Review Form 1.7

Journal Name:	**Journal of Materials Science Research and Reviews**
Manuscript Number:	**Ms_JMSRR_119191**
Title of the Manuscript:	**Quantum chemical and Experimental Techniques for Evaluation of Expired GlucoredForte Drugs as Corrosion Inhibitor for mild Steel in HCl solution**
Type of the Article	**Original Research Article**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(https://journaljmsrr.com/index.php/JMSRR/editorial-policy)

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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)	The manuscript addresses a significant issue in materials science and corrosion engineering. By proposing a novel application for expired pharmaceuticals, it offers a potential solution to both environmental pollution and industrial corrosion problems. This dual benefit underscores its importance to the scientific community. This study has potential significance for several reasons: **Environmental benefits:** Repurposing expired drugs as corrosion inhibitors reduces waste and promotes environmental sustainability. **Cost-effectiveness:** Utilizing readily available expired drugs offers a potentially cheaper alternative to conventional corrosion inhibitors. **Material protection:** The study demonstrates the effectiveness of GlucoredForte in protecting mild steel from corrosion in acidic environments.	
2. Is the title of the article suitable? (If not please suggest an alternative title)	The title is clear and descriptive, accurately reflecting the study's content. However, it could be shortened for brevity while maintaining its essence The title, "Quantum chemical and Experimental Techniques for Evaluation of Expired GlucoredForte Drugs as Corrosion Inhibitor for mild Steel in HCl solution", is accurate but lengthy. An alternative title could be: - **"Expired GlucoredForte Drugs as Corrosion Inhibitors for Mild Steel in HCl Solution."** **-"Repurposing Expired GlucoredForte Drugs as Eco-Friendly Corrosion Inhibitors for Mild Steel"**	
3. Is the abstract of the article comprehensive?	The abstract provides a good overview of the study's objectives, methods, results, and conclusions. However, it could be improved by explicitly mentioning The specific type of drug molecule in GlucoredForte responsible for inhibition (e.g., Glibenclamide). The proposed mechanism of adsorption (physisorption). The significance of using expired drugs and the potential environmental benefits.	
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)**	The references are appropriate, recent, and sufficient. They include key studies that support the manuscript's findings and provide a solid foundation for the research The manuscript seems to follow appropriate referencing format. Including access dates for online resources would be helpful.	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	The English quality is generally suitable for scholarly communications, seems good overall but there are areas where clarity and conciseness could be improved. Minor grammatical corrections and rephrasing could enhance readability. However, a professional edit for clarity and conciseness would be beneficial.	

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Optional/General comments	The manuscript "Quantum chemical and Experimental Techniques for Evaluation of Expired GlucoredForte Drugs as Corrosion Inhibitor for mild Steel in HCl solution" offers valuable insights into the innovative use of expired pharmaceuticals for corrosion inhibition. The study is well-conducted, and its findings are significant for both environmental and industrial applications. Minor improvements in the abstract and English quality could enhance the manuscript's clarity and impact. Overall, it is a noteworthy contribution to the field of corrosion science and green chemistry.	

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)*	

Reviewer Details:

Name:	**Constance Chinyere Ezemba**
Department, University & Country	**Chukwuemeka Odumegwu Ojukwu University, Nigeria**