عنوان مقاله:

Cyclic Voltammetry Investigation of the Mechanism of CuInSe۲ and CuIn(Al)Se۲ Electrodeposition from Aqueous Solution

محل انتشار:

مجله سرامیک های پیشرفته, دوره 2, شماره 3 (سال: 1395)

تعداد صفحات اصل مقاله: 4

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خلاصه مقاله:

Electrodeposition of CuInSe۲ (CIS) and CuInAlSe۲ (CIAS) from aqueous solution has been systematically investigated by cyclic voltammetery implementing different scan rates. It has been shown that electrodeposited CIS and CIAS have been formed on the substrate through electrochemical-chemical interaction of reduces species on the substrate. From the obtained results, it could be inferred that Induced electrodeposition is the main mechanism of incorporation of aluminium and indium in the deposited layer. Effect of electrodeposition potential on the composition of the prepared film has also been investigated and it was observed that in potential close to -۰.۷ V stoichiometery close to desired stoichiometery of CIAS solar cells could be obtained.

کلمات کلیدی:

Cyclic Voltammetry, Scan Rate, Elecrodeposition, CuInAlSe۲, Mechanism