

PC 기판에 저온 증착한 AZOB 박막의 두께에 따른 특성 변화

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Dependance of thickness on the properties of B doped ZnO:Al (AZOB) thin film on polycarbonate (PC) substrate at room temperature

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Abstract : In this study, effect of thickness on structural, electrical and optical properties of B doped ZnO:Al (AZOB) films was investigated. AZOB films were deposited on PC substrates by DC magnetron sputtering. The thickness range of films were from 300 nm to 800 nm to identified as increasing thickness, stress between substrate and AZOB film. The average transmittance of the films was over 80 % until 500 nm. Then a resistivity of $1.58 \times 10^{-3} \Omega\text{-cm}$ was obtained. We presented that a AZOB film of 500 nm was optimization to obtain a high transmittance and conductivity.

Key Words : polycarbonate, AZOB, DC magnetron sputtering, thickness