Review Form 1.7

Journal Name:	**Physical Science International Journal**
Manuscript Number:	**Ms_PSIJ_118232**
Title of the Manuscript:	**The interdependence of the kinematic and intrinsic parameters of a HIT cell: the effect of charge carrier mobility.**
Type of the Article	

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. Yes. It addresses the kinematic and intrinsic parameters of a silicon heterojunction solar cell. It can be interesting for readers.** **2. Yes.** **3. Yes.** **4. Good.** **5. It needs some corrections.** **6. It should be updated. I recommend some proper ones in my comments below.**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	1- A whole revise is necessary.	
Optional/General comments	The authors have reported the interdependence of the kinematic and intrinsic parameters of a HIT cell: the effect of charge carrier mobility. This paper discusses the dependence of the kinematic and intrinsic parameters of a silicon heterojunction solar cell, highlighting mobility phenomena. To improve the article's quality, I have some inquiries: 1- The authors have used the acronym as HIT in the abstract, though they have not provided the explanation! 2- I faced some grammatical issues. Please check the text completely. 3- The introduction should highlight the importance of the work and make comparison with the similar project. I think it should be rewritten. 4- The importance of the solar energy must be highlighted in the introduction. These refs are strongly recommended: 1- https://www.sciencedirect.com/science/article/pii/S0577907316306839 , 2- https://link.springer.com/article/10.1007/s11664-020-08524-w , 3- https://www.spiedigitallibrary.org/journals/journal-of-photonics-for-energy/volume-10/issue-2/024504/Performance-enhancement-of-ultrathin-graded-CuInGaSe2-solar-cells-through-modification/10.1117/1.JPE.10.024504.full 5- Please point out the advantages of using ZnO and ITO as TCO in optoelectronic devices. These refs are strongly recommended: 1- https://www.sciencedirect.com/science/article/pii/S0749603613004096 , https://koreascience.kr/article/JAKO201219240565128.page 6- Could the author explain if it is possible to achieve high mobilities such as 500 or 3500 cm2V-s-1 as they have used in their calculations? It is so tough in practice.	

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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)*	

Reviewer Details:

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Department, University & Country	**University of Saskatchewan, Canada**