

Abstract

The ability of piezo-materials in energy harvesting from mechanical vibrations and convert it into useable electrical energy. In this research work, different piezo- materials are synthesized by solid state reaction method, then by solution casting method piezoelectric thin films are fabricated for the construction of piezoelectric devices. To evaluate material sensitivity and performance, oscilloscope and digital meter is used. The whole experiment was done to evaluate the piezoelectric activity of all synthesized piezoelectric materials. A comparison was made to know which piezomaterial showed best activity amongst all the materials. Piezoactivity analysis was done in three ways , in ambient sound, at table vibrations and when pressure is applied on the device. It has been found that the cobalt borate stannate piezocomposite is active among all synthesized materials showed maximum output voltage of 35.6V (peak to peak), resistance and current (I) 22.25 μ A by applying pressure on device through fingers.