

**Review Form 3**

Journal Name:	<a href="#">Asian Journal of Research and Reviews in Physics</a>
Manuscript Number:	Ms_AJR2P_127103
Title of the Manuscript:	<b>Influence of Quantum Effects on Amplitude Modulation in n-InSb Semiconductor</b>
Type of the Article	<b>Original Research Article</b>

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**PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	This manuscript is about theoretical analysis that provides detailed information on the quantum effect on amplitude modulation in n-InSb semiconductors which is an important subject to understand when designing optical communication systems. However, it is clear that the authors do not include recent references to this research and their knowledge was finished in 2010. Recently there has been published work similar to their research should be included.	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes, it is right	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	<b>No actually it needs improvement. For example "</b> The results show significant changes in the modulational characteristics due to the quantum effects, highlighting the importance of considering quantum hydrodynamic models in semiconductor plasma studies. This research provides valuable insights for understanding the behavior of n-type InSb crystals under laser illumination at low temperatures. The numerical estimates are made for n-type InSb crystal at 77K duly shined by pulsed 10.6 $\mu\text{m}$ CO <sub>2</sub> laser." Needs rewrite	
Are subsections and structure of the manuscript appropriate?	Yes, they are good	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	No,	
Minor REVISION comments		
Is the language/English quality of the article suitable for scholarly communications?	There are some corrections in the abstract and introduction	
<b>Optional/General</b> comments	<p>Some repeated sentences such as:" each energy level can be occupied at most by two electrons owing to the spatial overlap of the wave functions and the need to obey the Pauli exclusion principle. The energy level occupation is described by the Fermi-Dirac rather than the Boltzmann distribution function."</p> <p>What do you mean by present authors? in this sentence "Recently the present authors have reported their study on quantum effect on parametric amplification characteristics in semiconductor plasmas. [19]."</p> <p>Long sentence try to make it clear : "To study the transverse modulation interaction and the consequent amplification of the frequency modulated waves in a highly doped piezoelectric semiconductor arising due to nonlinear effective optical susceptibility <math>\chi_{eff}</math> of homogeneous semiconductor plasma of infinite extent is considered"</p>	

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**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(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)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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