

[Review Form 3](#)

Book Name:	<a href="#">Science and Technology: Developments and Applications</a>
Manuscript Number:	Ms_BPR_4139
Title of the Manuscript:	Thermal Enhancement of Air Conditioner in Thailand
Type of the Article:	Book chapter

**PART 1: 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. A minimum of 3-4 sentences may be required for this part.	This manuscript provides valuable insights into thermal enhancement techniques for air conditioning systems, particularly under Thailand's climatic conditions. By presenting five distinct methods, including R-32 refrigerants, ultrasonic integration, and phase change materials, the research contributes significantly to energy efficiency and environmental sustainability in HVAC systems. Its applications in waste heat recovery and novel uses like cannabis irrigation demonstrate its practical and economic relevance. The findings could guide engineers and policymakers in adopting greener technologies globally.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title is suitable and reflects the content effectively. However, to broaden its appeal, it is recommended that the authors should fine-tune the title to capture the climatic scenario. Alternative Title: Advanced Thermal Performance Strategies for Air Conditioning Systems in Tropical Climates.	
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.	The abstract is well-structured and provides a comprehensive overview of the study. However, it could benefit from: A brief mention of the significance of each technique beyond their performance metrics, emphasizing their environmental and economic implications.  Avoiding overuse of technical terms that might reduce clarity for non-specialist readers.  Suggestion: Add a concluding sentence summarizing the broader impact of the findings on HVAC advancements and environmental conservation.	
Is the manuscript scientifically correct? Please write here.	The manuscript is scientifically sound and technically robust. The methodologies are appropriately detailed, and results are presented with clarity. However, the following improvements are recommended:  1) Provide more detailed explanations for empirical correlations (e.g., Equation 7) to ensure transparency in result derivation. 2) Some figures and diagrams (e.g., Figure 19) could use additional annotations to clarify their context and data.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =	The references are sufficient and relevant. However, some are relatively dated, such as the NIST Refprop Version 10 from 2018. Recent works from 2022–2025 on similar energy efficiency techniques should be considered to strengthen the manuscript's scientific grounding. Include studies on the environmental impact of R-32 refrigerants and ultrasonic wave integration in HVAC systems.	

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<b>Is the language/English quality of the article suitable for scholarly communications?</b>	The language is appropriate but could be refined for grammatical precision and smoother readability. Minor issues include: Inconsistent use of technical terms (e.g., "PCM ball" vs. "plastic pack"). Awkward phrasing in some parts, such as "It was found that the value is around 2 °C reduction." Recommendation: Conduct a thorough grammatical and stylistic review to enhance clarity and flow.	
<b>Optional/General</b> comments	The study could better emphasize the scalability of the proposed techniques for broader industrial applications.  Highlighting potential limitations, such as the economic feasibility of ultrasonic integration, would improve the study's balance	

**PART 2:**

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

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