

## Electronic Supplementary Information

### In situ formation of MnO@N-doped carbon for asymmetric supercapacitor with enhanced cycling performance

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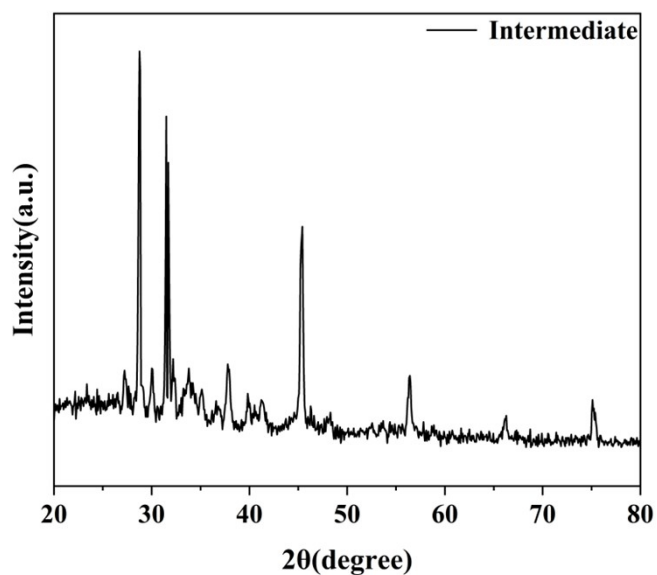
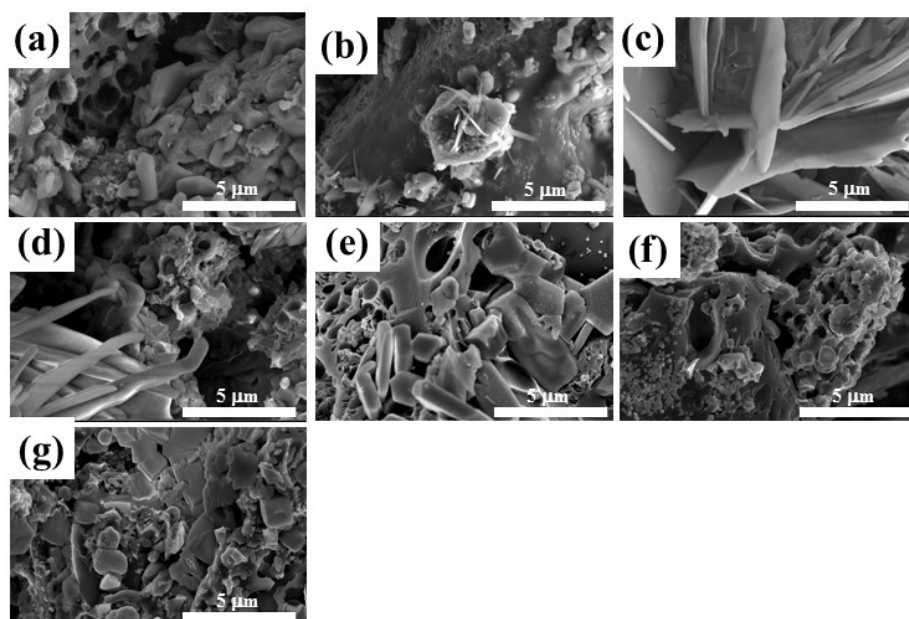
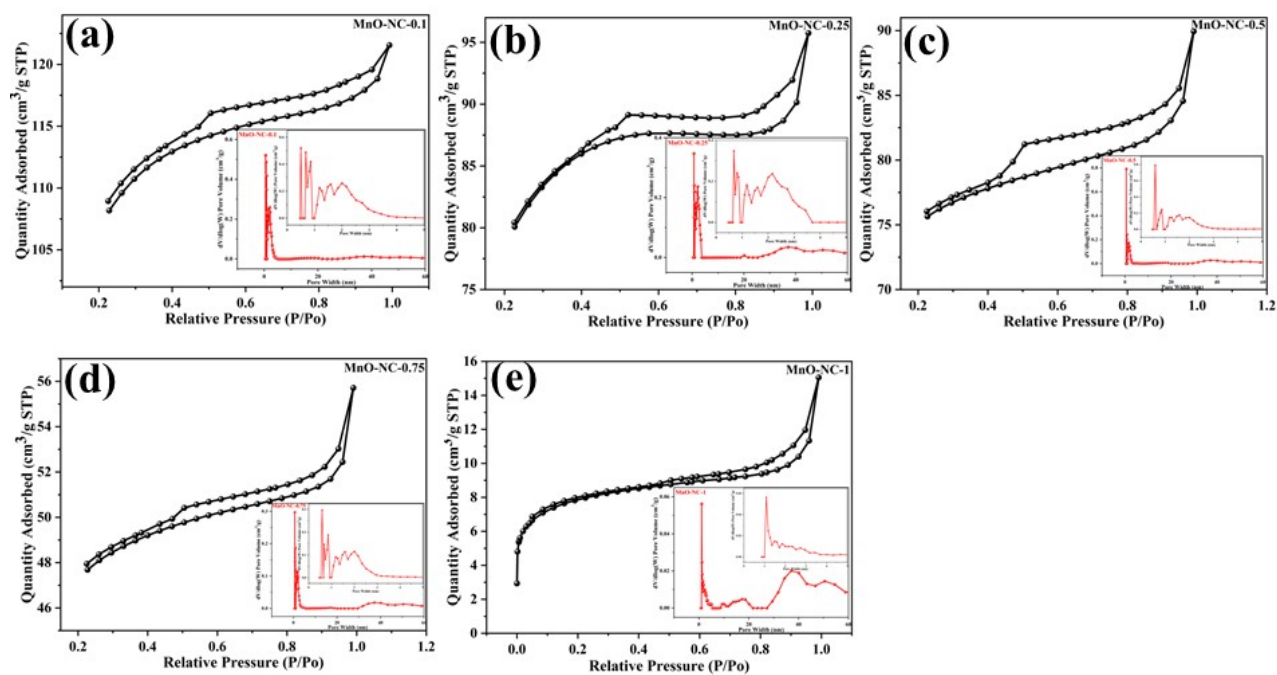


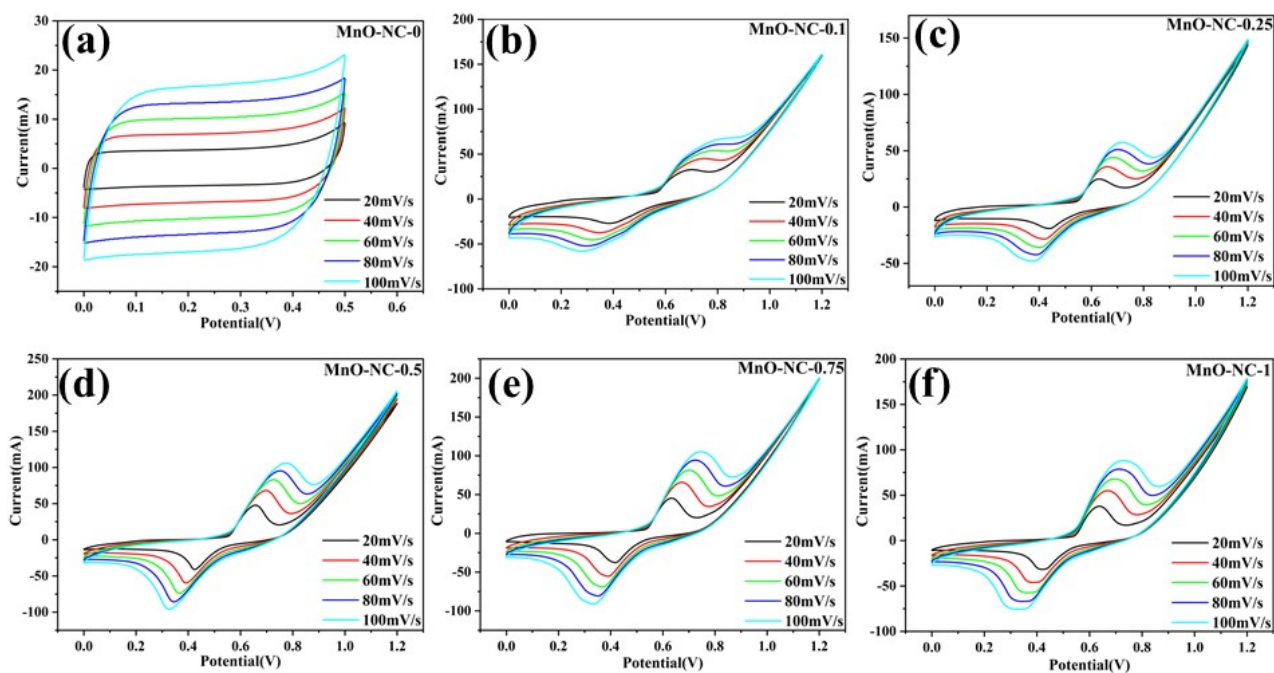
Figure S1. XRD pattern of intermediate.



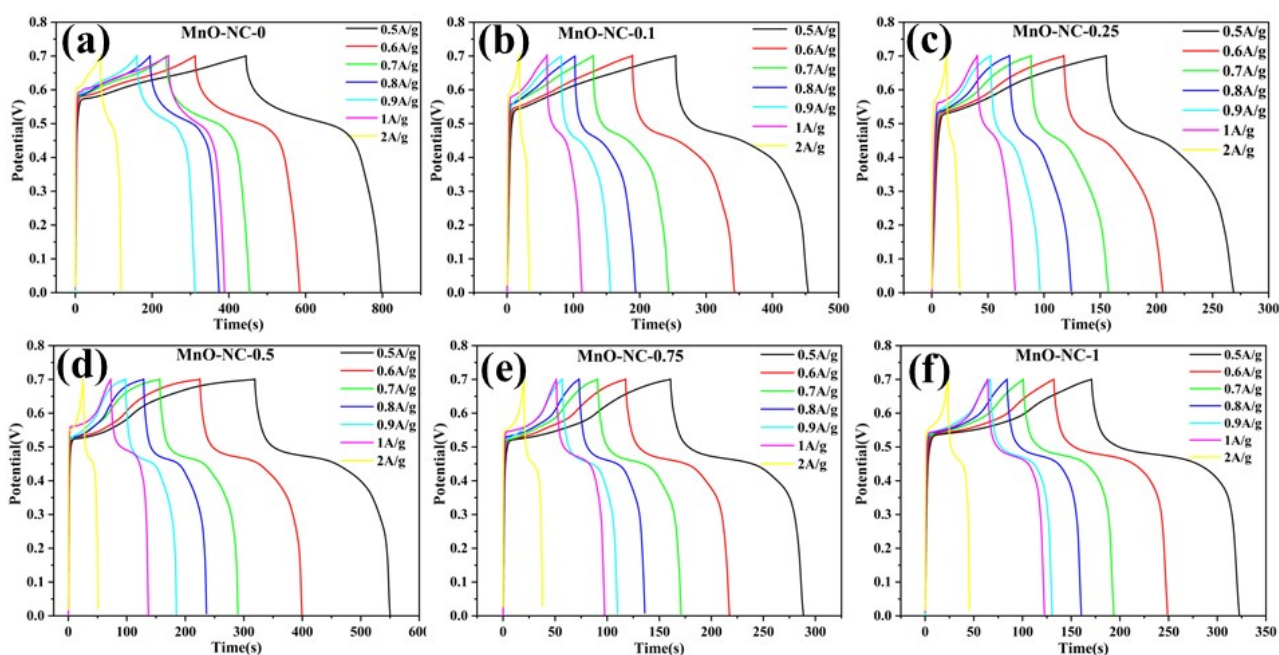
**Figure S2.** SEM image of (a) MnO-NC-0, (b) MnO-NC-0.05, (c) MnO-NC-0.1, (d) MnO-NC-0.25, (e) MnO-NC-0.5, (f) MnO-NC-0.75 and (g) MnO-NC-1.



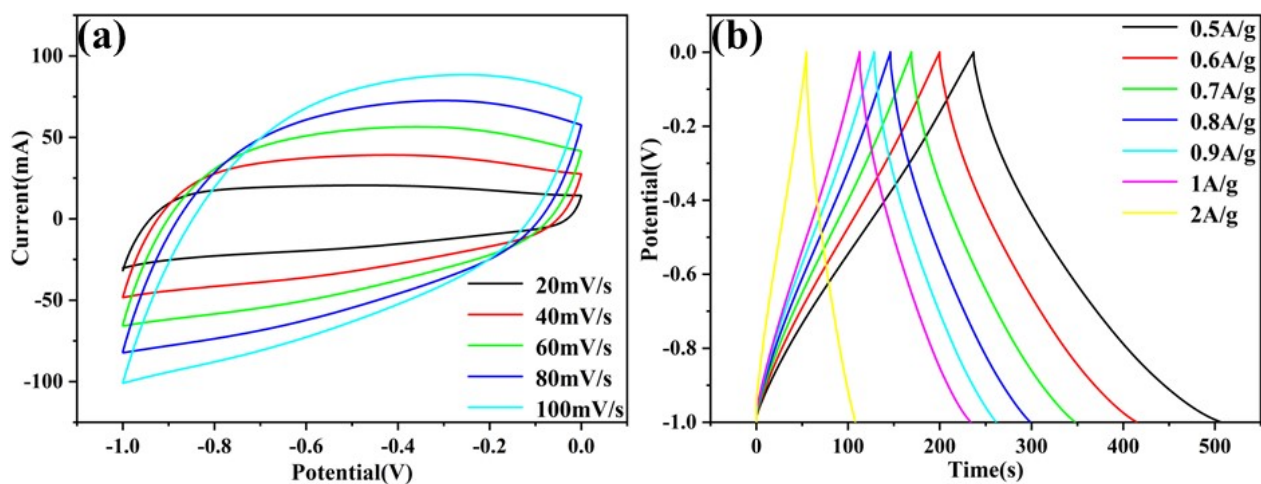
**Figure S3.** The nitrogen adsorption-desorption isotherms and the corresponding pore size distribution(inset) of (a) MnO-NC-0.1, (b) MnO-NC-0.25, (c) MnO-NC-0.5, (d) MnO-NC-0.75 and (e) MnO-NC-1.



**Figure S4.** CV curves of (a) MnO-NC-0, (b) MnO-NC-0.1, (c) MnO-NC-0.25, (d) MnO-NC-0.5, (e) MnO-NC-0.75 and (f) MnO-NC-1.



**Figure S5.** GCD curves of (a) MnO-NC-0, (b) MnO-NC-0.1, (c) MnO-NC-0.25, (d) MnO-NC-0.5, (e) MnO-NC-0.75 and (f) MnO-NC-1.



**Figure S6.** CV and GCD curves of AC.

**Table S1.** Relative atomic contents of nitrogen element in MnO-NC-0 and MnO-NC-0.05 based on XPS results.

Sample	Nitrogen species (at. %)	
	Pyridine N	Pyrrole N
<b>MnO-NC-0</b>	6.10(51.59%)*	4.33(48.41%)
<b>MnO-NC-0.05</b>	5.12(51.18%)	4.49(48.82%)

\* The value in bracket represents the relative atomic contents of nitrogen species obtained by fitting N 1s XPS spectra.