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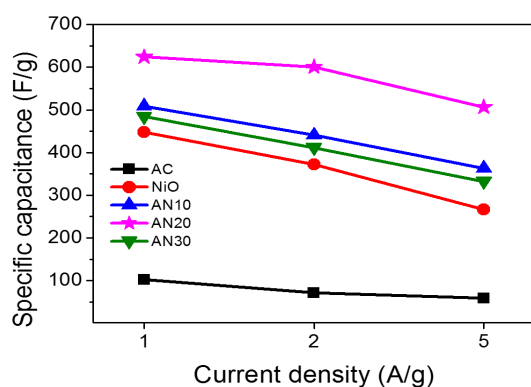
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Nitrogen doped activated carbon with nickel oxide for high specific capacitance as supercapacitor electrodes

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Graphical abstract



ABSTRACT

In this paper, activated carbon was prepared from microalgae via chemical activation with a mass ratio of charcoal/KOH=1:5 at an activation temperature of 700 °C for high surface area and porosity. The activated carbon/nickel oxide composites were produced by precipitation method in aqueous solution. The prepared activated carbon had a high surface area, many mesopore, and nitrogen atoms which improved good capacitance in the composite. In addition, the activated carbon/nickel oxide composites exhibited better electrochemical properties than those of nickel oxide in which activated carbon improved the dispersion of nickel oxide particles to prevent aggregation. When the nickel oxide was mixed to about a

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