**ABSTRACT**

Cadmium zinc telluride (CdZnTe) thin films were grown on glass substrates by the chemical bath deposi-tion. The films were annealed in air for 1 h at various temperatures (300◦C, 400◦C and 500◦C). The grownfilms were analyzed by X-ray diffraction, scanning electron microscopy and UV spectra. X-ray diffrac-tion studies reveal that films are polycrystalline in nature with rhombohedral structure. The structuralparameters such as grain size, dislocation density and micro strain were evaluated. SEM analysis at hightemperature indicates the hexagonal face like rod structure. Optical transmittance study shows the widetransmittance with the band gap energy decreasing, from 2 to 1.75 eV.