

## عنوان مقاله:

The Effect of Doping and the Thickness of the Layers on CIGS Solar Cell Efficiency

## محل انتشار:

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## خلاصه مقاله:

The main problems with the use of fossil fuels is the restrictions on their access and the detrimental consequences of their use which causes a threat to human health and quality of life. Consequently, the use of other energy sources has become necessary. Renewable Energy as a permanent and clean energy source is an answer to this problem. One such energy source includes photovoltaic solar energy that is widely available as a reliable energy source. Research and Development of Photovoltaic Energy in general, will reduce costs and improve efficiency in both areas. CIGS solar cells have higher efficiency in comparison with other cells. Ion implantation and doping technique offers the unique structure of a solar cells. This paper will examine the performance of solar cells with  $Cu In_{1-x} Ga_x Se_2$  structure. This will be performed by Silvaco software. Effect of doping phosphorus (p) and Natrium (Na), as well as the value of x and the thickness of the various layers of the solar cell, on the efficiency of the cell, have been studied.

## کلمات کلیدی:

absorber layer, Efficiency, ion implantation, Solar Cells, Thin Film

## لینک ثابت مقاله در پایگاه سیویلیکا:

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