

Preparation and Characterization of SnO₂ Thin Film by Atomic Layer Deposition

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Abstract : Thin film of SnO₂ was fabricated from plasma enhanced atomic layer deposition technology with bubbler type injector system by using TEMASn (tetrakisethylmethylamino tin) precursor. Mostly crystalline of SnO₂ films can be obtained with oxygen plasma and with water at relatively low temperature of 150°C. SnO₂ was deposited as an uniform rate of 1.0Å/cycle. In order to obtain uniform film, a seed oxide material was used before TEMASn deposition in ALD process. The process parameters were controlled to obtain dense thin film by atomic deposition methodology. The morphology and characterization of thin film with optimized process condition will be discussed.