

## Review Form 2

Book Name:	<b>Innovative Solutions: A Systematic Approach Towards Sustainable Future</b>
Manuscript Number:	<b>Ms_BPR_ 3724.11</b>
Title of the Manuscript:	<b>SYNTHESIS &amp; PROPERTIES OF PULSE ELECTRODEPOSITED TERNARY CHALCOPYRITE SEMICONDUCTOR AgGaSe<sub>2</sub> THIN FILMS FOR OPTOELECTRONIC DEVICES</b>
Type of the Article	<b>Complete book chapter</b>

### PART 1: Review Comments

<b>Compulsory</b> REVISION comments	<b>Reviewer's comment</b>	<b>Author's Feedback</b> <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>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.</b>	This manuscript can be accepted for publication after revision because - This paper reports a pulse electro deposition technique for the synthesis of AgGaSe <sub>2</sub> thin films at room temperature with varying duty cycle in the range of 6–50 %. - This paper reports the optical constants such as absorption coefficient, refractive index, extinction coefficient, optical conductivity and dielectric constant in the wavelength range from 500 to 1400 nm. - The dispersion parameters using single oscillator model of free carrier absorption normal dispersion of the refractive index has been analyzed as well as the lattice dielectric constant , the ratio of free carrier concentration to free carrier effective mass and relaxation time have been determined and reported in this paper.	
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>	The title of the article is suitable.	
<b>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>	The sentences “Analar grade 10 mm silver nitrate, 10 mm gallium nitrate and 10 mm SeO <sub>2</sub> onto Tin oxide coated glass substrates (5.0 ohms/sq). The potential for the deposition was maintained at -0.68 V (SCE).” should be removed and the overall abstract should be rewritten.	
<b>Are subsections and structure of the manuscript appropriate?</b>	- The transmittance and reflectance spectra should be performed in this manuscript. - ABSORPTION COEFFICIENT should be 3.1 and can be calculated from reflectance and the thickness of thin film, please see this literature and cite it ( <a href="https://doi.org/10.1016/j.optmat.2017.11.037">https://doi.org/10.1016/j.optmat.2017.11.037</a> ). - EXTINCTION COEFFICIENT should be 3.2 and can be calculated from absorption coefficient, please see this literature and cite it ( <a href="https://doi.org/10.1016/j.surfin.2022.102037">https://doi.org/10.1016/j.surfin.2022.102037</a> ). - The plot of refractive index should be 3.3 and dielectric constant should be 3.4, please see this literature and cite it ( <a href="https://doi.org/10.1016/S0925-3467(02)00234-3">https://doi.org/10.1016/S0925-3467(02)00234-3</a> ). - OPTICAL ENERGY GAP should be 3.5 and OPTICAL CONDUCTIVITY should be 3.6 and cite the reference ( <a href="https://doi.org/10.1016/j.surfin.2022.102037">https://doi.org/10.1016/j.surfin.2022.102037</a> ). - The intercept of tangent line on the x-axis for Eg determination should be drawn in Fig. 5. - Remove the symbol of minus of the slope for the plot of $(n^2 - 1)^{-1}$ versus $(h\nu)^2$ on page 11. - Add the values of electronic charge, velocity of light, effective mass of the charge carriers. - The unit of N/m* should be $(\text{kg}\cdot\text{m}^3)^{-1}$ and the value of power may be changed. Please recheck them.	
<b>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.</b>	This manuscript is scientifically robust and technically sound because - The film thickness is the key role and important in changing optical, dispersion and oscillator parameters of the thin films. - The investigation of these above parameters can determine the properties of AgGaSe <sub>2</sub> thin films that will be helpful to design and fabricate future and practical optoelectronic devices and applications.	
<b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b>	Please see the above section for additional references.	

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Minor REVISION comments  Is the language/English quality of the article suitable for scholarly communications?	The English quality of the article is not suitable for scholarly communications. Please carefully recheck and edit it entire the manuscript.	
Optional/General comments	All figures in the paper should be plotted by different symbols for each duty cycle for clearer observation.	

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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