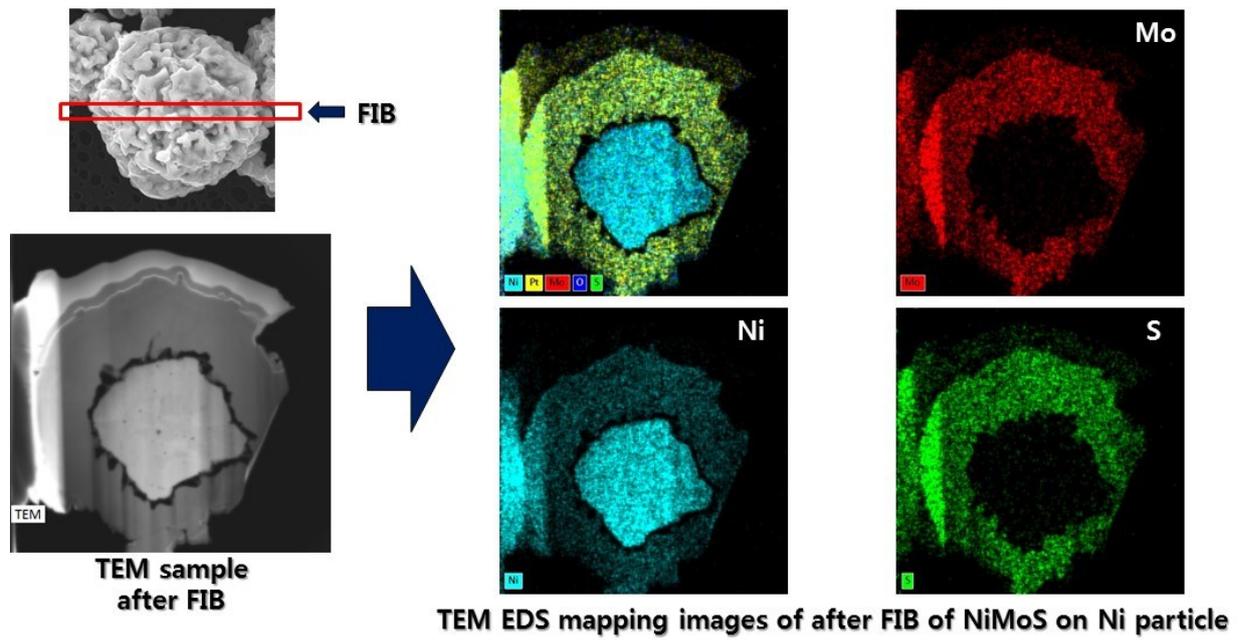


Figure S4. TEM image and SAED results of NiMoS-160.

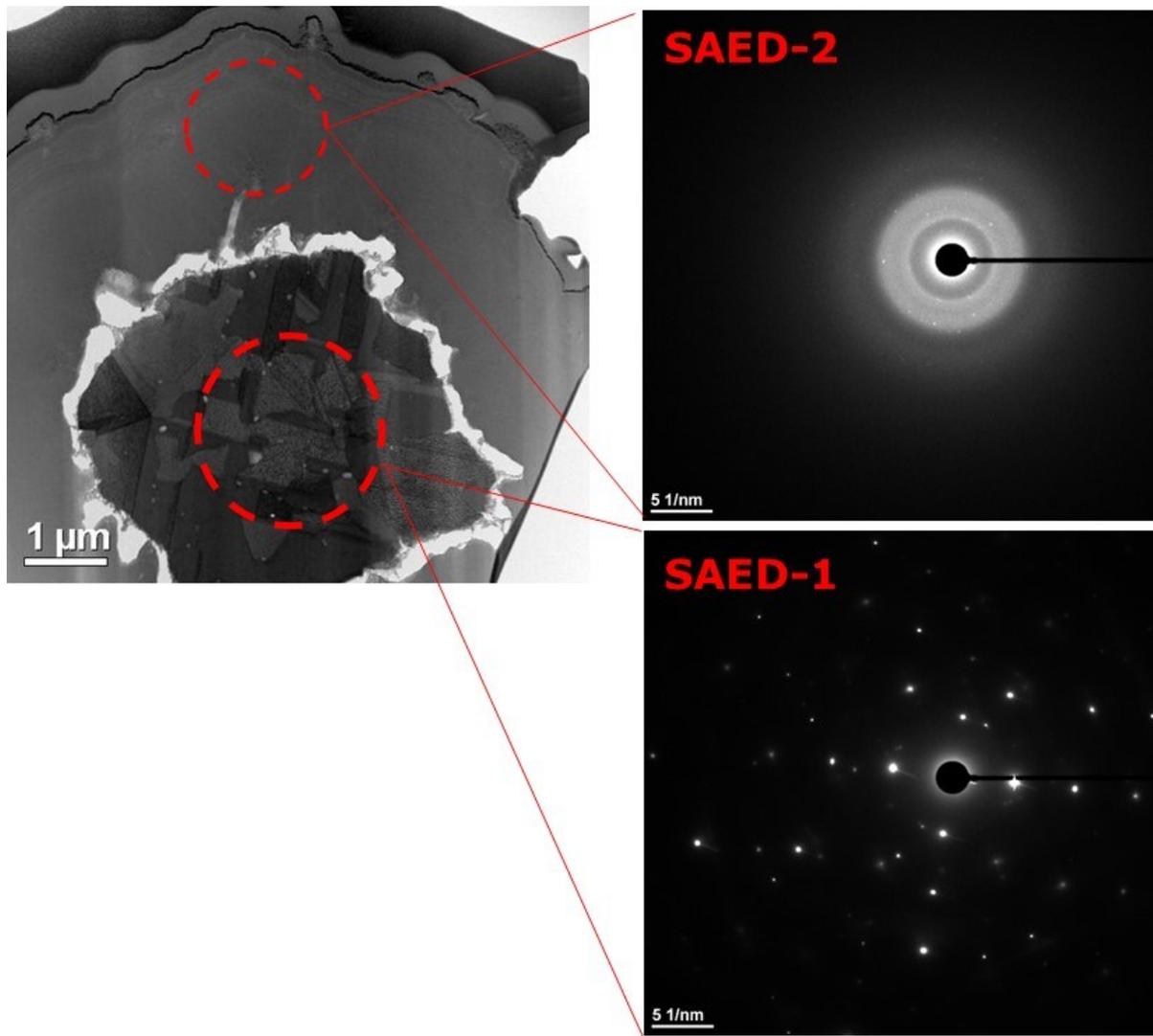


Figure S5. A comparison on discharge performance of as-received Ni-foam, NiMoS-80 and NiMoS-160.

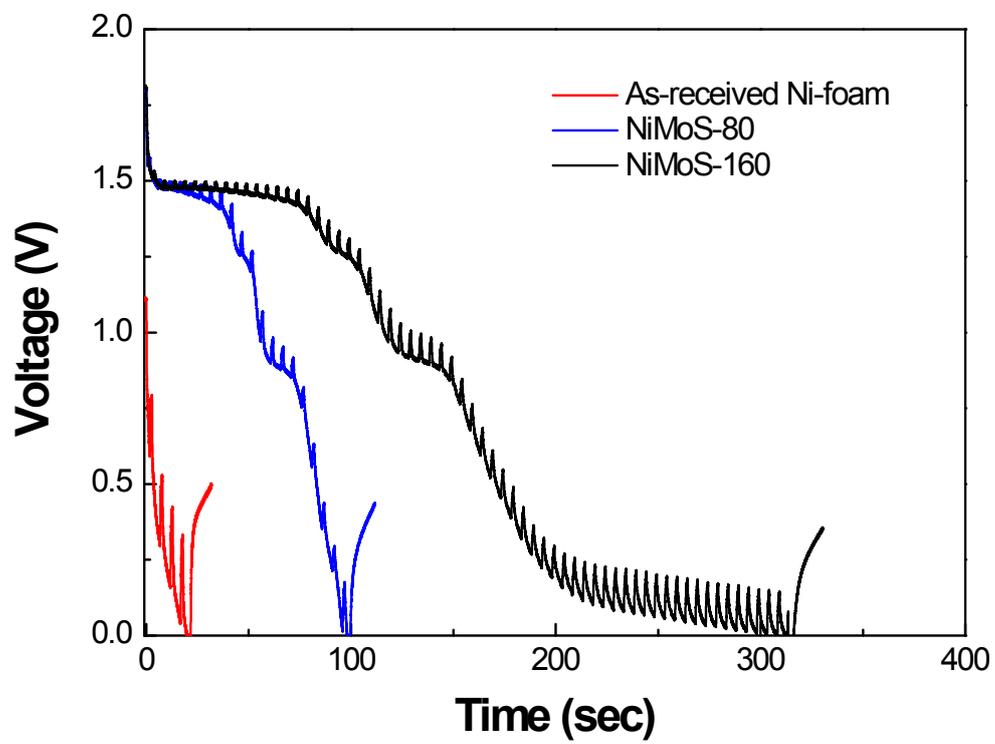


Figure S6. Specific capacity of FeS<sub>2</sub> vs. NiMoS cathodes on Ni-foam.

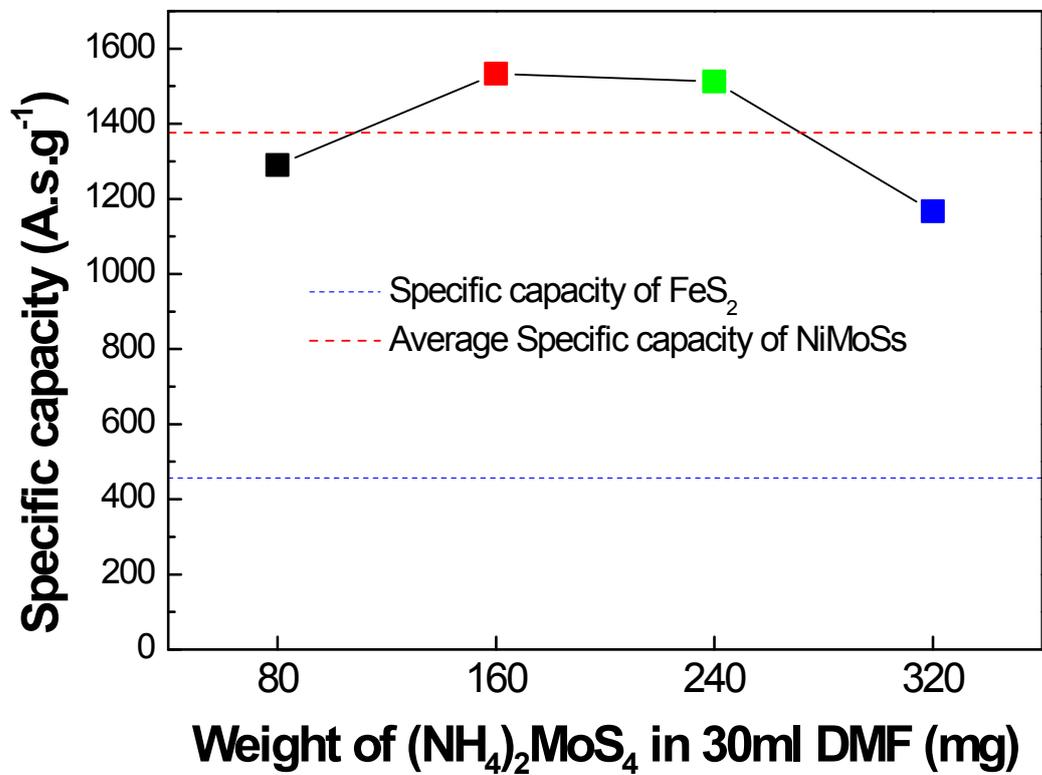


Figure S7. Cross-sectional SEM image of NiMoS-160 after single cell discharge (a) cross section SEM image of single cell after discharge, (b) NiMoS particles delaminated from Ni-foam after single cell discharge.

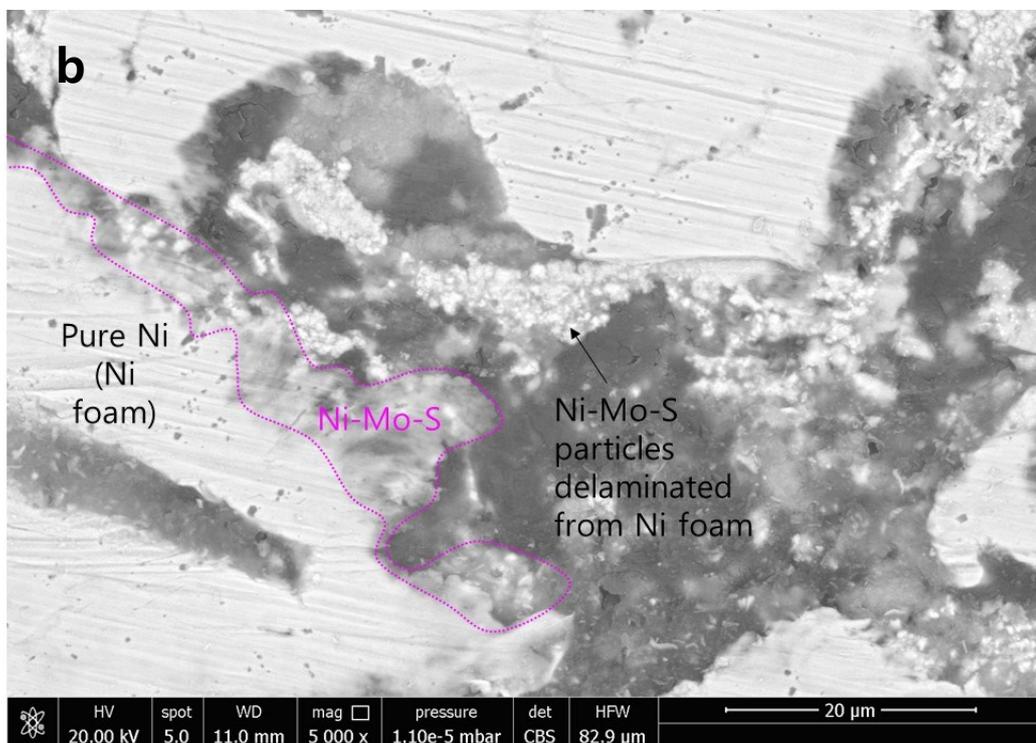
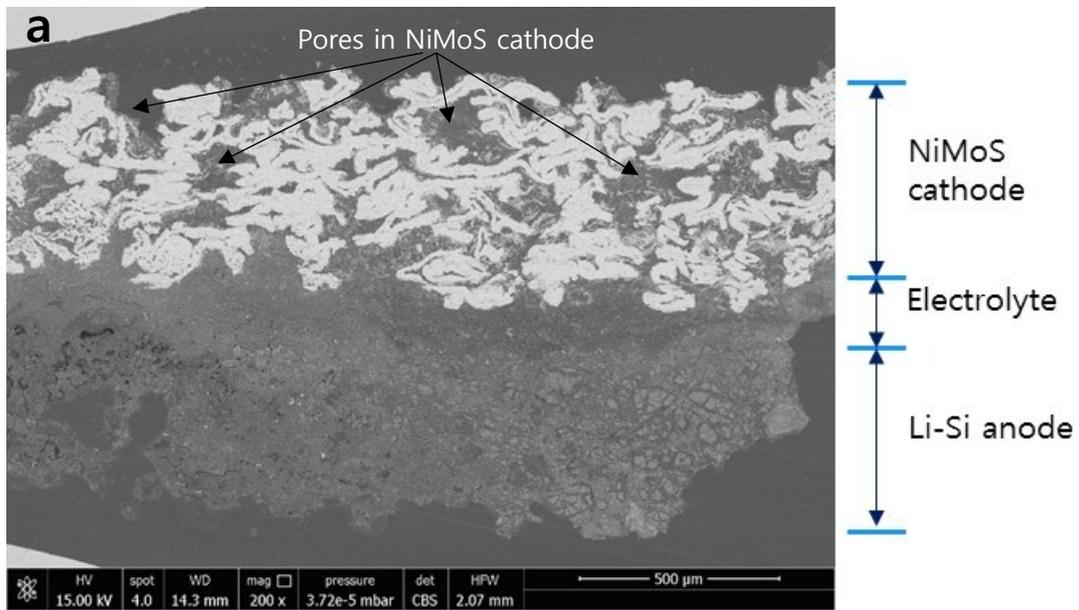


Figure S8. Total polarization of NiMoS cathodes and FeS<sub>2</sub> depicted from single cell discharge test result.

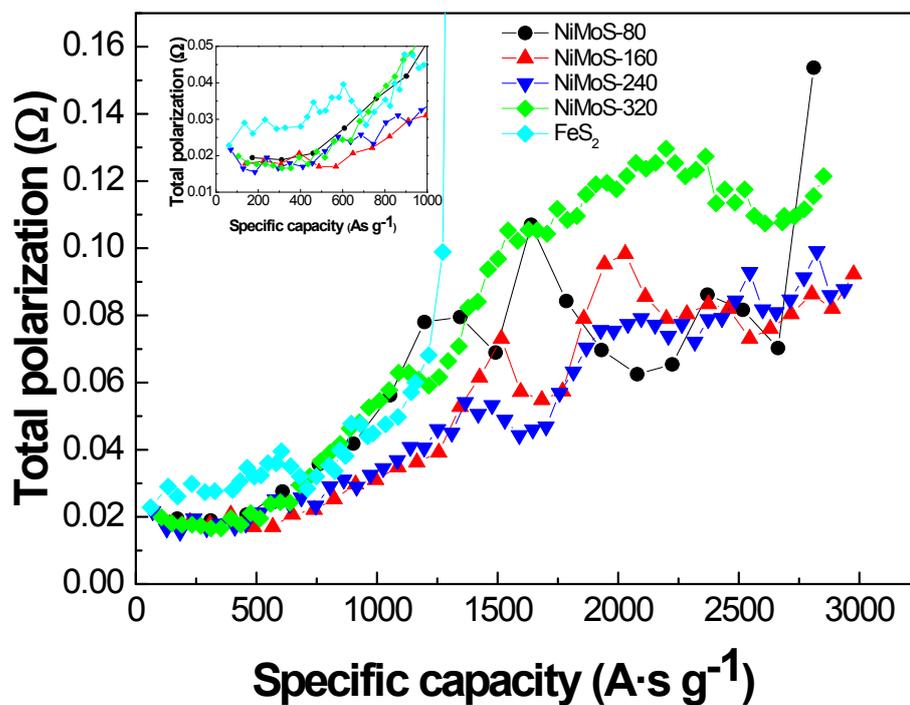
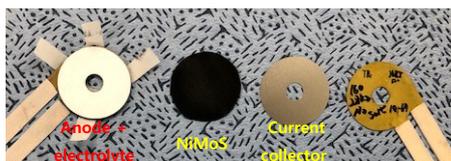
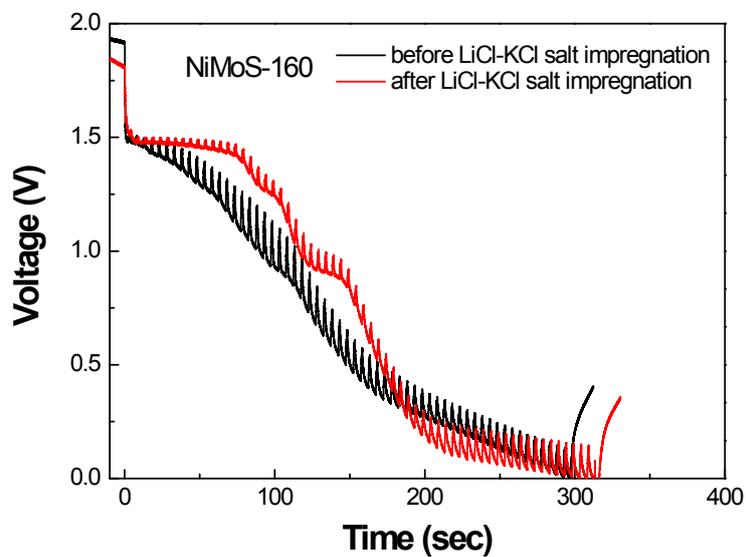
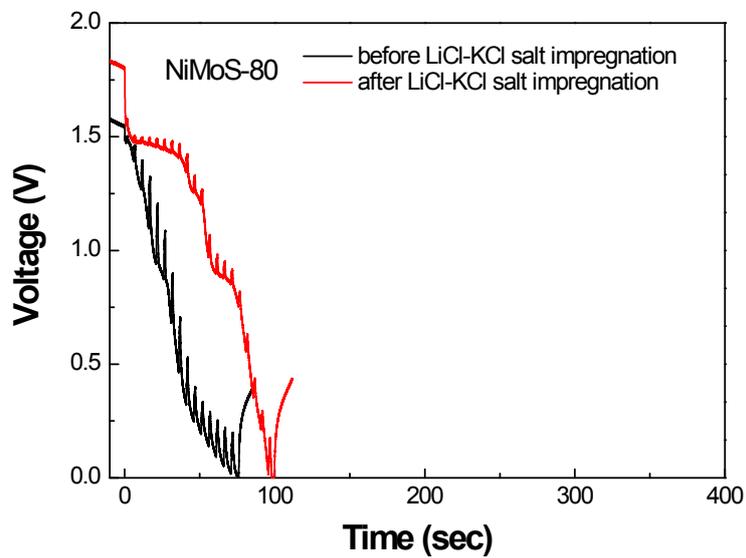
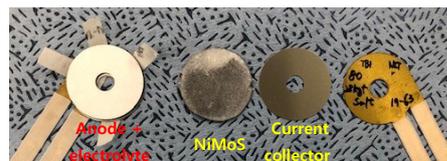


Figure S9. LiCl-KCl salt impregnation effect of NiMoS cathodes on single cell discharge.



Single cell test assembly before  
LiCl-KCl salt impregnation



Single cell test assembly after  
LiCl-KCl salt impregnation

Table S1. NiMoS loading rate according to the  $(\text{NH}_4)_2\text{MoS}_4$  in precursor solution.

	$(\text{NH}_4)_2\text{MoS}_4$ (mg)	DMF (ml)	Loading (mg)
NiMoS-80	80	30	27.3
NiMoS-160	160	30	46.6
NiMoS-240	240	30	71.3
NiMoS-320	320	30	97.7