

Supplementary materials

Mild and efficient One-step synthesis of nitrogen-doped multistage porous carbon for high-performance supercapacitors

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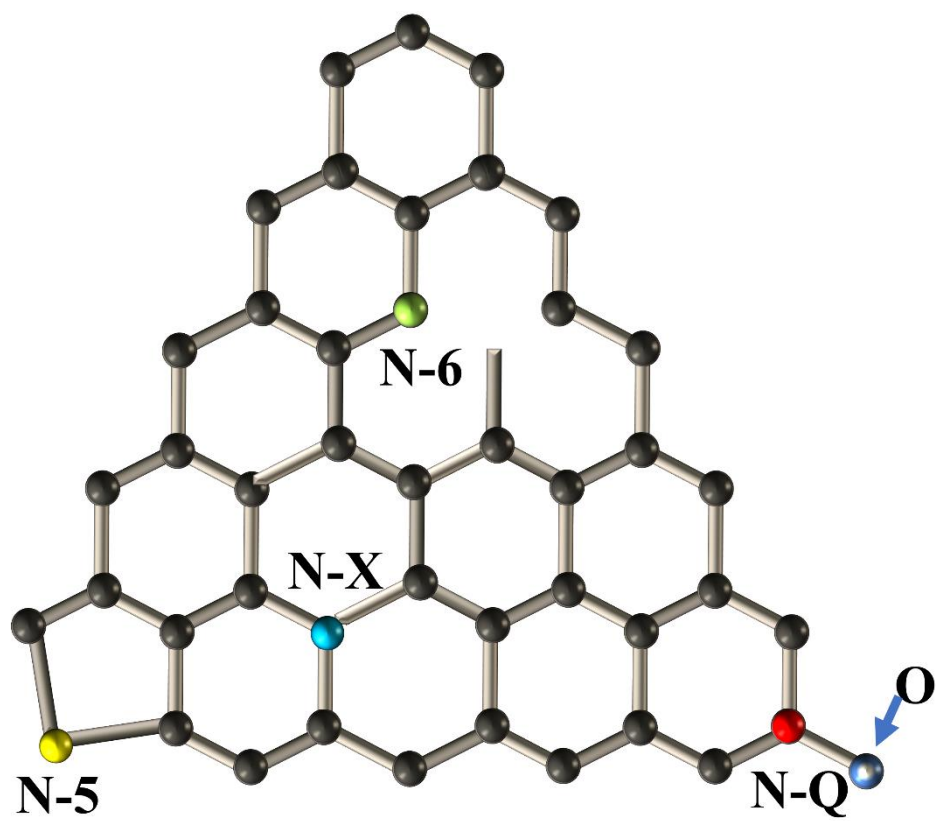


Figure S1. The mode of existence of nitrogen atoms in the carbon skeleton

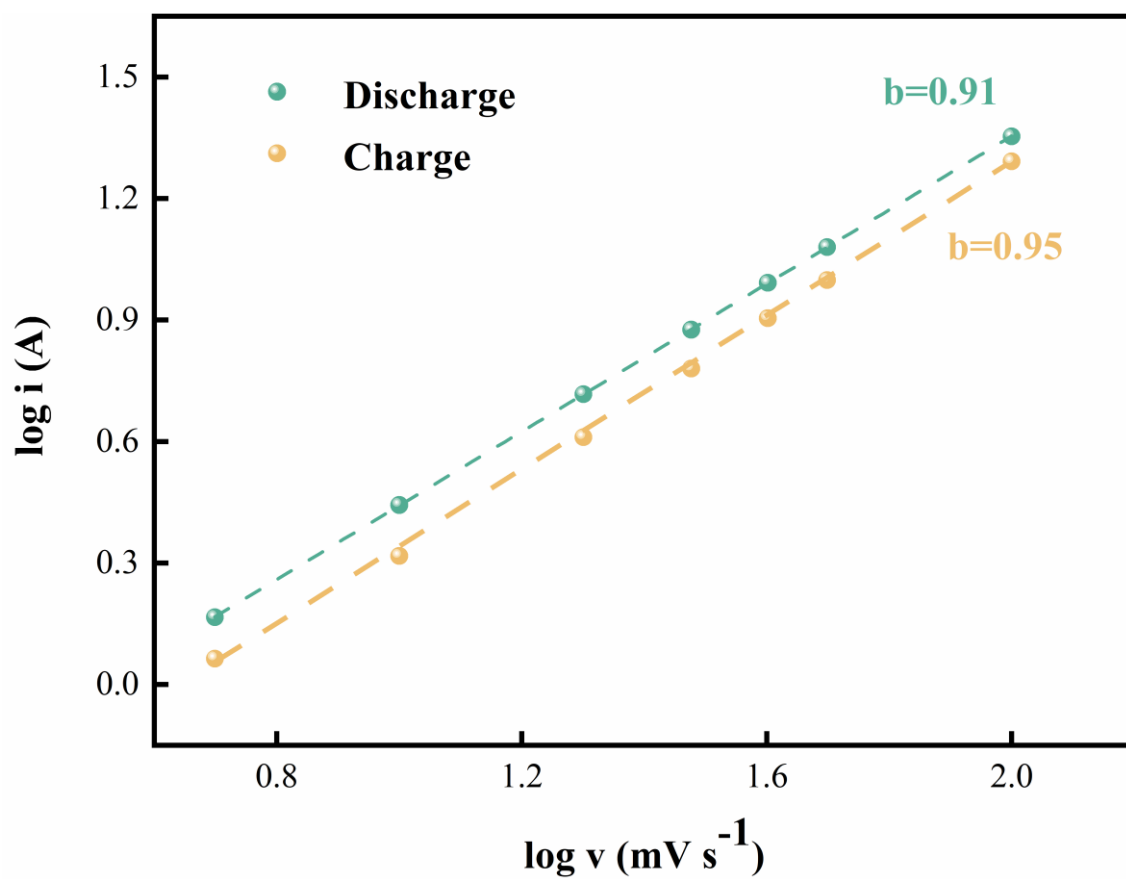


Figure S2. Fitted plots of peak current versus scan rate for the charging process (orange curve) and the discharging process (green curve) for N-PAC_{0.5}, fitted slopes are the values of b .

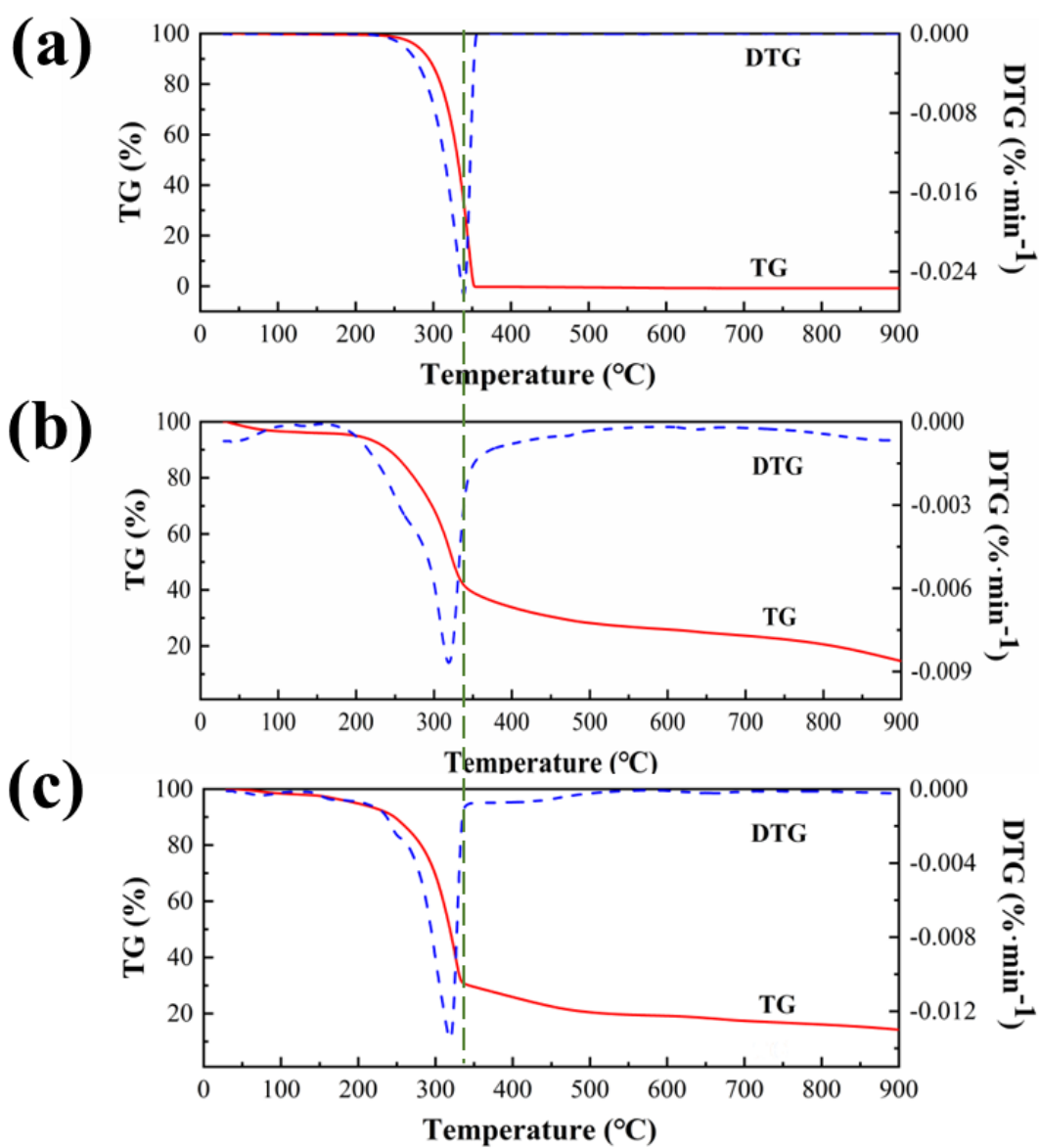


Figure S3. TG and DTG curves: (a) melamine; (b) tobacco straw;(c) melamine: tobacco straw =1:1

Detailed information on K₂CO₃ activation

During the activation process, K₂CO₃ decomposes into CO₂ and K₂O, which reacts with C atoms and then generates K and CO. When the temperature exceeds the boiling point of K (about 800 °C), the K vapor drills into the carbon layer and causes damage to the structure of the carbon material. In addition, the CO₂ produced during the activation process also plays a physical porosity role on the carbon structure [40].

