

**Flexible Display용 Low Temp Process를 이용한
ZnO TFT의 제작 및 특성 평가**

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Fabrication and Characteristics of ZnO TFTs for Flexible Display using Low Temp Process

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Abstract : Recently, transparent ZnO-based TFTs have attracted much attention for flexible displays because they can be fabricated on plastic substrates at low temperature. We report the fabrication and characteristics of ZnO channel layers(ZnO TFTs) having different channel thicknesses. The ZnO film were deposited as active channel layers on Si₃N₄/Ti/SiO₂/p-Si substrates by rf magnetron sputtering at 100°C without additional annealing. Also the ZnO thin films deposited at oxygen partial pressures of 40%. ZnO TFTs using a bottom-gate configuration were investigated. The Si₃N₄ film were deposited as gate insulator by PE-CVD at 150°C. All Processes were processed below 150°C which is optimal temperature for flexible display and were used dry etching method.

Key Words : ZnO, TFT, Flexible, Low Temp process