**Abstract**

A battery type electrode material of FePO4 nano particles have synthesized through various synthetic routes of combustion, hydrothermal and ultrasonication methods for the design of aqueous supercapacitors. The phase purity, homogeneity and the functional groups present in the synthesized FePO4 are characterized through X-ray diffraction and FTIR measurements. Field emission scanning electron microscopy (FESEM) images show that there is a uniform and spherical shaped nano particles present in the compound synthesized from combustion technique than the remaining samples. The electrochemical properties of the FePO4 electrode are studied in various aqueous electrolytes of 1 M LiOH, 1 M KOH and 1 M NaOH to explore their superior electrochemical performances. Among these alkaline electrolytes, the FePO4 electrode provides a maximum specific capacitance of 400 F g-1 in 1 M NaOH at 2 mV s-1 and also retained about 93% of the initial capacitance value even after 5000 cycles at a current density of 1 mA cm-2. These results suggest that the fabricated electrode material has high potential as a newer electrode material for hybrid supercapacitor.