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# High-throughput fabrication of porous carbon by chemical foaming strategy for high performance supercapacitor

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## Abstract

Inspired by people to make flour food, a one-pot, low-cost, green and environmental friendly gas foaming strategy is adopted here to prepare the three-dimensional hierarchical porous carbon (HPC) by introducing  $\text{NaHCO}_3$  as foaming and activation agent. During the pyrolysis process, the  $\text{CO}_2$  gas produced during the transforms from  $\text{NaHCO}_3$  into  $\text{Na}_2\text{CO}_3$  will resulted in the producers of the macro-pores and meso-pores, meanwhile, the as-produced  $\text{Na}_2\text{CO}_3$  further reactor with the carbon intermediate at a high temperature, and finally result in forming a micro-pores porous structure. Such intimate structural interconnectivities provide three-dimensional continuous pathway for electron rapid transfer and the interconnected pores allow for the ion to penetrate and evenly contact the electrode material quickly. The

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