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1. RESEARCHER INFO

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2. PUBLICATIONS:

Books (3)

1. V.Sharulatha, R.Saratha & Shubashini.K.Sripathi,2022, " Volumetric Analysis- A Road Map", Knowledge Curve Publishing, ISBN:978-93-84389-27-7
2. R.Rajalakshmi, N.Renugadevi, Shubashini.K.Sripathi, R.Saratha & P.Lalitha, 2020, "*Physical Chemistry Experiments for Undergraduate Students*", Xpress Publishing, An imprint of Notion Press, ISBN: 978-1-64983-251-1
3. S.V.Priya &R. Saratha (2015)"Inhibition of Mild Steel Corrosion using natural product- A new class of Pickling inhibitors, *Lambert Academic Publishing*, First Edition, Germany,ISBN-I978-3-659-71874-8

Book Chapters (7)

1. Shilpa, R., Periyakaruppan, K., Mithra, U., Thrisha, K., Saratha, R & Varatharaj, R.(2025). "Artificial Intelligence in Lithium-Ion Battery Predictions: A Comparative Study" In M. Syafrudin, N. Fitriyani,; M. Anshari (Eds.), *Achieving Sustainability in Multi-Industry Settings With AI* , pp. 203-236 IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3373-2530-9.ch007>
2. R.Vasanth Jothi & R.Saratha, 2022 "Advanced Microscopy A Strong Analytical Tool in Materials Science ", Apple Academic Press , ISBN: 9781003282044
3. Viswapriya Shanmugam, Rajasekar Rathanasamy, Saratha Raman and Abbas Ganesan, November 2021, " *Natural Dye-Sensitized Solar Cells*", Materials for Solar Energy Conversion:Methods and Applications, John Wileys &Sons ,ISBN 978-1-119-75060-4, pp 133-162 <http://doi.org/10.22271/ed.book.1370>
4. S.Visalakshi Rajeswari, R.Saratha & R.Karunambika, 2021, "*Green Initiatives to Focus Environmental Consciousness and Sustainability in Academic Institutions-A Model for Practice*", Energy and Environment Management Audit, First Edition, AkiNik Publications, New Delhi, ISBN 978-93-91538-26-2, pp 141-151
5. S.V.Priya& R. Saratha(2016) *Evaluation of the Inhibitive Effect of Environment-Friendly Inhibitor for Corrosion of Mild Steel in H₂SO₄ solution*" Island of Research Treasure",

Research Highlights-25th Year, Coimbatore, Shanga Verlag, :, ISBN-978-93-85604-02-7, pp 122- 132

6. R. Saratha, *Life history of freedom fighters of Coimbatore district*, Gandhian Study Centre, & Department of Tamil, Avinashilingam University for Women, Coimbatore, 2008, pp 14-16
7. R. Saratha, *Tamil encyclopedia Contributed explanation for 23 words in Chemistry*, Environmental Pollution Centre with excellence And potential in Environmental Science, Anna University, Chennai

INTERNATIONAL:

1. Thrisha, K., & Saratha, R. (2024). Natural polymer-based electrolytes for energy storage devices—An overview. *Ionics*, Vol.1
2. Jenifer, J., Saratha, R., & Brindha, T. (2024). Bioactive seaweed extracts: Sustainable solutions for corrosion protection. *Journal of Bio- and Tribo-Corrosion*, 10.
3. Thrisha, K., & Saratha, R. (2024). Natural polymer electrolyte based on guar gum doped with NaI for Na-ion batteries. *Bulletin of Materials Science*, 47.
4. Shanmugam, V., Rathanasamy, R., Saratha, R., & Ganesan, A. (2021). Natural dye-sensitized solar cells. In *Materials for Solar Energy Conversion: Methods and Applications*.
5. Senthil Vadivu, D., & Saratha, R. (2021). Investigation on the effect of Averrhoa carambola leaves extract on corrosion inhibition of mild steel in acid media. *Journal of Chengdu University of Technology*, 26(8).
6. Nandhini, D., Saratha, R., & Shilpa, R. (2021). Green polymer electrolytes for magnesium-ion batteries. *International Journal of Current Advanced Research*, 10(5B), 24332–24337. <https://dx.doi.org/10.24327/ijcar.2021.24337.4826>
7. Govindharajan, S., Raman, S., Shanmugam, V., Rathanasamy, R., & Palaniappan, S. K. (2021). Corrosion of brass subjected to cast-off cooking oil blended with diesel. *Journal of Material Testing*, 63(11).
8. Vasantha Jothi, R., Saratha, R., & Krishnaveni, K. (2021). Mild steel green inhibition by *Hardwickia binata* Roxb. leaves extract in acid medium. *Journal of Adhesion Science and Technology*, 35, 296–312.
9. Abirami, M., Saratha, R., Shilpa, R., & Vinitha, B. (2020). Preparation and characterization of guar gum-based solid biopolymer electrolyte doped with lithium bis(trifluoromethanesulphonyl)imide (LiTFSI) plasticized with glycerol. *Bulletin of Materials Science*, 43.
10. R.Shilpa, A.N. FahmithaFathima, M.Abirami, B.Vinitha and R.Saratha, (2020) Lithium Based Electrolytes in Electrochemical Energy Storage Device- A Review, *Journal of materials and environmental science*, 11 (1),109-122, ISSN: 2028-2508.
11. Rajendran, S., & Saratha, R. (2020). An evaluation of solid-state electrolyte based on pectin

and lithium bis(trifluoromethanesulphonyl)imide for lithium-ion batteries. *Materials Today: Proceedings*, 47, 819–824.

12. Sangeetha, G., Saratha, R., Shanmugam, V., Rajasekar, R., Gobinath, V. K., & Kumar, P. S. (2019). Wet corrosion behavior of copper exposed to recycled groundnut oil as biofuel. *Materials Testing*, 61, 131–135.
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15. R. VasanthaJothi, P. Maheshwari, R.Saratha andD. SenthilVadivu, (2017) A study on Inhibitive action of *Bauhinia racemosa* Lam. Extract as Green Corrosion inhibitor for Mild steel in Hydrochloric acid medium, *Asian J. Research Chem*, 10(5), ISSN: 0974-4150.
16. Senthil Vadivu, D., Saratha, R., & Vasantha Jothi, R. (2016). Corrosion inhibition of mild steel in hydrochloric acid medium using plant extracts – A succinct review. *International Journal of Science, Engineering and Technology Research*, 5(12).
17. Vasantha Jothi, R., Saratha, R., & Priya, S. V. (2016). A review on environmentally safe corrosion deterrence of metals in various media. *International Journal of Applied Sciences*, 4(1).
18. Meenakshi, H. N., Prasanna Venkata Lakshmi, M. C., Anand, A., Shyamala, R., & Saratha, R. (2016). Corrosivity of *Pongamia pinnata* biodiesel on zinc and its alloy – A comparison. *International Journal of Environment and Sustainable Development*, 15, 264–271.
19. R.Saratha, S.V. Priya and P. Divya,(2016) Impediment Effect of *Galinsogaparviflora* (Quick Weed) on Mild Steel Corrosion in 1 M HCl, *Chemical Science Review and Letters*, 5, (18), 115-126. ISSN: 2278 6783.
20. S.V. Priya and R. Saratha,2016, Corrosion Inhibition of Mild Steel in 1M HCl and 0.5 MH₂SO₄ by Natural Product Extract-A Comparative Analysis by Electrochemical Studies, *International Journal of Advanced Research in Chemistry & Chemical Engineering*,1(1).
21. R. Subha and R. Saratha. 2016. Corrosion Mitigation of low Carbon Steel in Hydrochloric acid Medium by *Tagetes erecta* Stem Extract Research Journal of Chemical and Environmental Sciences, *Res J. Chem. Environ. Sci*, 4 (2),19-26,ISSN: 2321-1040.
22. Saratha, R., & Thilagavathy, P. (2015). *Mirabilis jalapa* flowers extract as corrosion inhibitor for the mild steel corrosion in 1M HCl. *IOSR Journal of Applied Chemistry*, 8(1), 30–35.
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26. Subha, R., & Saratha, R. (2012). Corrosion inhibition and adsorption properties of African marigold for the corrosion of mild steel in hydrochloric acid. *Asian Journal of Research in Chemistry*, 5(3), 390–396.
27. R. Subha and R. Saratha, 2012, Influence of Tagetes erecta–leaves extract on the corrosion inhibition of mild steel in HCL medium, *Elixir Appl. Chem.* 44, 7242-724. ISSN:2229-712X.
28. S.V. Priya and R. Saratha, 2011, Inhibition of mild steel corrosion in 0.5 H₂SO₄ with leaves extract, *Elixir Corrosion*, 37, 3617-3622, ISSN: 2229-712X.
29. Anand, A., Paramesh, M. H. N., Krishnamurthy, S. R., Mani, S. R., & Papavinasam, S. (2011). Compatibility of metals in Jatropha oil. NACE International Corrosion Conference Series.
30. Saratha, R., & Meenakshi, R. (2011). Dimethylaminobenzylidene acetone as corrosion inhibitor for mild steel in acid medium. *Rasayan Journal of Chemistry*, 4, 251–263.
31. Vasudha, V. G., & Saratha, R. (2011). Studies on inhibition of acid corrosion of mild steel by Terminalia catappa (Tropical almond) leaves. *Oriental Journal of Chemistry*, 27, 1165–1171.
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33. R. Saratha, A.R. Mary Sheeba, H.N. Meenakshi, and R. Shyamala, 2011, Evaluation of stability and durability of plant extract on corrosion inhibition of mild steel in IN H₂SO₄ medium, *International Journal of Recent Scientific Research*,2 (6), 173-178. ISSN: 0976-3031, 1.136.
34. V.G. Vasudha and R. Saratha, 2011, Thermodynamic and adsorption studies on Nyctanthesarbortristis(Night Jasmine) leaves extract as corrosion inhibitor for mild steel in 1N HCl medium, *Asian J. Research. Chem.*, 4(6),1001-1004, ISSN: 0974-4169,0.266.
35. Saratha R., Saranya Devi M., Meenakshi H.N. and Shyamala R, 2011,Enhanced corrosion resistance of Techomastans extract on mild steel in 0.5M H₂SO₄ solution, *International Journal of Current Research*, 2(1), 092-096, ISSN: 0975-833X,0.455
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37. Saratha, R., & Vasudha, V. G. (2010). Emblica officinalis (Indian gooseberry) leaves extract as corrosion inhibitor for mild steel in 1N HCl medium. *E-Journal of Chemistry*, 7, 677–684.

38. Saratha, R., & Meenakshi, R. (2010). Corrosion inhibitor—A plant extract. *Der Pharma Chemica*, 2, 282–294.
39. R. Saratha, R. Shyamala and P. Thilagavathy, 2010, Comparison of corrosion mitigation efficiency of Coat of Coffee arabica for mild steel in 1M HCl and 0.5M H₂SO₄, *Acta Ciencia Indica*, XXXVIC (3), 263-271, ISSN: 0253-733X
40. N. Kasthuri, R. Saratha, R. Meenakshi, and H.N. Meenakshi, 2010, Inhibition of corrosion of mild steel in 0.5 M H₂SO₄ by Tectonagrandis leaves, *Asian J. Research Chem.*, 3(3), 588-590, ISSN: 0974-4169, 0.247.
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43. R. Saratha, N. Kasthuri and P. Thilagavathy, 2009, Environment friendly acid corrosion inhibition of mild steel by Ricinus communis leaves, *Der Pharma Chemica*, 1(2), 249-257. ISSN: 0975-413X.
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50. Subha, R., & Saratha, R. (2006). Naturally occurring substance (Calendula officinalis flower) as a corrosion inhibitor of mild steel in 1M HCl solution. *Journal of Corrosion Science and Engineering*, 10.

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National Journal Publications

1. Kavyasree.V, Saratha, R. & Thrisha K (2024). Bio-host guar gum complexed with sodium bromide - an electrolyte for sodium-ion batteries, *Res. High.*, JADU.,34, 145.
2. Senthil Vadivu, D., & Saratha, R. (2020). Corrosion inhibition using plant extracts for mild steel in hydrochloric acid and sulphuric acid medium: SEM and EDS studies. *Research Highlights*, 30(2), 99–105. ISSN: 2231-2374.
3. Shilpa, R., & Saratha, R. (2019). Biopolymer electrolyte from pectin doped with lithium salts and plasticizer for lithium-ion batteries. *Journal of Electrochemical Society of India*, 68(3–4), 89–95. <https://doi.org/10.3578/jecsi.68.3&42019.89>. ISSN: 0013-466X.
4. Saratha, R., & Maheshwari, S. (2017). *Quisqualis indica* Linn leaves: Evaluation of the corrosion inhibition performance. *Research Highlights*, 27, 276–286. ISSN: 2231-2374.
5. VasanthaJothi, R., & Saratha, R. (2017). Inhibitive action of *Ailanthus excelsa* Roxb. extract on the corrosion of mild steel in hydrochloric acid medium. *Indian Journal of Advances in Chemical Sciences*, 5(4), 263–267. ISSN: 2320-0898.
6. Saratha, R., & Priya, S. V. (2014). *Crossandra infundibuliformis* leaves as corrosion inhibitor for mild steel in 1 M HCl and 0.5 M H₂SO₄: A comparative study. *Journal of Environmental Nanotechnology*, 3(1), 30–36. ISSN (Print): 2279-0748, ISSN (Online): 2319-5541.
7. Thilagavathy, P., & Saratha, R. (2013). Temperature effect on the performance of *Bougainvillea spectabilis* leaves as corrosion inhibitor for mild steel in 1 M hydrochloric acid. *Research Highlights*, JADU, 23, 285. ISSN: 2231-2374.
8. Saratha, R., & Anandhi, D. (2011). A study on the inhibiting property of plant extract. *Research Highlights*, JADU, 21, 40–45. ISSN: 2231-2374.
9. Saratha, R., & Vasudha, V. G. (2010). Stability and durability studies of plant extract as corrosion inhibitors for mild steel in 1N HCl medium. *Research Highlights*, JADU, 20, 33–38. ISSN: 2231-2374.
10. Saratha, R., Shyamala, R., & Meenakshi, H. N. (2009). Precluding effectiveness of *Pisum sativum* on mild steel corrosion in acidic medium. *Advances in Applied Research*, 1(2), 168–175. ISSN: 0974-3839.

11. Vasudha, V. G., & Saratha, R. (2009). Acid extract of *Emblica officinalis* leaves as environment friendly green corrosion inhibitor for mild steel in sulphuric acid medium. *Journal for Emerging Researches Edu Quest*, 118–125.
12. Saratha, R., & Revathi, A. (2008). Plant-based extract as corrosion inhibitor for carbon steel in acid medium. *Research Highlights, JADU*, 18, 26–34. ISSN: 2231-2374.
13. Saratha, R., Shyamala, R., & Kala Priya. (2005). Precluding effectiveness of the acid extracts of *Coffea arabica* on mild steel corrosion. *Research Highlights, JADU*, 15, 85–91. ISSN: 2231-2374.
14. Saratha, R., Kasthuri, P. K., & Sivakamasundari, S. (2003). Inhibitive effect of extracts of leaves and vegetables of *Solanum verbascifolium* (Sundai) on corrosion of mild steel in acid medium. *Journal of Electrochemical Society of India*, 52(4), 163–168. ISSN: 0031-4651.
15. Saratha, R., Savitha, R., & Sivakamasundari, S. (2003). The influence of *Michelia champaca* leaves extract on the corrosion inhibition of mild steel in sulphuric acid medium. *Journal of Electrochemical Society of India*, 52(2), 59–63. ISSN: 0031-4651.
16. Sivakamasundari, S., Saratha, R., & Sasikala, J. (2001). Effect of pickling inhibitors on corrosion rate of mild steel in hydrochloric acid medium: Polarisation and weight loss method. *Research Highlights, JADU*, 11, 89.

3. MEMBERSHIP

MEMBERSHIP IN PROFESSIONAL BODIES

1. Life member(ID:386) -The Electrochemical Society of India, Indian Institute of Science, Bengaluru, 2020
2. Member ECS ID: 428904-The Electrochemical Society, 2020
3. Member- Editorial Board -International Journal of Chemical Engineering , 2015
4. Member-Editorial Board-IJAR in Chemistry and Chemical Engineering-International Science and Research Journals, 2014
5. Life Member – L/F No. 1475-Indian Council of Chemists, 2012
6. Life Member. Membership No. L11881- The Indian Science Congress Association, 2006
7. All India Scientific Tamil Congress, 1999 Life member- L.M.No.-148
8. Life member-Ref:99/AICEIW/98 -All India Committee for the Eradication of Illiteracy among Women, 1998
9. KARUNA- Coimbatore, 1996 Life member