The Study of Elevation Control of the Solar Cell

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ABSTRACT

The main purpose of the present research is to develop elevation control of the solar cell system which uses 8051 micro controller, two photo sensors, and one axis tracking mechanical system for raising the efficiency of PV cell. The controller follows a series of tracking elevation control rules to judge the best way to track the sun light. The proposed system improves the energy saving efficiency and has the ability of anti-disturbance variation of illumination. On a sunny day, the experiment results show the solar power of the elevation control is raised 3.9% and the energy of depletion by motor is less than 0.4% of the energy produced by the tracking elevation control. The performance of the elevation control of the solar cell is shown satisfactory.

Keywords: Solar Cell, Elevation Control, 8051