

Fig. I: Differential scanning calorimetric (DSC) scan of BaTiO_3 nanoparticles showing distinct tetragonal to cubic phase transition at $\sim 120^\circ\text{C}$

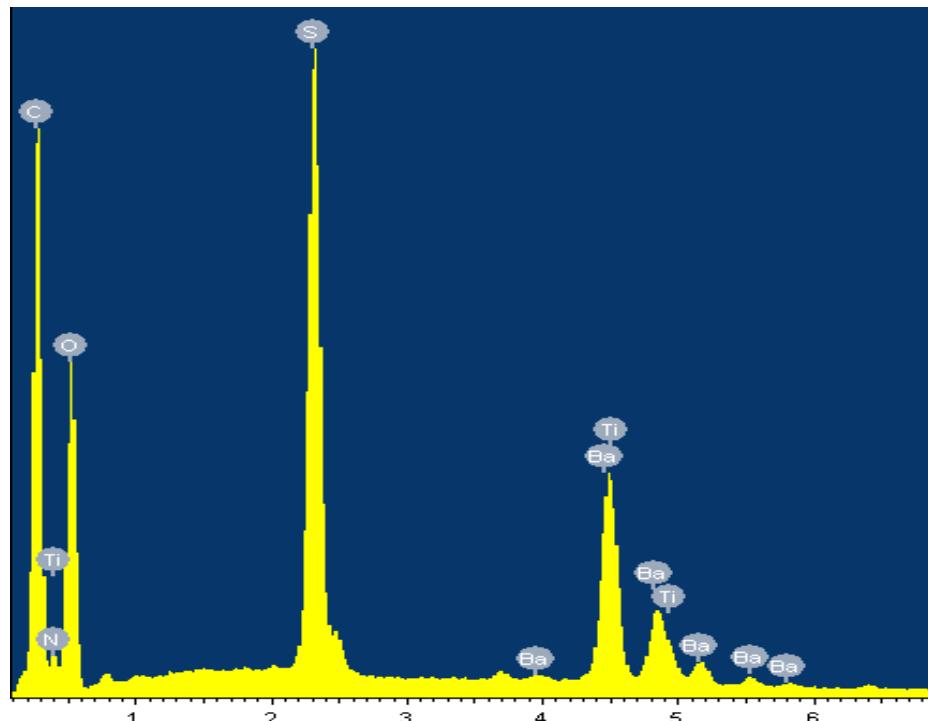


Fig. II: Energy dispersive X-ray spectroscopic (EDS) patterns of PANI- BaTiO_3 particles

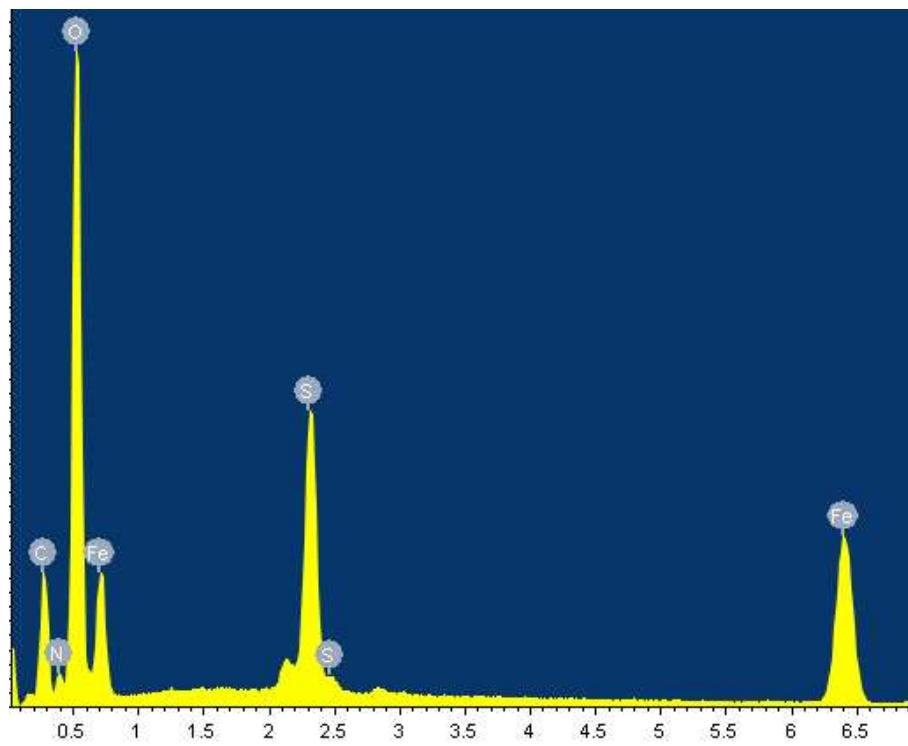


Fig. III: Energy dispersive X-ray spectroscopic (EDS) pattern of PANI-Fe₃O₄ particles

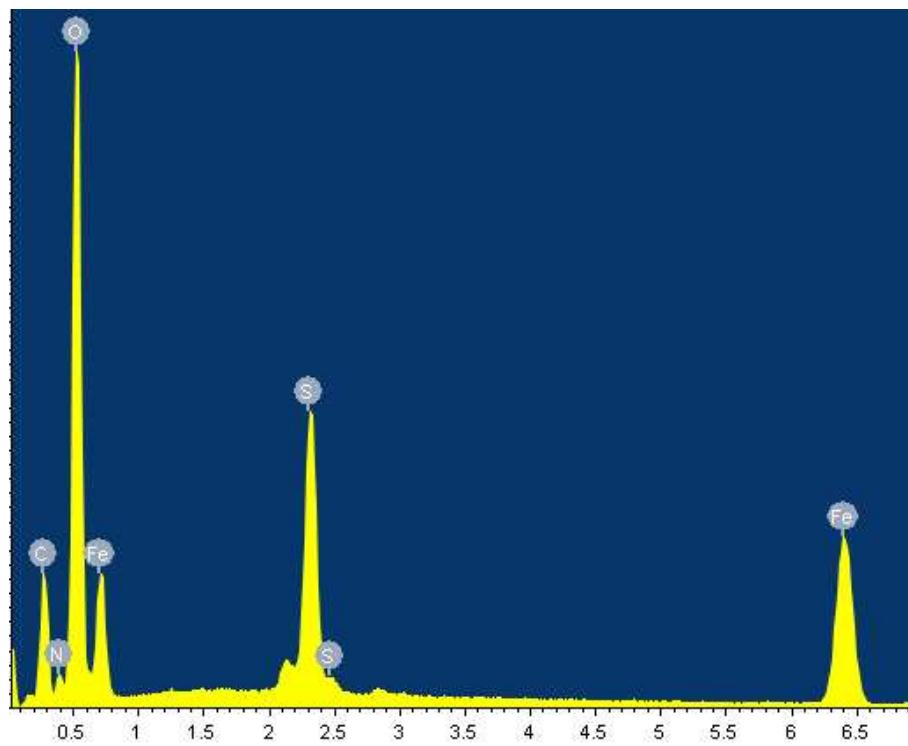


Fig. IV: Energy dispersive X-ray spectroscopic (EDS) pattern of polyaniline (PANI) particles

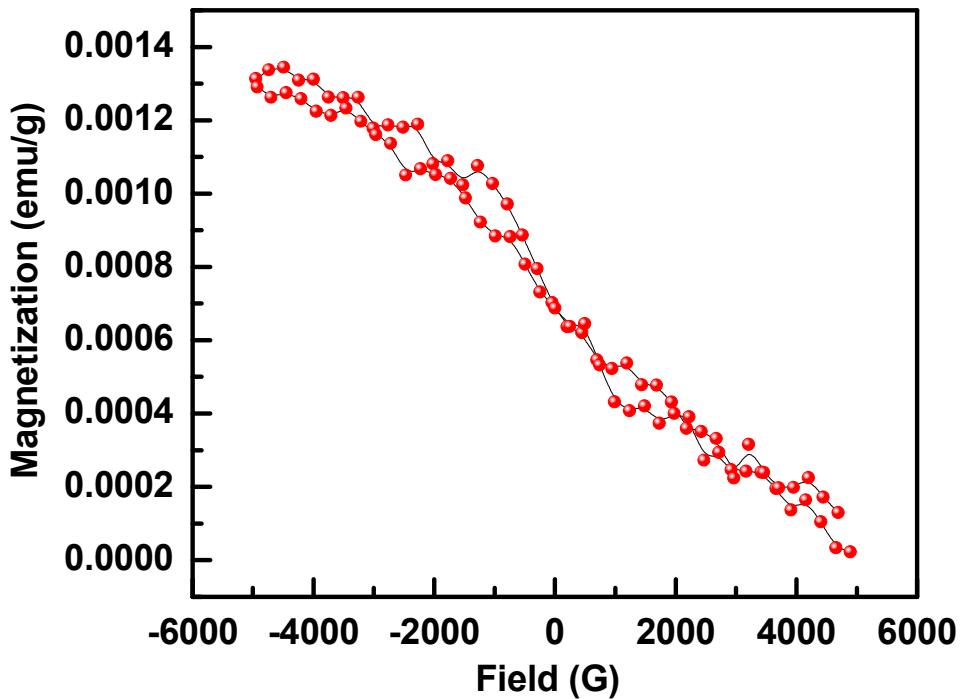


Fig. V: Vibrating sample magnetometric (VSM) plot of BaTiO_3 nanoparticles showing clear diamagnetic behavior

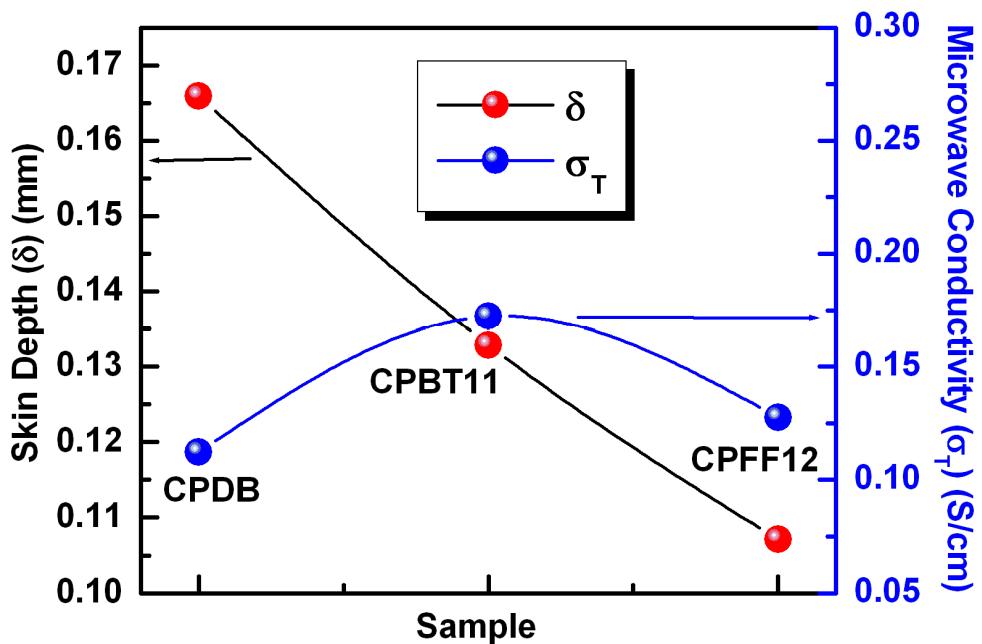


Fig. VI: Skin depth (δ) and microwave conductivity (σ_T) value of particles from different conducting fabrics viz. CPDB, CPBT11 and CPFF12