

Hetero Junction Solar Cell

¹Shaikh Sohail Mohiyodin, ²Pathan Shahrukh, ³Shaikh Aftab, ⁴Mohd Shahbaz

¹Assistant Professor, ^{2,3,4}UG Student, Department of Electrical Engineering, EESCOET, Aurangabad, Maharashtra, India.

Abstract - Hetero junction solar cells are thin amorphous silicon layers deposited on crystalline silicon wafers. This cell is a global environment concern. It is a renewable source energy which consists of thin film plate which absorbs the light from the sun. This design enables energy efficiency is above 25% at production industrial level as a requirement. Hetero junction solar cell is a pollution free energy system this does not produce any types of pollution as well as not harmful to human nature.

KEY WORD: Solar panel, Photovoltaic, Silicon, Hetero junctions, High efficiency.

I. INTRODUCTION

A hetero junction is the contact between two layers or regions of non-similar Crystalline semiconductors. Hetero junction solar cell is semiconductor material is the unequal band gaps. The multiple hetero junction combination together in one device it called as a hetero structure.

The hetero junction solar cell continuation in Aug. 24, 1976, now abandoned. The present hetero junction solar cell is invention on the efficiency improvement solar cell. Today on the world electricity is the most conceptive problem then the solar energy is the most easily available energy source on that time. Solar energy is the main concept on the technology research.

Herbert Kroemer (University of California, Santa Barbara, California, USA) he got a Nobel Prize in physics, in 2000. For development semiconductor hetero structures used in high-speed.

II. LITERATURE REVIEW

Hetero junction solar cell is same as a solar cell. The hetero junction solar cell has consumed energy from the sun light. This sun light emitted on the solar panel. After taking the sun light on the solar panel that time electrons are moves then electric energy is produce.

1) Technology of SI PV

The technology of Si PV in the hetero junction solar cell is $\frac{1}{2}$ manufacturing history, 90% of 2011. The Si PV technology is

produce high performance of flat- plate. The Si PV techniques are low – cost and the application are newly possibilities. In the hetero junction solar cell are efficiency enhancement is major challenge.

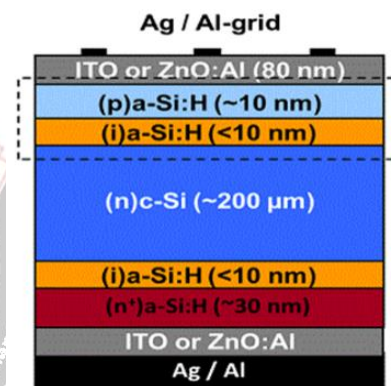


Fig1. Constitution of Elements

2) Operating Principle of solar

The operation of solar cell are two step conversion first are solar energy are converted in to chemical energy and then another is chemical energy are converted in to electrical energy.

3) ADVANTAGES

- The hetero junction solar is convert solar energy in to electrical energy. It have no moving parts.
- Hetero junction cell are the reliable system.
- It is pollution free energy source.
- The solar energy is easily available source.
- The hetero junction solar cell generally maintenance free.
- This system is expected life span of 15 or more.

III. CONCLUSION

A brief review on energy generation which work on the sun light. The hetero junction solar cell produces energy. This electrical energy which can be used for multipurpose use. Also reviews on the main components of solar panel, photovoltaic, hetero junction cell.

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