Electronic Supplementary Information for

**Si/Ag Composite Building by Interconnected Micro-Nano Bimodal Porous Structure as High-Performance Anode for Li-Ion Batteries**

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Fig. S1 Pore size distribution of the BP Si/Ag composite.
Fig. S2 EDS measurement of the BP Si sample.
**Fig. S3** The XRD patterns of (a) Si$_{10}$Al$_{90}$ alloy, (b) Si$_8$Ag$_2$Al$_{90}$ alloy, (c) BP Si, (d) BP Si/Ag composite, and (e) the standard XRD patterns of pure Al, Si, and Ag.
Fig. S4 EDS measurement of the (a) Si₈Ag₂Al₉₀ alloy and (b) BP Si/Ag composite.
Fig. S5 The XRD patterns of the samples obtained by etching SiAgAl alloy in HCl solution for (a) 2 h and (b) 5 h.
Fig. S6 The digital photographs of the experiments about immersing SiAl alloy foils in different solutions for (a) 2, (b) 5, (c) 10, and (d) 24 h at room temperature.
Fig. S7 The SEM image of the product obtained through immersing Si$_{10}$Al$_{90}$ alloy in 1 M HCl solution for 10 h.
**Fig. S8** The SEM image of the BP Si/Ag sample after cycling at 200 mA g⁻¹ for 150 cycles between 0.01-1 V.