Review Form 1.7

Journal Name:	**Journal of Engineering Research and Reports**
Manuscript Number:	**Ms_JERR_118918**
Title of the Manuscript:	**The Removal of Humic Acid in Water by Metal-Organic Frameworks MOFs Adsorption**
Type of the Article	**Original Research Article**

Review Form 1.7

PART 1: Review Comments

	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)*
Compulsory REVISION comments **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	1. The manuscript titled "The Removal of Humic Acid in Water by Metal-Organic Frameworks (MOFs) Adsorption" is indeed important for the scientific community. Humic acid is a significant component of natural organic matter in water sources, and its presence poses challenges for water treatment processes due to its complex structure and potential to form harmful by-products. The study of MOFs for the adsorption and removal of humic acid is particularly relevant, as MOFs are known for their high surface area, tunable porosity, and strong adsorption capabilities. The findings of this research could contribute to the development of more efficient and sustainable water treatment technologies, addressing both environmental and public health concerns. 2. The title "The Removal of Humic Acid in Water by Metal-Organic Frameworks (MOFs) Adsorption" is clear and effectively conveys the main focus of the study. However, for enhanced clarity and to capture the essence of the research more precisely, a slight modification could be considered. An alternative title could be: "Adsorption of Humic Acid from Water Using Metal-Organic Frameworks (MOFs): An Effective Removal Strategy". This alternative title highlights the adsorption process and emphasizes the effectiveness of MOFs in removing humic acid from water. 3. The abstract is detailed and informative, but it can be made more concise and focused. 4. The subsections and structure of the manuscript are appropriate and well-organized, covering all essential aspects of the research comprehensively. 5. the manuscript demonstrates a high level of scientific rigor and provides significant insights into the removal of humic acid from water using MOFs. The methodologies and findings appear to be well-founded and scientifically sound. 6. The references provided seem to cover a wide range of relevant topics related to the removal of humic acid by MOFs and adsorption processes. However, to ensure the manuscript's completeness and relevance, it may be beneficial to include some more recent references. Here are a few suggestions: – Kaur, H., Devi, N., Siwal, S. S., Alsanie, W. F., Thakur, M. K., & Thakur, V. K. (2023). Metal–organic framework-based materials for wastewater treatment: superior adsorbent materials for the removal of hazardous pollutants. ACS omega, 8(10), 9004-9030. – Li, B., Wen, H. M., Cui, Y., Zhou, W., Qian, G., & Chen, B. (2016). Emerging Multifunctional Metal-Organic Framework Materials. Advanced Materials, 28(40), 8819-8860. – Nehra, M., Dilbaghi, N., Singhal, N. K., Hassan, A. A., Kim, K. H., & Kumar, S. (2019). Metal organic frameworks MIL-100 (Fe) as an efficient adsorptive material for phosphate management. Environmental research, 169, 229-236. – Zhao, X., Wang, T., Du, G., Zheng, M., Liu, S., Zhang, Z., ... & Gao, Z. (2019). Effective removal of humic acid from aqueous solution in an Al-based metal–organic framework. Journal of Chemical & Engineering Data, 64(8), 3624-3631. These additional references can provide more recent and specific insights into the field of MOF-based water treatment, enhancing the manuscript's depth and relevance. **qst 1.** How do the adsorption capacities of the synthesized MOFs compare with other commonly used adsorbents for humic acid removal, such as activated carbon or other advanced materials? **qst 2.** Have you considered testing the performance of these MOFs in real-world water samples that may contain other contaminants alongside humic acid? How would the presence of other substances affect the adsorption efficiency? **qst 3.** What are the regeneration and reusability properties of the MOFs after adsorption of humic acid? Can the MOFs be easily regenerated for repeated use, and how does this impact their overall effectiveness and economic viability? **suggestion 1.** Consider including additional experiments to test the stability of the MOFs in different water chemistries (e.g., varying ionic strengths, presence of	

	competing ions) to better simulate real-world conditions. **suggestion 2.** Include a brief economic analysis comparing the cost-effectiveness of using MOFs for humic acid removal versus other traditional water treatment methods. This could provide valuable insights for practical implementation. **suggestion 3.** Investigate and report on the long-term performance and durability of the MOFs under continuous operation conditions. This information would be crucial for understanding their practical applicability in water treatment facilities.	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	1. the language and English quality of the article seem appropriate for scholarly communications. The abstract is clear and well-structured, effectively summarizing the research aims and findings. The organization of the manuscript, including subsections and headings, indicates a thoughtful approach to presenting the research. The use of technical terminology is suitable for the topic, and the abstract is concise and focused. However, a comprehensive review of the entire manuscript by a language editor or native English speaker would be advisable to ensure overall language quality and coherence throughout the article.	
Optional/General comments	**The research topic is relevant and well-defined, the methodology appears thorough, and the language and structure seem appropriate for scholarly communication.**	

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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