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## The Urbach Energy and Dispersion Parameters dependence of Substrate Temperature of CdO Thin Films Prepared by Chemical Spray Pyrolysis

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**Abstract:**The CdO thin films are prepared by the chemical spray pyrolysis technique from 0.1 M of CdCl<sub>2</sub> dissolved in double distilled water. The transmittance, reflectance, and real and imaginary dielectric constants are decreased with increasing substrate temperature of CdO thin films. Energy gap decreased from 2.425 eV for CdO thin film prepared with substrate temperature 300 °C to 2.357 eV for CdO thin film prepared with substrate temperature 450 °C, while Urbach energy increased from 751 to 826 meV. Dispersion parameters such as: E<sub>d</sub>, E<sub>o</sub>,  $\tilde{a}_\infty$ , n(0), S<sub>o</sub>, M<sub>-1</sub>, and M<sub>-3</sub> are decreased with increasing substrate temperature in the CdO thin films.

**Keywords :**CdO, chemical spray pyrolysis, Urbach energy, dispersion parameters.

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