**Objectives:**

ZnO is one of the most promising candidate for opto-electronic materials, as it has wide direct band gap energy and large exciton binding energy. From the previous studies it was observed that, The results from structural characterizations clearly demonstrated that yttrium ions were successfully doped into the crystal lattice of ZnO matrix [1]. Here are some key objectives for the Yttrium doping in ZnO:

1. To improve both optical and electrical properties [1-4].
2. To decrease the native defect densities (As Y has near equal atomic radius and crystal parameters to that of ZnO) [5-6].
3. To determine the change of crystallite sizes by the Yttrium doping in ZnO.