Research in colossal magnetoresistance (CMR) manganites is of much interest owing to the phenomena of charge ordering (CO) exhibited by them. CO in manganites reveals extraordinary variety in the properties which include their fine sensitivity to the average size of the A-site cations, pressure, magnetic and electrical fields, as well as isotopic and chemical substitutions. Based on the properties of the CO state in manganites, a number of device approaches are being explored like Magnetic field sensors, Electric field effect devices, Bolometric uncooled infrared (IR) sensors using the metal - insulator transition at the Curie temperature and Low temperature hybrid HTS - CMR devices. Structural properties like size-mismatch and disorder of A-site cations play an important role on the magnetic and transport properties of the manganites, which has attracted researchers to study structure-property correlation. Selected complex Charge Order and near to charge order manganites are very important from fundamental research as well as applications point of view. Charge ordered systems are basically disordered systems which give rise to phase coexistence at low temperature due to which distinct phenomenon of arrestation of kinetics has been studied. Temperature dependent Neutron Diffraction studies have been carried out for charge ordered systems to understand structure-property correlation and impact on electronic and magnetic properties. During the course of present work, bulk polycrystalline manganites of the type (LaTb)(Ca/Sr)MnO$_3$ were synthesized by solid state reaction method and structural understanding was carried out using Neutron Diffraction studies while the nanostructured manganites of the type LaCaMnO$_3$ and NdSrMnO$_3$ were synthesized using novel Sol - Gel route and sintered at different temperatures to understand the effect of grain size and grain morphology on transport, magnetotransport. Materials synthesis work was carried out at Oxide materials laboratory in the Department of Physics, Saurashtra University, Rajkot. Transport, magnetotransport and magnetic measurements on all the samples studied were carried out at UGC-DAE CSR, Indore while Neutron Diffraction measurements were performed at DHRIUVA facility, B.A.R.C., Mumbai.