Review Form 3

Journal Name:	Journal of Materials Science Research and Reviews
Manuscript Number:	Ms_JMSRR_127358
Title of the Manuscript:	SUPPRESSION OF MILD STEEL DEGRADATION IN H2SO4 MEDIUM USING COW BONE ASH - POLYANILINE COMPOSITE AS INHIBITOR: ELECTROCHEMICAL AND THERMOMETRIC STUDIES
Type of the Article	

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)*
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.	**The manuscript aimed to study the synthesis, characterization and application of natural composite of cow bone ash – polyaniline composite as corrosion inhibitor of mild steel deterioration in H2SO4 medium. The authors used electrochemical and thermometric measurement for evaluation of the corrosion inhibition performance.**	
Is the title of the article suitable? (If not please suggest an alternative title)	**Yes**	
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.	**No, the abstract should be more informative to summarize he important results.**	
Are subsections and structure of the manuscript appropriate?	**yes**	
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.	**he area of the manuscript is vibrant with technical and environmental impact.**	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. -	**no , need updating**	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	acceptable	
Optional/General comments	major revision Decision: Major Revision 1- The important finding should be summarized in the abstract to be more formative 2- The novelty of the present work should be highlighted in the introduction. 3- The literature part should be modified by adding and highlighting more vibrant and related reported papers (read and cite for examples the following papers) . 1. Reda S. Abdel Hameed, Solvent Free Glycolysis of Plastic Waste as Green Corrosion Inhibitor for Carbon Steel in Sulfuric Acid, Journal of New Materials for Electrochemical Systems, 2017, 20, 141-149. doi: https://doi.org/10.14447/jnmes.v20i3.272. 2. Reda S. AbdelHameed, SofianObeidat, M.T.Qureshi, S.R.Al-Mhyawi, Enas H.Aljuhani, M.Abdallahd, Silver nanoparticles – Expired medicinal drugs waste accumulated at hail city for the local manufacturing of green corrosion inhibitor system for steel in acidic environment, J. Mater. Res. Technol., 21, (2022) 2743. https://doi.org/10.1016/j.jmrt.2022.10.081. 3. Reda Abdel Hameed, Mohamad Faride, Mohamad Othman, Bader Huwaimel, Saedah Al-Mhyawi, Ahmed Shamroukh, Freah Alshammary, Enas Aljuhani & Metwally Abdallah, Green synthesis of zinc sulfide nanoparticle organic heterocyclic polyol system as eco-friendly anti corrosion and anti-bacterial corrosion inhibitor for steel in acidic environment, Green Chemistry Letters and Reviews, 15:3, 847-862, DOI: 10.1080/17518253.2022.2141585. 4. Reda Abdel-Hameed, Ghadah Aleid, Hanan Ragab, Hussin Alshafey, Enas Aljuhani & Saedah Al-Mhyawi, Green synthesis of polymeric surfactants from recycling of plastic waste for applications on steel protection in the petroleum industry, Green Chemistry Letters and Reviews,2024, 17:1, 2379442, DOI: 10.1080/17518253.2024.2379442. 5. Kaseb D.Alanazi, Basmah H.Alshammari, TahaniY.A.Alanazi, OdehA. O.Alshammari, Ashraf M.Ashmawy, Meshari M.Aljohani, Isma Haq, RedaAbdel Hameed, M.A. Deyab, Thermodynamic, chemical, and electrochemical studies ofAloe ferox Mill extract as a naturally developing copper corrosion inhibitor in HCl solution, Scientifc Reports | (2024) 14:11944. https://doi.org/10.1038/s41598-024-62169-x. 6. Reda Abdel-Hameed, Ghadah M. S. Aleid, Hanan Ragab, Hussin Alshafey, Abeer M. Alosaimi, Synthesis, characterization, and evaluation of polymeric surfactants derived from PET plastic waste as green corrosion inhibitor of steel surfaces in marine environment for heavy industry, RSC Adv., 2023, 13, 31969. 1- The figure quality could be improved. 2- The Potentiodynamic polarization (PDP) part need more discussion. See the above mentioned papers to improve his part. 3- The mathematical equations were mentioned without citing references. 4- Conclusion part should be modified to be more informative ((highlighting the important notes and findings). 5- References: The references should be updated and rewritten by the same format (as journal format). The authors could use the above-mentioned references for updating the references list.	

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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:	**Reda Abdel-Hameed Abdelghany**
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