

[Review Form 3](#)

Book Name:	Science and Technology: Developments and Applications
Manuscript Number:	Ms_BPR_4087
Title of the Manuscript:	Nanomaterials for Sustainable Pollution Management
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.	<ol style="list-style-type: none"> 1. This manuscript provides valuable insights into the innovative use of nanomaterials for effective environmental remediation strategies. 2. It highlights the potential of nanotechnologies to overcome limitations of traditional pollution management methods, offering sustainable alternatives. 3. The discussion on the challenges and risks associated with nanoparticle use emphasizes the need for responsible deployment in environmental applications. 4. By integrating recent advancements in nanotechnology, this work serves as a crucial resource for researchers seeking to tackle pressing pollution issues. 	
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.	<ol style="list-style-type: none"> 1. Include a clearer definition of key terms such as "nanomaterials" and "photocatalysis" to enhance reader understanding. 2. Provide specific examples of pollutants that can be effectively addressed using these technologies to illustrate practical applications. 3. Mention ongoing research directions or future implications of nanomaterial-based solutions to strengthen the manuscript's relevance. 4. Add a brief statement on the importance of addressing environmental risks associated with these technologies for a balanced perspective. 	
Is the manuscript scientifically, correct? Please write here.	<p>The manuscript appears to be scientifically sound, as it discusses the unique properties of nanomaterials and their applications in environmental remediation, which are well-established areas of research. The mention of specific nanoparticles such as carbon nanotubes, graphene, and titanium dioxide aligns with existing literature on their effectiveness in pollutant degradation, particularly under conditions like ultraviolet light.</p> <p>However, for it to be fully scientifically rigorous, it is advisable to:</p> <ol style="list-style-type: none"> 1. Include references to current research studies or reviews to support claims about the efficacy of nanomaterial-based technologies. 2. Discuss the mechanisms in more detail, particularly how different nanoparticles interact with various types of pollutants. 3. Consider addressing the varying degrees of success reported in the literature regarding the environmental impact and toxicity of certain nanomaterials, as this is a critical aspect of their deployment in pollution management. <p>Overall, while the core concepts presented are valid, enhancing the manuscript with more detailed explanations and supporting evidence would strengthen its scientific accuracy and credibility.</p>	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =	<p>The references in the manuscript should be updated to include more recent studies for enhanced credibility. Here are suggestions for additional references, please add these references:</p> <ol style="list-style-type: none"> 1. A recent review of the synthesis of plant-derived iron oxide nanoparticles for metal ion removal, 10.1016/j.inoche.2024.112611 2. Nanoparticles in Agriculture and Wastewater Treatment: Evaluating Dual Impacts Across Nations, 	

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	<p>10.2023/EJRI/202312001 3. Adsorption-Based Approaches for Exploring Nanoparticle Effectiveness in Wastewater Treatment, 10.1002/slct.202400959</p>	
<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>Yes</p>	
<p>Optional/General comments</p>	<ol style="list-style-type: none"> 1. Consider adding recent references to support assertions made regarding the effectiveness of nanomaterials in air and soil remediation, as some citations appear outdated. Some are referred to the author please include it in the manuscript. 2. The section would benefit from clearer subheadings or transitions between different methods of remediation for better organization and readability. 3. The conclusion section summarizes well but could include specific future research directions to enhance the scope and impact of the findings. 4. Please clarify the terminology used, such as defining acronyms like "VOCs" and explaining specific nanomaterials briefly for readers who may be less familiar with the subject. 5. Discuss the potential environmental hazards related to the long-term use of nanomaterials more comprehensively to balance their benefits against risks. 6. Consider including illustrations or diagrams to visually represent the processes mentioned, which would aid in understanding complex mechanisms. 7. The manuscript could highlight case studies or real-world applications of nanomaterials for remediation to demonstrate practical efficacy. 8. Emphasize the importance of regulatory frameworks or guidelines for the safe use of nanomaterials in environmental applications. 9. More detailed discussion on the challenges faced in implementing nanomaterial-based solutions in field settings would strengthen the manuscript. 10. Ensure all claims about survey results or efficacy are backed up with quantitative data or references from peer-reviewed studies for scientific rigor. 11. The figures and illustrations are not cited or discussed, which detracts from clarity. 12. Consider including a flow chart or graphical abstract to visually summarize key concepts. 13. The manuscript lacks empirical data and specific case studies to support assertions. 14. There's no clear identification of a research gap, which should be addressed to highlight the manuscript's significance. <ol style="list-style-type: none"> 1. Ensure all references are up to date and relevant to support the manuscript's claims effectively; consider adding recent studies to enhance credibility. 2. The manuscript structure could be improved by incorporating clearer headings and transitions between sections, and by ensuring that all figures are appropriately cited and referenced within the text. 3. Clarify acronyms and technical terms upon first use to assist reader comprehension, and add captions to all figures to explain their relevance and findings clearly. 4. Consider including diagrams or additional visual aids, such as flow charts or graphical abstracts, to visually represent key concepts and processes discussed. 5. The discussion of potential environmental hazards related to nanomaterials should be more comprehensive, with an emphasis on regulatory frameworks governing their use in remediation. 6. Highlight specific case studies or real-world applications for better contextual understanding and ensure that all claims are substantiated with quantifiable data or references to peer-reviewed studies. 	

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PART 2:

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

Reviewer Details:

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