

Review Form 3

Journal Name:	Asian Journal of Chemical Sciences
Manuscript Number:	Ms_AJOCS_129247
Title of the Manuscript:	Photolytic Degradation of Methylene Blue: Influence of pH, H ₂ O ₂ , NaI, and NaCl on Wastewater Treatment Efficiency
Type of the Article	Original Research Article

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Review Form 3

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 provides critical insights into the photolytic degradation of methylene blue, a widely used model dye, addressing a significant environmental challenge posed by untreated dye effluents in wastewater. By systematically evaluating the effects of pH, H ₂ O ₂ , NaI, and NaCl, the study advances our understanding of how these parameters influence degradation efficiency, paving the way for more effective and sustainable wastewater treatment strategies. The work highlights the potential of synergistic systems such as UV/H ₂ O ₂ and UV/NaCl+NaI, offering practical solutions for enhancing degradation rates under neutral pH conditions. These findings are valuable for the scientific community, particularly researchers and practitioners focused on advanced oxidation processes (AOPs), as they provide a foundation for scaling up photolytic methods for industrial and environmental applications.	
Is the title of the article suitable? (If not please suggest an alternative title)	The current title, "Photolytic Degradation of Methylene Blue: Influence of pH, H ₂ O ₂ , NaI, and NaCl on Wastewater Treatment Efficiency," accurately reflects the core focus of the manuscript.	
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, providing an overview of the study's objectives, methodology, key findings, and conclusions. However, it can be improved by emphasizing the broader implications of the study and streamlining the language for clarity.	
Is the manuscript scientifically, correct? Please write here.	Yes	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	<p>The manuscript includes a robust set of references, many of which are highly relevant and recent, demonstrating a strong foundation for the research. However, while most references date from 2016 to 2024, there are some older sources (e.g., before 2015) that could potentially be updated with more recent studies to enhance the manuscript's relevance. Please here is a list of updated references for the improvement of your work. (Ullah, S., Noman, M., Ali, K.S., Siddique, M., Sahak, K., Hashmi, S.K., Emiliya, H. and Khan, F., 2021.</p> <ol style="list-style-type: none"> 1. Treatment of Industrial Wastewater (IWW) and Reuse through Advanced Oxidation Processes (AOPs): A Comprehensive Overview. <i>IOSR Journal of Environmental Science, Toxicology and Food Technology</i>, 15(1), pp.04-14. 2. Yadgari, M.Y., Subat, S., Rashid, S., Ullah, S., Li, L., Hassani, M.A., Emiliya, H. and Rukh, G., 2023. Toxic effects of arsenic and its adsorption through thiolated cobalt doped silver nanomaterials from water resources. <i>Digest Journal of Nanomaterials & Biostructures (DJNB)</i>, 18(4). 3. Xie, P., Zahoor, F., Iqbal, S.S., Ullah, S., Noman, M., Din, Z.U. and Yang, W., 2022. Elimination of toxic heavy metals from industrial polluted water by using hydrophytes. <i>Journal of Cleaner Production</i>, 352, p.131358. 4. Shaukat, S., Hassani, M.A., Yadgari, M.Y., Ullah, S., Iqbal, M.S., Khan, F., Bibi, S.D., Ullah, Z., Rukh, G., Sabir, M. and Hussain, S.A., 2022. Green synthesis of silver nanoparticles and its application towards As (V) removal from aqueous systems. <i>Digest Journal of Nanomaterials & Biostructures (DJNB)</i>, 17(4). 5. Ullah, S., Shams, D.F., Ur Rehman, S.A., Khattak, S.A., Noman, M., Rukh, G., Bibi, H., Ateeq, M., Bibi, N., Ali, L. and Fazil, P., 2022. Application of visible light activated thiolated cobalt doped ZnO nanoparticles towards arsenic removal from aqueous systems. <i>Digest Journal of Nanomaterials & Biostructures (DJNB)</i>, 17(2). 6. Li, L., Haziq, M.A., Ullah, S., Stanikzai, A.G., Bibi, S.D., Haq, T.U., Tayyeb, M. and Yang, Z., 2024. Remediation of lead-contaminated water using green synthesized iron-oxide nanoparticles: performance and mechanism. <i>Air, Soil and Water Research</i>, 17, p.11786221241278517. 7. Noman, M., Haziq, M.A., Safi, B.U., Ullah, S., Rukh, G., Faiq, M.E., Ullah, Z., Bibi, S.D., Shaukat, S., Emiliya, H. and Rahim, Z., 2022. Lead (II) adsorption from aqueous systems using visible light activated cobalt doped zinc oxide nanoparticles. <i>Digest Journal of Nanomaterials & Biostructures (DJNB)</i>, 17(3). 	

Review Form 3

	8. Hussain, T., Akhter, N., Nadeem, R., Rashid, U., Noreen, S., Anjum, S., Ullah, S., Hussain, H.R., Ashfaq, A., Perveen, S. and A. Alharthi, F., 2023. Biogenic synthesis of date stones biochar-based zirconium oxide nanocomposite for the removal of hexavalent chromium from aqueous solution. <i>Applied Nanoscience</i> , 13(9), pp.6053-6066.	
Is the language/English quality of the article suitable for scholarly communications?	Yes, the English quality of the article suitable for scholarly communications in current form.	
Optional/General comments	The manuscript is well-written, with a clear focus on addressing a significant environmental challenge. The systematic investigation of key influencing parameters, such as pH, H ₂ O ₂ , and inorganic ions, adds substantial value to the field of wastewater treatment.	

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?	<i>(If yes. Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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