

## Supporting Information

### **Nitrogen-Doped Porous Carbon with Hierarchical Structure for High Performance Symmetric Supercapacitor**

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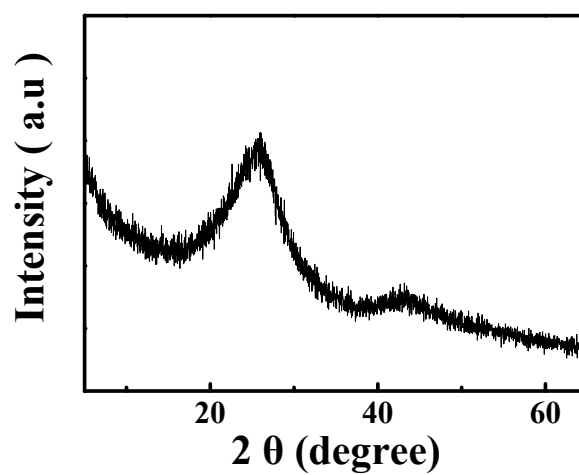


Figure S1. XRD spectrum of NPC-6-800.

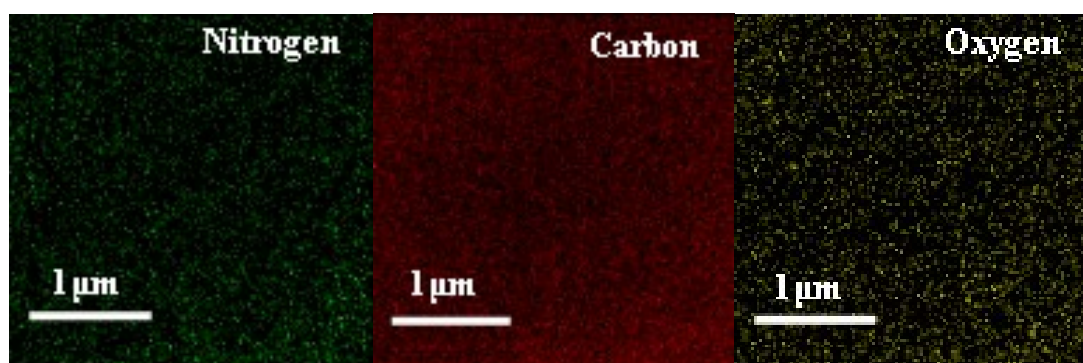


Figure S2. Elemental mapping images of NPC-6-800.

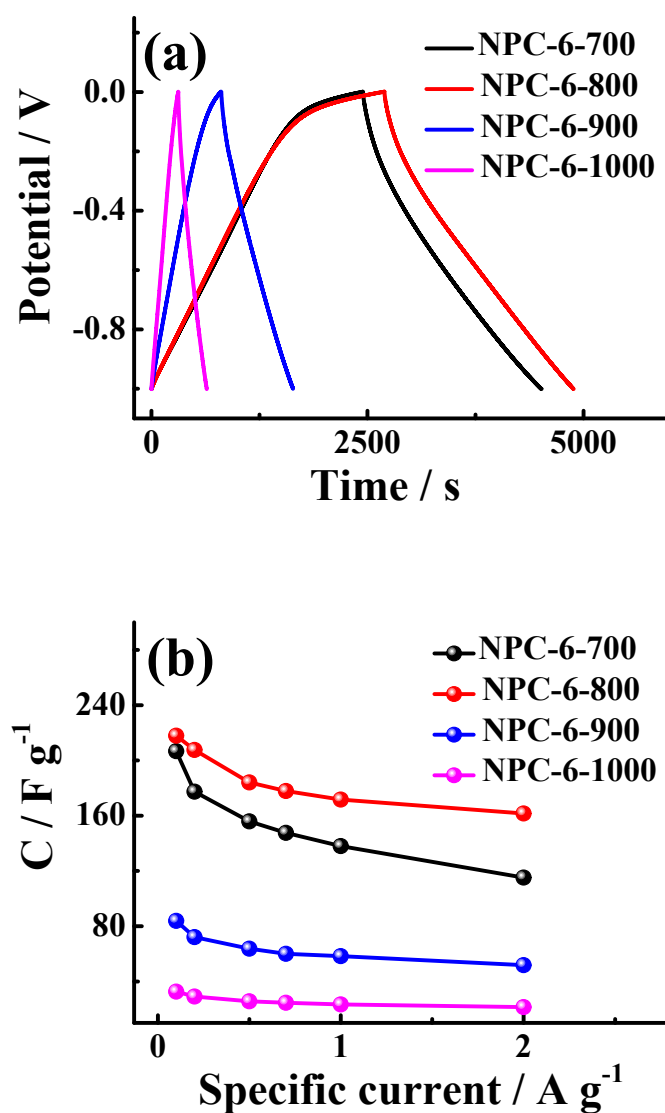


Figure S3. (a) Galvanostatic charge-discharge curves of NPCs at a current density of 0.1 A g<sup>-1</sup>, and (b) Specific capacitances of NPCs at different current densities.

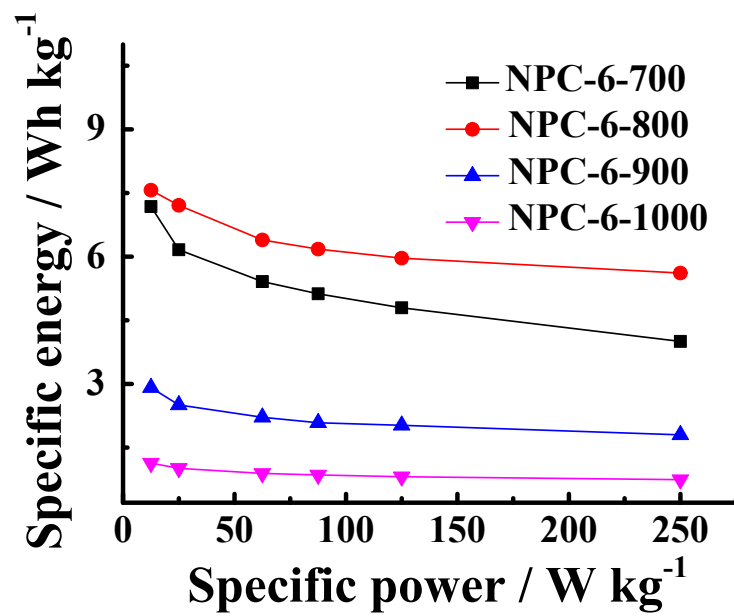


Figure S4. Ragone plots.

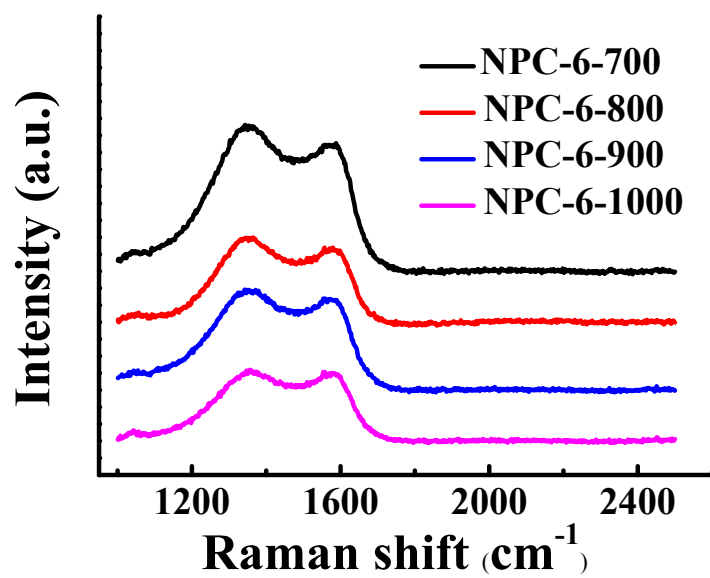


Figure S5. Raman spectra of the NPCs.

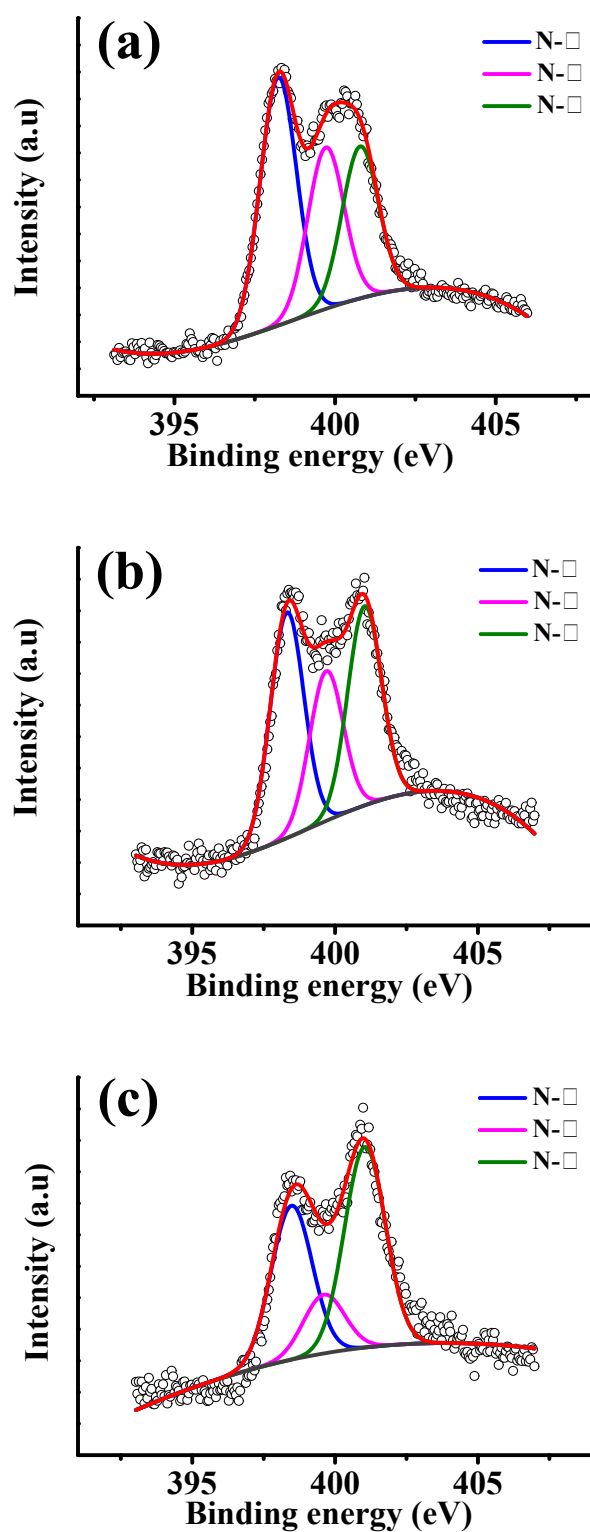


Figure S6. High-resolution N 1s spectra of NPC-6-700 (a), NPC-6-900 (b), and NPC-6-1000 (c).

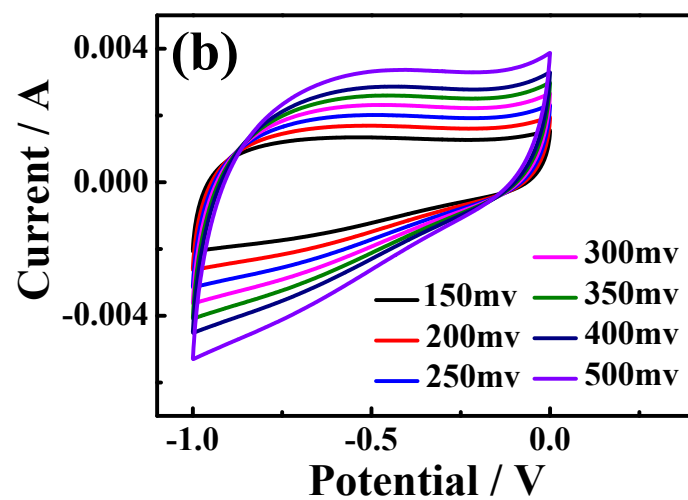
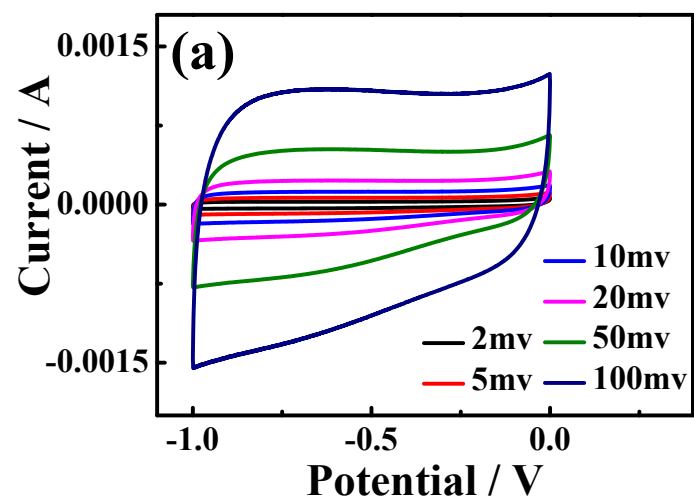


Figure S7. Cyclic voltammograms of NPC-6-800 at different scan rates.

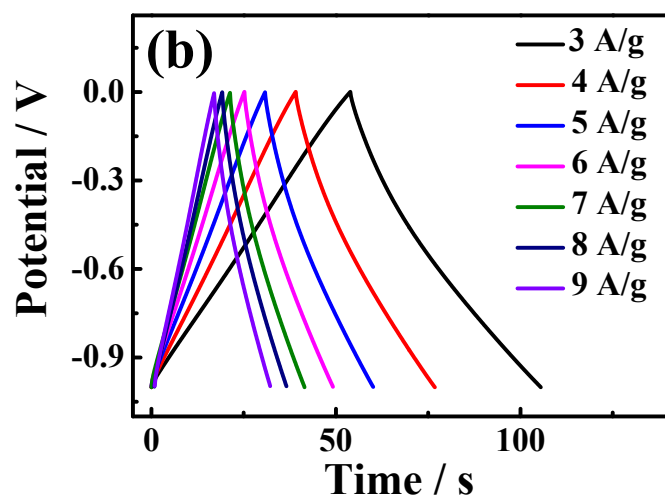
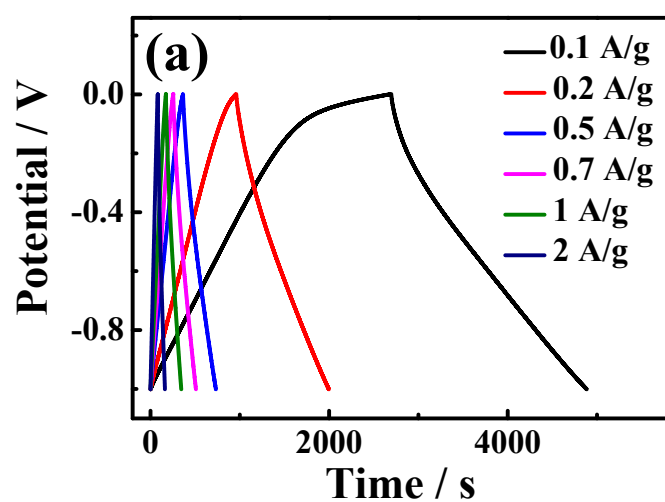


Figure S8. Galvanostatic charge-discharge curves of NPC-6-800 at different current densities.

Table S1 Pore structure parameters of NPCs

| Sample    | Porogen/PoPD | $S_{\text{BET}}$<br>( $\text{m}^2 \text{g}^{-1}$ ) | $V_{\text{total}}$<br>( $\text{cm}^3 \text{g}^{-1}$ ) | $V_{\text{micro}}$<br>( $\text{cm}^3 \text{g}^{-1}$ ) | $V_{\text{meso}}$<br>( $\text{cm}^3 \text{g}^{-1}$ ) |
|-----------|--------------|----------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------|
| PoPD-800  | -            | 33.93                                              | 0.047                                                 | 0.044                                                 | 0.003                                                |
| NPC-1-800 | 1:1          | 10.40                                              | 0.016                                                 | 0.013                                                 | 0.003                                                |
| NPC-3-800 | 3:1          | 190.94                                             | 0.12                                                  | 0.10                                                  | 0.02                                                 |
| NPC-6-800 | 6:1          | 266.49                                             | 0.18                                                  | 0.15                                                  | 0.03                                                 |



Table S2 Comparison of the specific capacitance of some carbon materials in the literature.

| Materials                                                 | electrolyte                         | C / F g <sup>-1</sup> | ref       |
|-----------------------------------------------------------|-------------------------------------|-----------------------|-----------|
| Mesoporous carbons                                        | 1 M H <sub>2</sub> SO <sub>4</sub>  | 240                   | 10        |
| Active nitrogen-enriched nanocarbons                      | 6 M KOH                             | 173                   | 23        |
| Nitrogen-containing hydrothermal carbons                  | 6 M KOH                             | 220                   | 26        |
| Nitrogen-doped carbonaceous hybrid                        | 6 M KOH                             | 267                   | 38        |
| Nitrogen and oxygen co-doped activated carbons            | 1 M H <sub>2</sub> SO <sub>4</sub>  | 277                   | 40        |
| Sulphur-doped carbon-graphene composites                  | 6 M KOH                             | 109                   | 41        |
| Nitrogen and sulphur co-doped nanoporous carbon materials | 6 M KOH                             | 73                    | 55        |
| Alkylated graphene nanosheets                             | 6 M KOH                             | 242                   | 56        |
| Boron-doped porous carbons                                | 1 M Na <sub>2</sub> SO <sub>4</sub> | 139                   | 57        |
| Nitrogen-doped multi-walled carbon nanotubes              | 6 M KOH                             | 44.3                  | 58        |
| Nitrogen-doped porous carbons                             | 6 M KOH                             | 365                   | This work |

Table S3. Chemical compositions and distributions of NPCs.

| Sample     | C (wt %) | N (wt %) | O (wt %) | N-I   | N-II  | N-III | N/C  | O/C  |
|------------|----------|----------|----------|-------|-------|-------|------|------|
| NPC-6-700  | 73.72    | 16.64    | 7.06     | 44.19 | 28.75 | 27.07 | 0.23 | 0.10 |
| NPC-6-800  | 71.03    | 14.86    | 11.5     | 41.34 | 28.24 | 30.43 | 0.21 | 0.16 |
| NPC-6-900  | 75.48    | 10.17    | 9.4      | 39.27 | 26.06 | 34.68 | 0.13 | 0.12 |
| NPC-6-1000 | 78.37    | 7.35     | 9.61     | 37.25 | 14.21 | 48.54 | 0.09 | 0.12 |