Title:	Structural and electrical properties of thin CdTe films with the application of CdCl2 activation
Authors:	Chander, S. (/jspui/browse?type=author&value=Chander%2C+S.)
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Abstract:	This work presents a study on structural and electrical properties of thin CdTe films with the treatment of post-CdCl2 activation. The thin layers of thickness 550 nm were grown on soda lime glass and ITO coated glass substrates by electron beam vacuum evaporation subsequently CdCl2 treatment and annealing at different temperature and then subjected to X-ray diffractometer and source-meter to investigate the structural and electrical properties, respectively. The films are found to be in polycrystalline nature with cubic phase at low annealing temperature (≤320 °C) and mixture of cubic and hexagonal phases at higher temperature (470 °C). The improvement in crystallinity is also observed with CdCl2 process while the electrical analysis reveals that the current is varied linearly with the voltage while electrical resistivity is increased with post-CdCl2 treatment. The obtained outcome of our study demonstrates that the CdCl2 treated CdTe films processed at 320 °C might be an appropriate candidate as a suitable absorber layer to the thin film solar cells.
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