

AN INVESTIGATION INTO THE APPLICABILITY OF MICROWAVE SINTERING SN DOPED In_2O_3

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Highly dense and pure indium tin oxide (ITO) sputtering targets are necessary to apply uniform and reliable thin layers to glass and plastic substrates. Indium oxide pellets doped at 4% and 10% tin oxide levels have been microwave sintered at varying temperatures from 1100-1500°C. The pellets were compared to conventionally sintered pellets. Density, conductivity, SEM and XRD analysis was performed for comparison to ascertain the applicability of microwave sintering ITO for dense sputtering targets among many ITO uses. The highest density and conductivity obtained was through microwave firing. The microwave sintered specimens displayed favorable results for continued experimentation and analysis.