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| Book Name: | [Science and Technology: Developments and Applications](https://www.bookpi.org/bookstore/product/science-and-technology-developments-and-applications-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4252** |
| Title of the Manuscript: | **Thermally enhanced pristine polyolefins: fundamentals, progress and prospective** |
| Type of the Article | **BOOK CHAPTER** |

**General guidelines for the Peer Review process:**

This Book’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 guidelines for the Peer Review process, reviewers are requested to visit this link:

<https://r1.reviewerhub.org/general-editorial-policy/>

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**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**Journal of Materials Research and Technology, Volume 9, Issue 5, September–October 2020, Pages 10796-10806.**

[**https://doi.org/10.1016/j.jmrt.2020.07.101**](https://doi.org/10.1016/j.jmrt.2020.07.101)

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| PART 1: 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. A minimum of 3-4 sentences may be required for this part.** | This manuscript is significant for the scientific community as it systematically reviews the strategies for enhancing the thermal conductivity of pristine polyolefins, a critical challenge for advancing polymer applications in thermal management and electronics. By emphasizing both experimental advancements and theoretical insights, it bridges the gap between fundamental understanding and practical implementation. Furthermore, the identification of current challenges and the proposed use of machine learning for material development highlight its forward-looking perspective, paving the way for innovation in polymer science and engineering. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | The title, "Thermally Enhanced Pristine Polyolefins: Fundamentals, Progress, and Prospective," is highly suitable as it succinctly captures the essence of the article. It reflects the focus on enhancing the thermal properties of pristine polyolefins, emphasizes the comprehensive nature of the review covering fundamental principles, recent advancements, and future directions, and aligns well with the scientific audience's expectations for clarity and relevance |  |
| 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 of the article is comprehensive and provides a good overview of the key themes, including the challenges of low thermal conductivity in polyolefins, mechanisms of thermal transport, enhancement strategies, and future directions. However, it could benefit from some refinements for clarity and completeness. Here are my suggestions:  **Specific Applications**: Include a brief mention of key applications, such as electronic packaging and heat exchangers, to highlight the relevance of the research.  **Redundancy**: Remove or condense repetitive phrases, particularly those reiterating the importance of enhancing thermal conductivity, to make room for additional details.  **Excessive Generalization**: Simplify phrases like "key challenges and prospective directions" to avoid vague wording and make the abstract more direct. |  |
| **Is the manuscript scientifically, correct? Please write here.** | The manuscript appears scientifically sound based on the provided content, as it systematically reviews thermal conductivity enhancement in pristine polyolefins and provides an in-depth analysis of mechanisms, experimental findings, and theoretical predictions. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | The manuscript includes a comprehensive set of references, which appear to provide a strong foundation for the discussion |  |
| Is the language/English quality of the article suitable for scholarly communications? | The language and English quality of the article appear largely suitable for scholarly communication, as the manuscript uses formal academic language, technical terms, and precise descriptions appropriate for the scientific community. |  |
| Optional/General comments | The manuscript is well-structured, with a logical flow of sections from mechanisms of thermal transport to challenges and future directions. However, some sections could benefit from greater conciseness to improve readability and reduce redundanc |  |

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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)* |  |

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| **Reviewer Details:** | |
| Name: | **Anonymous reviewer (Only for this stage as per Review policy)** |
| Department, University & Country |  |