

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 <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<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>Further development is needed to explain the results obtained. Pay attention to the simulated wastewater used to evaluate the membrane's performance. Additionally, review the references used, as there are identical references, and add references that can support the phenomena observed in the research results.</p> <p>SEE ATTACHMENT</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>I think this title is less effective; you could use "Analysis of membrane fouling of nZVI@PVDF using infrared spectroscopy-multivariable curve resolution analysis"</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>the abstract does not include the results of the IR-ATR and MCR-ALS analyses on the membrane, and it does not clearly convey the study's findings. The abstract should comprehensively represent the content of the entire article. Additionally, the language and word choice in the article should be refined for better clarity and readability.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The subsections and structure are already good, but the content and research objectives need to be clearer. There is some missing information related to the explanation of the work procedures and results.</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 article presents an intriguing topic, especially regarding the impact of nanoscale zero-valent iron on PVDF membranes. The fouling analysis using an infrared imaging platform for surface contamination is particularly relevant to membrane science, and exploring the underlying phenomena in more detail would be valuable. Additionally, this article has strong potential if it successfully explains the processes occurring in water simulations with HA, SA, and XG.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :</p>	<p>The current references are adequate but require a thorough review as there are duplicates, such as references 29-30. Additionally, more references should be included to strengthen the discussion. It's also advisable to use a reference management tool like Mendeley to prevent errors such as duplicate citations and to maintain better citation organization.</p>	
<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The language is quite good, but it needs further improvement. There are still sentences that are difficult to understand because some tenses are not used correctly. Please pay attention to the subject and verb agreement in each sentence, as well as the tenses used.</p>	
<p>Optional/General comments</p>	<ol style="list-style-type: none"> 1. In the discussion section, I have not found the correlation of the simulated wastewater used in the study, as it only mentions the concentration of XG and does not include HA. Therefore, it is unclear how the distribution of HA can be accounted for. It would be better to explain whether XG can convert into HA or to add details about how this process occurs. 2. In the characterization section with SEM, how can the statement "This study showed that the mixture of humic acid and sodium alginate could affect nZVI@PVDF membrane fouling" be justified when the wastewater simulation procedure only referenced XG? 3. Provide a more detailed explanation of how to determine whether the fouling is caused by HA or XG during characterization using infrared spectroscopy. 4. It would be best if the images are of quality at least 300 dpi. 	

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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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