Abstrac

Electrochemical capacitor is a promising tool in storing electrical energy with high capacitance and power density. Electrochemical capacitor has several advantages including having a high specific capacitance, a simple and safe model of its use. The energy storage mechanism in electrochemical capacitor uses a double layer found in the pore electrode[1]. Porous electrodes that have large specific surface are in serious concern on research nowadays. In addition, the material elements of those electrode constituents are also an aspect that affects the capacitance. Mangan theoretically has a high capacitance of 1,370 F/g. Some researchers have used the electrodeposition to make porous manganese oxide films which are used as supercapacitor electrodes. This method produces electrode specific capacitance ranging from 377 F/g to 445 F/g [1].plants such as sensitive seed plant are a source of material that can be used to make supercapacitor electrodes. The simple process that is carried out such as pulverization is carried out on sensitive seed plant and produces a thin layer of electrode with the thickness needed by the micrometer. Then using a thin layer of electrode was evaluated using cyclic voltammetry and obtained a specific capacitance value of 0,113 F/g.

Keywords: supercapacitor, manganese, electrode, capacitance