Nanostructured surfaces

Influence of growth condition and thermal treatment of thin Cu_2O film obtained by magnetron sputtering on transmission spectra

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In present time there are intensive works to obtain technology, which allows to produce low-cost solar panels to mass using. Area of researches has been focused on about 10 chemical compounds, from which the most promising is copper oxide Cu_2O. Photovoltaic effect was observed for example for structures ZnO/Cu_2O, Ga_2O_3/Cu_2O and TiO_2/Cu_2O [1].

It is commonly known, that condition of growth as well as thermal treatment after growth can affect on physico-chemical properties of thin layers [2]. One of characteristical parameter of films is theirs transmission, which describe theirs optical quality.

In this work the results of researches of depending transmission spectrum of Cu_2O film on glass versus conditions of growth and heating in air will be presented. Analysis of results leads to conclusion that transmission highly dependent on mentioned factors. Furthermore, there was observed that transmission of layer changed in time, which will be also a matter of discuss.

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