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Growth and Charaterization of Copper Indium Diselenide

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CuInSe2 thin films were prepared on Ti plates by electrodeposition from an aqueous solution containing CuCl2, InCl3 and SeO2. The deposition was carried out at -0.5V Vs SCE. X-ray diffraction and Scanning electron microscopy have been used to study the crystallographic and morphological properties of the samples. Effects of annealing in air have also been monitored. Apparent bulk structure changes have been observed during annealing. Annealing of films at 350 0C was found to result in the formation of CuInSe2 films having a chalcopyrite structure, indicating that the samples are of good quality.