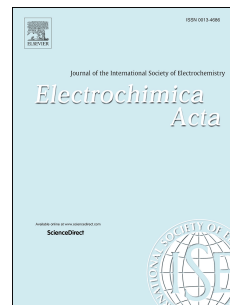


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Preparation of metal-organic framework-derived porous carbon and study of its supercapacitive performance

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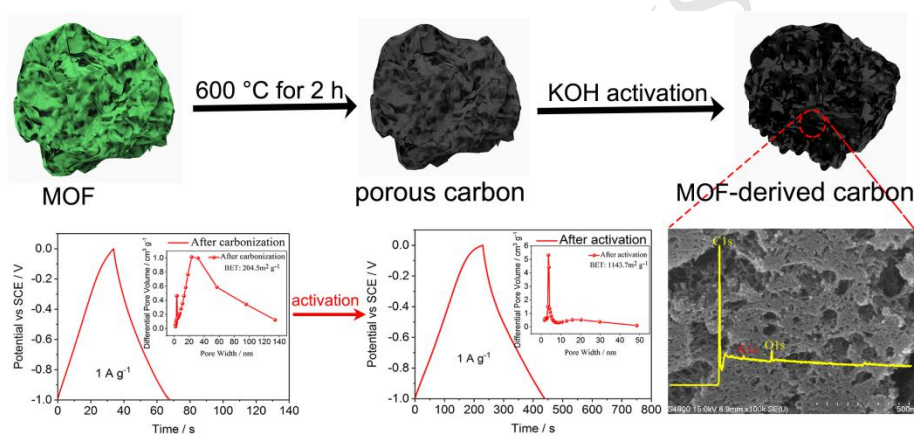
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Graphical Abstract

In this work, $\text{Ni}_3(\text{BTC})_2(\text{Me}_2\text{NH})_3$ was synthesized via a hydrothermal method and used as a carbon precursor. Porous carbon with hierarchical structure was then obtained from pre-carbonization of the precursor at a certain temperature and then mixing of the pre-carbonization product and KOH in a certain ratio. The porous-carbon materials showed a high BET specific surface area ($1143 \text{ m}^2 \text{ g}^{-1}$), an average pore size (5.246 nm), and nitrogen content ($2.79 \text{ at}\%$). Favorable specific capacitances of 211 F g^{-1} in 6 M KOH solution were achieved. These properties may enrich and broaden the use of porous carbons as electrodes, especially considering their high conversion rate, high surface area, and good electrochemical performance.



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