Structural Properties of chemically deposited Cds Films on plasma treated PET

Woochang Song, Seungbeom Park, Donggun Lim, Jaehyeong Lee*, Jongkuk Park, Hayong Park and Jeongho Kim
Chungju National Univ., Kunsan National Univ., Kangwon National Univ. and Kyushu Institute of Technology

Abstract: Cds is II-VI semiconductor with a wide band gap of approximately 2.42 eV. Cds is the most popularly employed heterojunction partner to p-CdTe due to its similar chemical properties. In this work, to improvement of the surface properties of the Cds films, PET substrate is treated by high density O₂ plasma. Cds films are prepared by chemical bath deposition(CBD) method. In case of the PET substrate with plasma treatment for 2min, the crystalline orientation of Cds films exhibits a strong hexagonal(002). Grain size was increased from 300nm without O₂ plasma treatment to 380nm with an O₂ plasma treatment.

Key Words: Cds, ICP, PET, CBD