

List of Tables

Table 1.1 Tolerance factor of different crystal structure.....	36
Table 2.1 Specification of materials used in synthesis.....	75
Table 3.1 Structural parameters, reliability factor, bond length, and bond angle of calcined powder of Sr ₂ SnO ₄	126
Table 4.1 Parameters obtained after refinement, cell volume, density, atomic coordinates, atomic occupancy, tolerance factor (experimental, calculated), various bond lengths and bond angles for solid solutions.	149
Table 4.2 Position of bands present in the samples.....	152
Table 4.3 Stretched Coefficient parameter (β), C_{total} , FWHM and relaxation time obtained from $M''f$ and parameter obtained from Eq. (13) for the solid solutions.....	165
Table 5.1 Structural parameters obtained from the Rietveld refinement of XRD pattern of the samples.....	179
Table 5.2 Crystallite size and lattice strain obtained from Size-Strain plot (SSP) and optical bandgap from Tauc plot of the samples.....	191
Table 5.3 Activation energy for DC, AC and relaxation process, slope between dc conductivity and hopping frequency, relaxation frequency and relaxation time for all samples.	200
Table 6.1 Rietveld refinement parameter, bond length, bond angle, crystallite size and lattice strain of all samples	210
Table 6.2 Magnetic parameters obtained from M-H curve of samples.....	223
Table 7.1 Structural parameters obtained from Rietveld Refinement of all samples.	233