

Review Form 3

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_124895
Title of the Manuscript:	Membrane fouling on the surface of nZVI@PVDF membrane and infrared spectroscopy-multivariable curve resolution analysis of membrane fouling
Type of the Article	Original Research Article

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PART 1: Review Comments

Compulsory REVISION 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)
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript is important for the scientific community as it addresses a critical challenge in membrane filtration—fouling, particularly in nanomaterial-decorated membranes. By investigating the interactions between xanthan gum (XG) and humic acid (HA), the study provides valuable insights into optimizing the composition of dissolved organic matter to mitigate fouling, which can significantly enhance membrane performance and longevity in water treatment processes. The use of advanced techniques such as infrared spectroscopy and MCR-ALS also adds robustness to the analysis, offering a clear understanding of pollutant distribution on membrane surfaces. I appreciate the manuscript's innovative approach and its potential to improve filtration technologies, though it could benefit from a broader discussion on real-world applications.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>Yes</p>	
<p>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.</p>	<p>It would be helpful to explicitly state the practical implications of the findings, such as how optimizing the XG-HA ratio could enhance membrane performance in real-world applications.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>Yes</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript appears to be scientifically robust and technically sound due to its well-structured approach to addressing membrane fouling in nanomaterial-modified membranes. The experimental design is clear, with controlled variables such as varying concentrations of xanthan gum (XG) and humic acid (HA), which are critical in understanding the interaction between dissolved organic matter and membrane fouling. The use of advanced analytical techniques like infrared spectroscopy and multivariable curve resolution (MCR-ALS) strengthens the study's credibility, as these methods provide detailed insights into pollutant distribution and fouling mechanisms. Furthermore, the correlation between TEP content and membrane fouling is supported by both qualitative and quantitative data, which enhances the reliability of the conclusions. Overall, the manuscript provides meaningful, data-driven insights that contribute to the field of membrane filtration technology.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :</p>	<p>Sriboonnak S, Yanun A, Induvesa P, Pumas C, Duangjan K, Rakruam P, Nitayavardhana S, Sittisom P, Wongrueng A. Efficiencies of O-MBR and A/O-MBR for Organic Matter Removal from and Trihalomethane Formation Potential Reduction in Domestic Wastewater. <i>Membranes</i>. 2022; 12(8):761. https://doi.org/10.3390/membranes12080761</p>	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Simplifying long and complex sentences will improve readability and ensure that the key points are conveyed clearly.	
Optional/General comments		

PART 2:

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

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