Review Form2

Book Name:	Science and Technology: Recent Updates and Future Prospects
Manuscript Number:	**Ms_BPR_2401**
Title of the Manuscript:	**Comparison of a two-wavelength pyrometer system and spectral pyrometry for high-temperature measurements**
Type of the Article	**Book chapter**

PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback***(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimumof 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)	**Yes.**	
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.	**Too long.**	
Are subsections and structure of the manuscript appropriate?	**Somewhat**	
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 minimumof 3-4 sentences may be required for this part.	**Partly**	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	**Can be improved and updated. Needs to be revised.**	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	Major modification required.	
Optional/Generalcomments	**The lack of detail in the calibration process requires more thorough explanations regarding the derivation and validation of calibration curves. The absence of a detailed error analysis raises concerns about understanding the sources of uncertainty, including environmental conditions and setup variations.** **1. The absence of a clear comparative analysis of the two pyrometer systems necessitates a discussion of their respective benefits and drawbacks based on the collected data.** **2. The variations in readings at similar temperatures in Tables 4 and 9 indicate potential systematic errors and require clarification regarding the measures taken for consistency.** **3. The need for a thorough discussion of the real-world implications of the pyrometer findings highlights which industries or scenarios might benefit from this technology.** **4. The specifics of how signals from the S1 and S2 sensors were processed require elaboration, particularly regarding the filters or adjustments applied for measurement validity.** **5. The rationale behind selecting specific wavelengths for the S1 and S2 sensors needs clarification and how these choices impact measurement accuracy.** **6. The lack of statistical methods applied to assess the robustness and reliability of S1 and S2 voltage averages raises questions about variability considerations across trials.** **7. The manuscript's mention of correlation coefficients lacks detailed explanation regarding their significance in the context of the analysis.** **8. Need for Comprehensive Analysis: The focus on comparing two pyrometer systems calls for deeper analysis that includes discussions on the physics involved and how factors like emissivity and environmental conditions influence measurements.** **9. The descriptions of models like Planck's law and Wien's approximation lack necessary detail, raising questions about assumptions made and their potential limitations on results.** **10. The need for confirming the alignment of theoretical models with empirical data collected necessitates an explanation of tests conducted for model validation.** 11. The existence of variations in emissivity among different materials necessitates a dedicated discussion on their impact on measurement accuracy.	

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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