Supporting Information

$Improved\ Electrochemical\ Performance\ of\ Spinel\ LiMn_{1.5}Ni_{0.5}O_4$ $through\ MgF_2\ Nano-coating$

Qing Wu, † [a] Xiaoping Zhang, † [a] Shuwei Sun, [a] Ning Wan, [a] Du Pan, [a]

Ying Bai* [a] [b], Huiyuan Zhu [b], Yong-Sheng Hu [c], Sheng Dai [b]

- [a] Key Laboratory of Photovoltaic Materials of Henan Province and School of Physics & Electronics, Henan University, Kaifeng 475004, PR China.
 - [b] Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831, USA.
- [c] Institute of Physics, Chinese Academy of Sciences, Beijing 100190, PR China.

E-mail addresses: ybai@henu.edu.cn (Ying Bai).

[†] These authors contributed equally to this work.

^{*}Corresponding author.

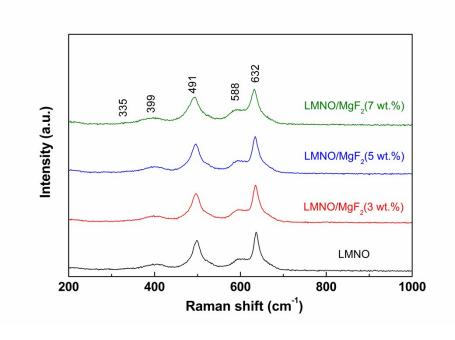
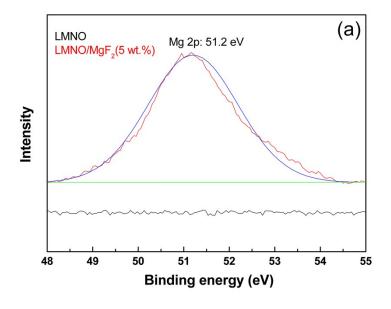


Fig. S1. Raman spectra of the pristine and MgF₂-coated LMNO.



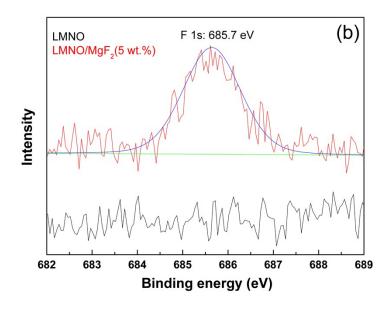


Fig. S2. XPS spectra of pristine and 5 wt.% MgF $_2$ -coated LMNO. (a) Mg 2p; (b) F 1s.

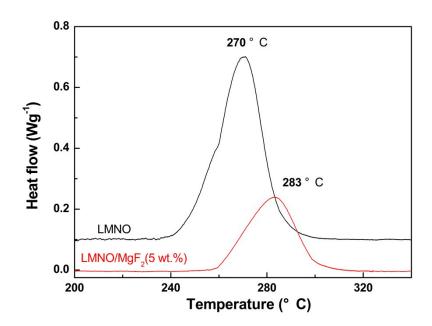


Fig. S3. DSC traces of the pristine and 5 wt.% MgF_2 -coated LMNO electrodes at charged state of 4.9 V.