

**Supporting information:**

**A combined first principles and experimental study on  
 $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$  for rechargeable Na batteries**

R. A. Shakoor,<sup>a,‡</sup> Dong-Hwa Seo,<sup>b,‡</sup> Hyungsuk Kim,<sup>b,c</sup> Young-Uk Park,<sup>b</sup> Jongsoon Kim,<sup>b</sup> Sung-Wook Kim,<sup>b</sup> Hyeokjo Gwon,<sup>a</sup> Seongsu Lee<sup>c</sup> and Kisuk Kang<sup>b,\*</sup>

<sup>a</sup>Department of Materials Science and Engineering, KAIST, 291 Daehak-ro, Yuseong-gu, Daejeon 305-701 (Republic of Korea), <sup>b</sup>Department of Materials Science and Engineering, Research Institute of Advanced Materials, Seoul National University, 599 Gwanak-ro, Gwanak-gu, Seoul 151-742 (Republic of Korea),

<sup>c</sup>Korea Atomic Energy Research Institute, P.O. Box 105, Yuseong-gu, Daejeon 305-600 (Republic of Korea)

E-mail: matlgen1@snu.ac.kr

**The scanning electron microscope image of  $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$  particles**

The scanning electron microscope image of  $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$  particles is shown in Figure S1. It can be observed that the particles are of about 1~3  $\mu\text{m}$  size, which is relatively larger than the usual active particle size of the fluorophosphate family reported earlier [1, 2].

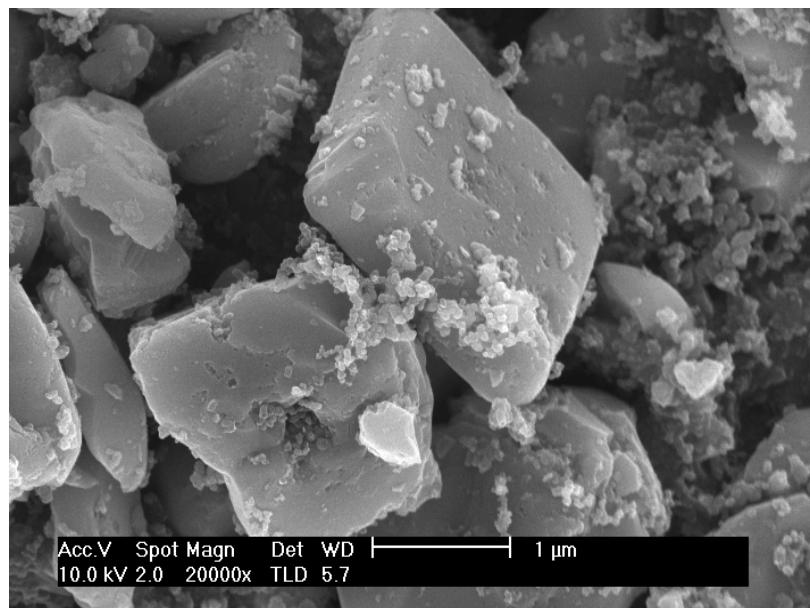


Figure S1. Scanning electron microscope image of  $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$ .

## References

1. Ellis, B. L.; Makahnouk, W. R. M.; Weetaluktuk, W. N. R.; Ryan, D. H.; Nazar, L. F. *Chem. Mater.* **(2010)** 22, 1059-1070.
2. Ellis, B. L.; Makahnouk, W. R. M.; Makimura, Y.; Toghill, K.; Nazar, L. F. *Nat. Mater.*, **(2007)** 6, 749 -753.