

글라스 기판위에 증착한 CdS 박막의 광전특성 평가

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Photo-conductive properties of CdS thin film deposited on glass substrate

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Abstract

Photo-conductive properties of CdS films deposited on glass substrates by a reactive sputtering in Ar atmosphere were characterized as a function of working pressure and the film thickness. The XRD measurements of CdS films revealed obvious (002) preferred orientation. In 300nm-thick of films, difference between dark and photo-resistance increases with increasing working pressure within the films. The films at 5 mTorr of working pressure show a dark resistance of approximately $1 \times 10^6 \Omega/\square$ and a photo-resistance of $3 \times 10^4 \Omega/\square$. The decrease dark- and photo-resistance of films as thickness decrease were 1.4×10^6 and $3 \times 10^4 \Omega/\square$, respectively. CdS films deposited on glass substrates are considered to be suitable for photo-conductivity materials in stealth radome applications.

Keywords : CdS thin films, glass substrate, dark and photo conductive.