Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A. This journal is © The Royal Society of Chemistry 2019

**Electronic Supplementary Information** 

## Co-spray printing of LiFePO<sub>4</sub> and PEO-Li<sub>1.5</sub>Al<sub>0.5</sub>Ge<sub>1.5</sub>(PO<sub>4</sub>)<sub>3</sub> hybrid electrodes for all-

## solid-state Li-ion battery applications

Junfu Bu, \*a, b Puiki Leung, a Chun Huang, a Sang Ho Lee, a and Patrick S. Grant \*a, b

<sup>a</sup> Department of Materials, University of Oxford, Parks Road, Oxford OX1 3PH, UK.

<sup>b</sup> Faraday Institution, Quad One, Harwell Campus, Didcot OX11 0RA, UK.

E-mail address: junfu.bu@materials.ox.ac.uk (Dr. J. Bu), patrick.grant@materials.ox.ac.uk

(Prof. P.S. Grant)



**Fig. S1** SEM images of how the electrode coating structure evolved as a function of spray cycles at 130 °C (blue line box) and 160 °C (red line box).



**Fig. S2** Cross-sectional SEM image of the honeycomb electrode at 160 °C after 20 spray cycles, with through thickness pores highlighted.



**Fig. S3** Volumetric capacity as a function of C-rate for non-honeycomb (NH) LFP-based electrodes formed at substrate temperatures of 130 to150 °C and honeycomb (H) LFP-based electrodes formed at substrate temperatures of 160 to 180 °C.