

Effect of rapid thermal annealing on CdS films prepared by RF magnetron sputtering

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Cds films were deposited on glass substrates using rf magnetron sputtering method followed by rapid thermal annealing(RTA). Effects of annealing temperature on surface characteristic, structural, electrical and optical property of CdS films were investigated at different temperatures ranging from 250 to 550°C with various holding time. The film annealed at 450°C with less than 1 min holding time is attributed to the improved crystalline quality of CdS film due to the effective relaxation of residual compressive stress and achieving maximum grain size. The results show that RTA treatments under optimal annealing condition can provide significant improvements in the properties of CdS films.