

The concept of storage of energy is not new. For hundreds of year the people have been storing energy in different foams like mechanical energy in water dams through pumped hydro systems and chemical energy in fuel like coal and wood. But as nowadays people started depending more and more electricity and use of electricity became more important in daily life people needed new and faster way to store energy for daily uses. The world is moving towards renewable energy, and this make storage becoming very important. Energy storage devices mainly batteries, supercapacitor, pseudo capacitor etc. In this work Copper based dual ligand MOF is synthesized and have exceptional results. Cu-SIP-MOF is synthesized by using sonication method. The material shows good electrical conductivity. Have good cyclic stability and 101% columbic efficiency. The change in peaks location at various scan rate i.e., the scan rate rises the peak current increases which suggest that the nature of material is pseudocapacitive like. The b-value of synthesized material is 0.56 recoded which confirmed that the material is pseudo capacitor like. Calculated specific capacity value for Cu-SIP-MOF is  $30.36 \text{ Cg}^{-1}$  and for two electrode  $208.89 \text{ Cg}^{-1}$ . CV curves were also used to calculate values of specific capacitance which  $60.31 \text{ F/g}$  and for two electrode  $144 \text{ F g}^{-1}$ ,  $R_{ct}$  value  $10.02 \Omega$  calculated for the material is high which means diameter of the semicircle is very large. Calculated value of power density and energy density are  $42.06 \text{ Whkg}^{-1}$  and  $1390.69 \text{ Wkg}^{-1}$ . This work will be helpful for practical applications in energy storage devises.