

## Properties of transparent conductive ZnO:Al film prepared by co-sputtering

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**Abstract** : Al-doped ZnO (AZO) thin films were grown on glass substrates by co-sputtering at room temperature. We made ZnO and Al target and ZnO:Al film is deposited with sputter which has two RF gun source. The Al content was controlled by varying Al RF power and effect of Al contents on the properties of ZnO:Al film was investigated. Crystallinity and orientation of the ZnO:Al films were investigated by X-ray diffraction (XRD), surface morphology of the ZnO:Al films was observed by atomic force microscope. Electrical properties of the ZnO:Al films were measured at room temperature by van der Pauw method and hall measurement. Optical properties of ZnO:Al films were measured by UV-vis-NIR spectrometer.

**Key Words** : ZnO:Al, co-sputter, transparent conductive