ABSTRACT

A lot attempts have been done to enhance the solar cell performance as an alternative for renewable energy source. They include seeking for the photon absorber materials. In this study, we investigate the Titanium Dioxide (TiO_2), an active absorbent material which has a low price and can be fabricated by a simple spray method. In order to improve the efficiency, Cu is inserted on TiO_2 grown on FTO substrate using fixed current electroplating method. We found the solar cell efficiency is depends on the applied current and electroplating time. The highest efficiency of 0,29% is obtained when 10 mA current is applied for 30 seconds.

Keywords: *Electroplating, solar cell, TiO2, Copper (Cu), Efficiency.*