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Journal Name:	**Physical Science International Journal**
Manuscript Number:	**Ms_PSIJ_95554**
Title of the Manuscript:	**Three-dimensional modeling study of the effect of irradiation on a single-face polycrystalline silicon photocell under multispectral illumination**
Type of the Article	**Scientific**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(https://www.journalpsij.com/index.php/PSIJ/editorial-policy)

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PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	1. This manuscript reports a three-dimensional modeling study of a polycrystalline silicon mono-facet photocell under multi-spectral illumination. Also derived the expression of the excess minority charge carrier density in the base of the polycrystalline silicon single-face photocell. This study has shown that performance degradation factors of the photocell are reduced with irradiation energy (Φ). Overall, this manuscript provides a compréhensive solution to improve the capacity of solar cells which is need of the day. The manuscript is meaningful to the researches in the areas of solar cell/photo detectors. 2. Title is more appropriate to the manuscript. 3. No numerical result found in either abstract or conclusion. Conclusion on the numerical result may provide in Abstract or conclusion section. 4. Yes, the subsection and structure of the manuscript is well organized. 5. The manuscript is scientifically correct due to the following, • The initial assumptions taken into study are quite strong. • The mathematical model for Excess Minority Carriers Density, Photocurrent Density and Photo Voltage are described with suitable equations. • The minority charge carrier density, the current density and the photovoltage of the photocell with the irradiation (ϕ, Kl) are analyzed with suitable results. 6. I suggest the authors to cite more relevant and recent literature in this context.	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	There are several typo/grammatical mistakes found in the Manuscript. Authors are requested to carefully handle this.	
Optional/General comments	Overall the information presented represents valuable information regarding the three-dimensional study of a polycrystalline silicon photocell in the static regime. The introduction is relevant and theory based. Sufficient information about the previous study findings is presented for readers to follow the present study rationale and procedures. The mathematical model and methods provide useful information regarding Excess Minority Carriers Density, Photocurrent Density and Photo Voltage. Overall, the results are clear and well explained.	

PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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