

In this paper we present the morphological, structural, optical and electrical properties of aluminium doped zinc oxide films prepared by spin coating technique from a zinc acetate dihydrate and 2-methoxyethanol (0.5M) solution. AlCl_3 and $\text{Al}(\text{NO}_3)_3$ were used as doping agents in different concentrations (1at%, 4at% and 6at% in starting solution). After deposition, films were dried at 100 degrees C and then annealed at temperatures between 400 degrees C and 500 degrees C. The characterization of deposited layer was performed by Scanning Electron Microscopy (SEM), Atomic Force Microscopy (AFM) and UV-Vis spectroscopy. The results show that the optical and electrical properties of the structures strongly depend on the deposition conditions of ZnO:Al. In addition, the resistivity can be easily varied depending on ZnO:Al annealing temperatures and Al concentration