

Supporting Information

**Influence of carbonization temperature and press processing on the electrochemical characteristics of the self-standing iron oxide/carbon composite electrospun nanofibers**

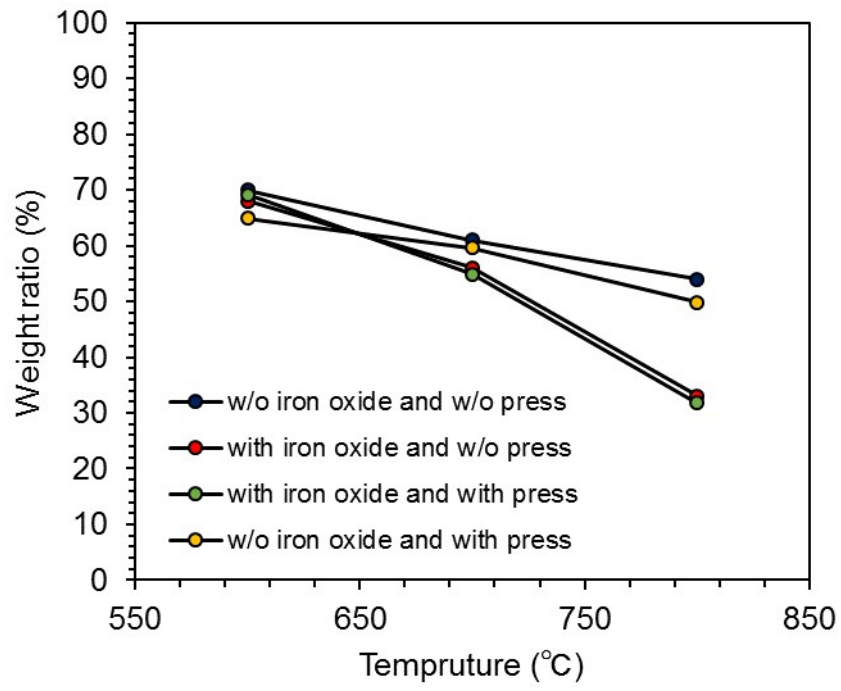
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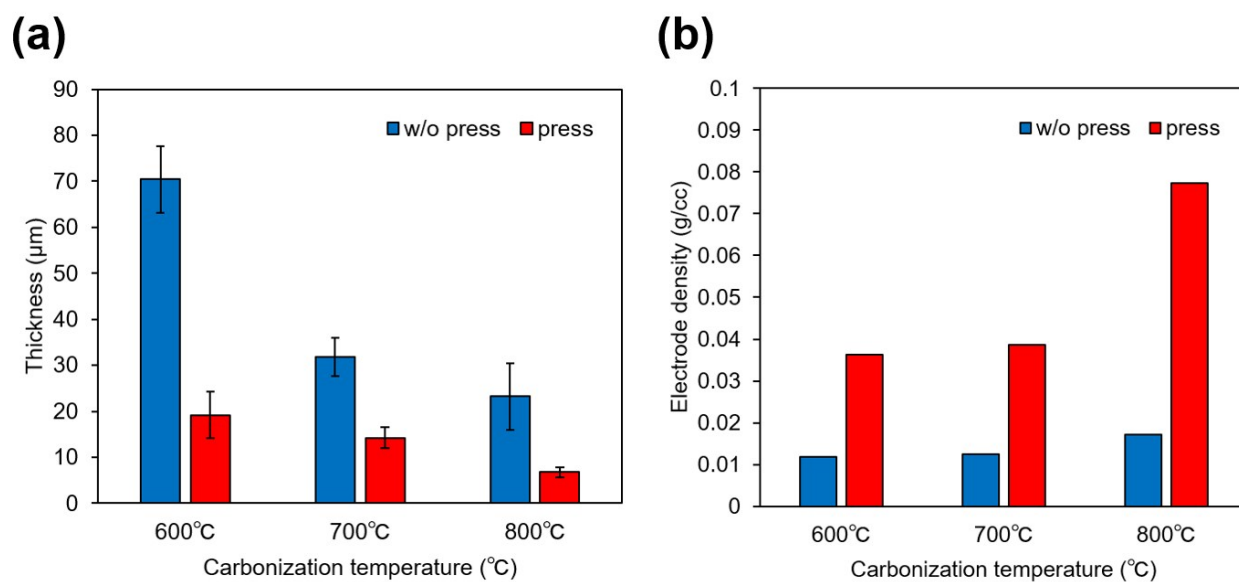
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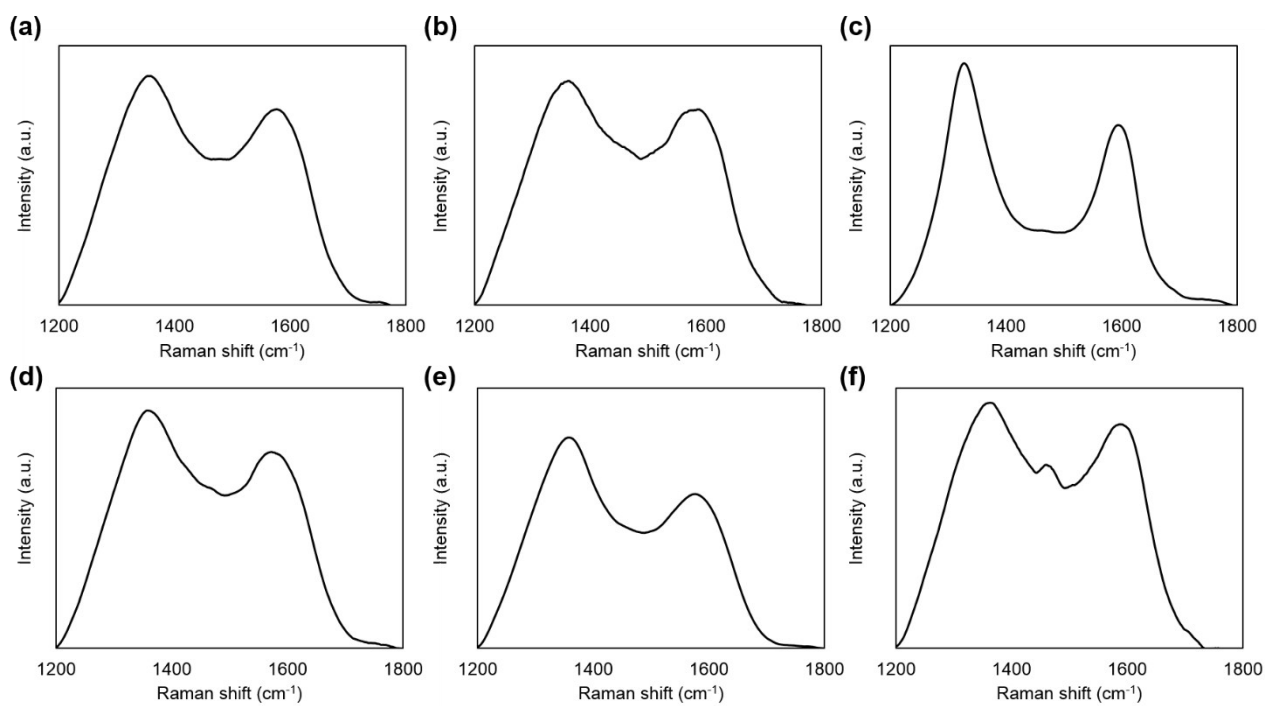
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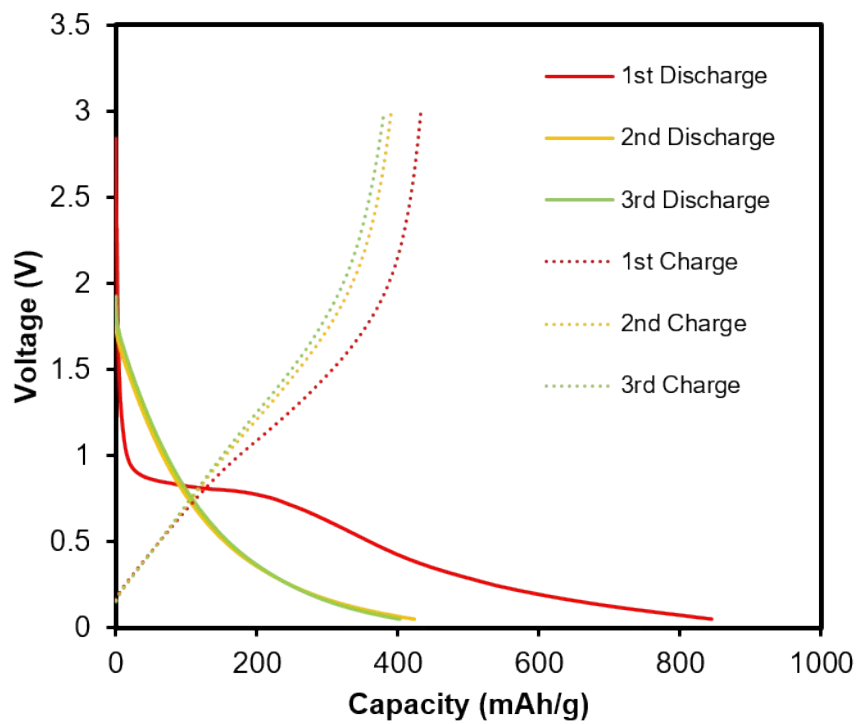
**Fig. S1** Weight retention of the self-standing carbon nanofibers and the iron oxide/carbon composite nanofibers with and without press processing for various carbonization temperature.



**Fig. S2** (a) Thickness and (b) Electrode density of the self-standing iron oxide/carbon composite nanofibers without and with press processing for various carbonization temperature.

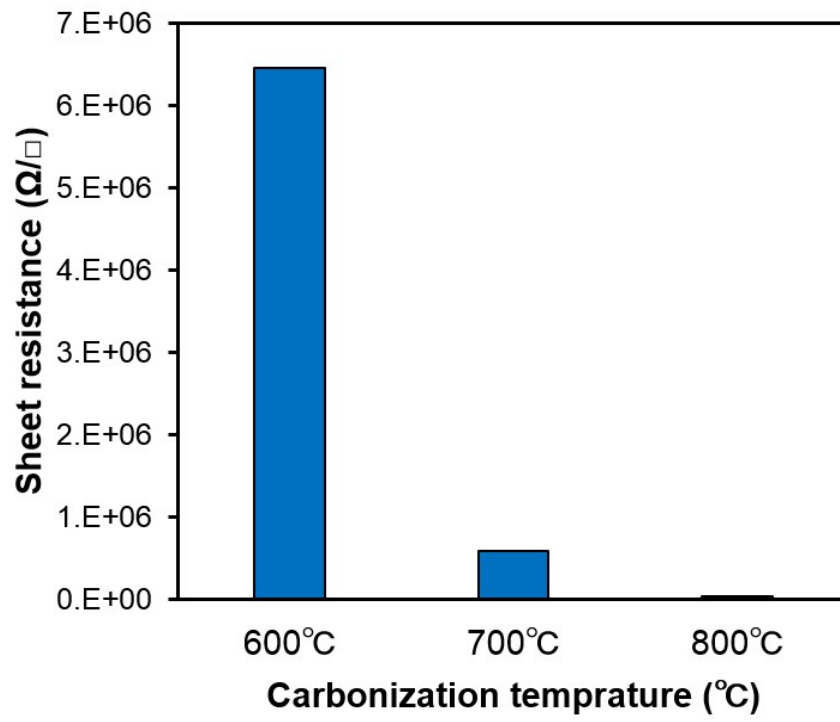


**Fig. S3** Raman spectra of the self-standing iron oxide/carbon composite electrospun nanofibers; (a) Calcination temperature: 600 °C, without press treatment (b) Calcination temperature: 700 °C, without press treatment (c) Calcination temperature: 800 °C, without press treatment (d) Calcination temperature: 600 °C, with press treatment (e) Calcination temperature: 700 °C, with press treatment (f) Calcination temperature: 800 °C, with press treatment.

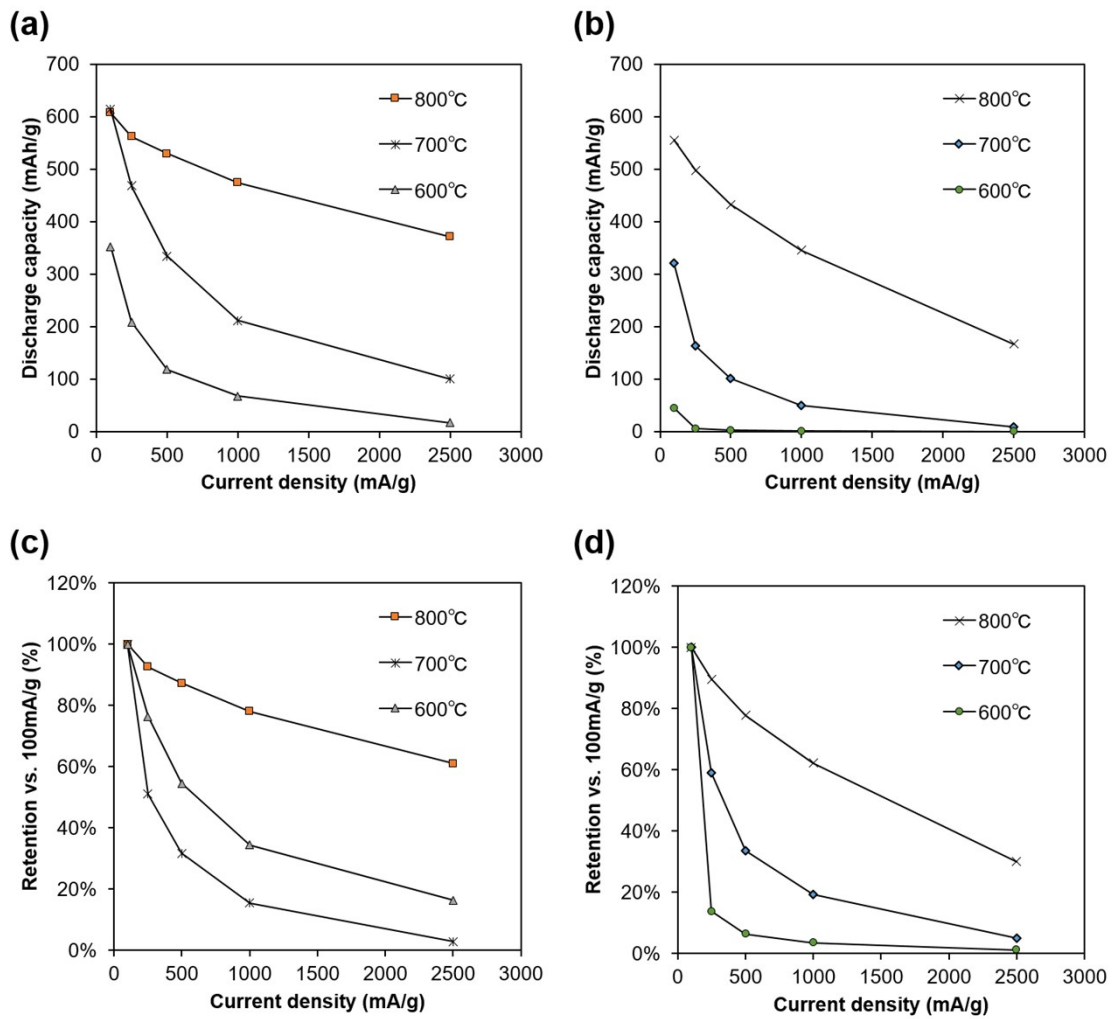


**Fig. S4** 1<sup>st</sup> – 3<sup>rd</sup> charge–discharge curves of the self-standing electrospun carbon nanofiber carbonized at 800 °C, without press

treatment.

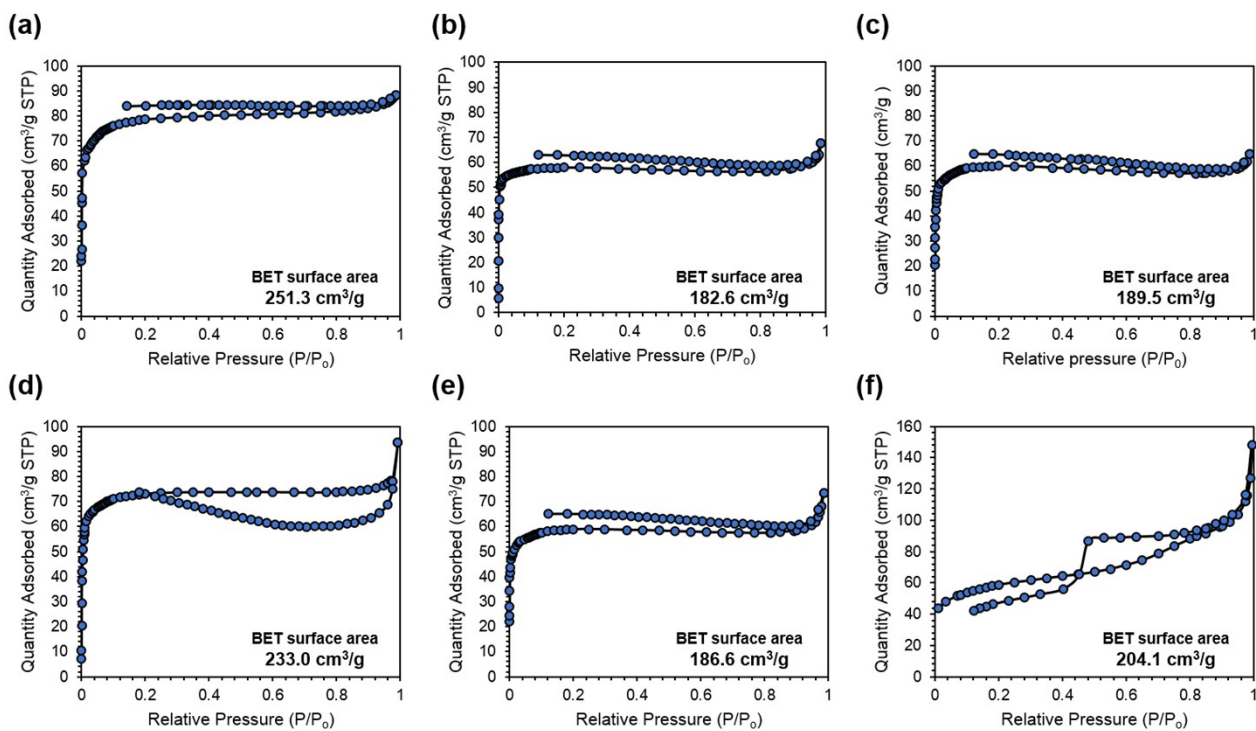


**Fig. S5** Sheet resistance of the self-standing iron oxide/carbon composite electrospun nanofibers carbonized at various temperature with press processing.



**Fig. S6** Discharge capacity of the self-standing iron oxide/carbon composite nanofibers (a) without and (b) with press processing,

Capacity retention of the self-standing iron oxide/carbon composite nanofibers (a) without and (b) with press processing for various current density.



**Fig. S7** Gas adsorption-desorption isotherms of self-standing iron oxide/carbon composite nanofibers: (a) carbonization at 600 °C, without press treatment; (b) carbonization at 700 °C, without press treatment; (c) carbonization at 800 °C, without press treatment; (d) carbonization at 600 °C, with press treatment; (e) carbonization at 700 °C, with press treatment; (f) carbonization at 800 °C, with press treatment.