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A Voltage Source Simulation Model of a Solar Cell

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Abstract content
 (Max 300 words)

Most circuit based models of solar cells are represented by a Current Source (CS) in parallel with a diode. This paper defines a circuit based Voltage Source (VS) representation of a simulation model for a solar cell. The purpose of the study is to understand the reason behind researchers' inclination toward a Current Source representation of the cell. The model is implemented using Matlab/Simulink software package. Solar irradiance and cell temperature are taken into consideration. Based on previous studies, the model's current and power characteristics are calculated and validated against experimental data. These characteristics are also compared with data from an existing Current Source simulation model.

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No

Level for award
(Hons, MSc,
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Yes

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