

## Electrochemical properties of novel corn-based carbon electrodes in an aqueous medium

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Novel corn-based activated carbons were prepared and the electrodes from these activated carbons were made for the EDLC to examine the commercial applicability of these materials. The structural properties, energetic heterogeneities and surface functional groups of corn-based activated carbons were characterized using different techniques such as nitrogen sorption data, adsorption energy distribution and X-ray photoelectric spectroscopy. The electrochemical properties of various corn-based activated carbons were evaluated by using cyclic voltammetry and impedance measurement. The discharge capacitance of each unit cell was obtained by conducting CV experiments in an aqueous solution at room temperature. The effects of various properties of the porous carbon materials on the EDLC performance were discussed.