PROFILE

Dedicated Professor at the University of Calicut, India, with a passion for teaching and a strong commitment to fostering academic excellence. Adept at creating an engaging learning environment and imparting knowledge in the field of Chemistry. Demonstrated commitment to research driven by genuine curiosity, contributing to the advancement of scientific knowledge. Proven track record of balancing teaching responsibilities with active involvement in meaningful research endeavors. Committed to inspiring students and cultivating a culture of curiosity and critical thinking.

CONTACT

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- https://www.esclabuoc.com/
- https://scholar.google.com/citations?hl=en&user=h4vdddIAAAAJ
- https://www.researchgate.net/profile/Abraham-Joseph-3

Dr. Abraham Joseph

Senior Professor

Department of Chemistry
University of Calicut

CAREER PROFILE

Senior Professor (Since 2021)
Department of Chemistry
University of Calicut

Professor (2011 - 2021)
Department of Chemistry
University of Calicut

Associate Professor (2008 - 2021)
Department of Chemistry
University of Calicut

Reader (2005 - 2008)
Department of Chemistry
University of Calicut

Senior Lecturer (2000 - 2005)
St.Pius X College, Rajapuram
Kasararagod

Senior Lecturer (1992 - 1995)
Nirmalagiri College, Kuthuparamba
Kannur

RESEARCH PROFILE

Ph. D.
1996 - 2000
'Studies on Nitrogen, Oxygen and Sulfur Donor Ligands as Analytical Reagents, Complexing Agents and Corrosion Inhibitors'
Mangalore University, Karnataka, with Prof., B, NARAYANA

M. Phil.
1991 - 1992
'Studies on the Complexing Behavior of Substituted 1,2,4-triazine and Complexometric Determination of Thallium(III)'
Mangalore University, Karnataka, with Prof., B, NARAYANA

RESEARCH SUMMARY

No. of Journal Articles	120
No. of Reviews	1
No. of Book Chapters	3
No. of Citations	3695
h -index (total)	34
h -index (last 5 years)	28
i10-index (total)	83
i10-index (last 5 years)	64

RESEARCH INTEREST

- Experimental corrosion studies
- Computational corrosion studies
- Environmental remediation
- Nature-dynamic studies
- Phyto-mediated nanomaterials
- Bio-responsive nanomaterials
- Fluorescence and sensing

ACADEMIC INTEREST

- Coordination Chemistry
- Bioinorganic Chemistry
- Inorganic Spectroscopy
- Analytical Chemistry

COMPLETED PROJECTS

2008 - 2011	Studies on substituted triazine and triazole derivatives as corrosion inhibitors for mild steel, copper, brass and aluminium in acid Solutions Funding Agency: KSCSTE Kerala- India
2011 - 2014	Amino acid derived green inhibitors for the corrosion of mild steel and copper in acid solutions Funding Agency: University Grant Commission- India
2016 - 2017	Carbohydrate become 'sweeter' on structural modifications with nanomaterials-A novel method for the protection of mild steel in acid Environments Funding Agency: University Grant Commission- India

THESIS PRODUCED

2024	Synthesis, characterization and sensing applications of novel schiff base ligands – Dr. Muhammed Arshad
2023	Thiophene bearing bis-chalcone based monomers and polymers for environmental applications – Dr. Sowmya P
2023	Tunable synthesis and characterization of phytoconjugated nanoparticles for water remediation – Dr. Julia Garwasis
2022	Mitigation of mild steel corrosion in hydrochloric acid using N,S,O donar phytorich extracts of selected medicinal plants – Dr. Jeejarani A. T.
2021	Synthetic and Natural N, S, O donor systems as corrosion inhibitors for mild steel in acid environments – Dr. Asha Thomas
2021	Protection of mild steel in aggressive media using carbohydrate polymers – Dr. Shamseera K. O.
2021	Biological and environmental applications of phytogenic ZnO nanoparticles – Dr. Anupama R. Prasad
2021	Synthesis, characterization and analytical applications of titania nanohybrids – Dr. Jaseela P. K.
2018	Synthesis, characterization, biological screening and corrosion inhibition studies of N, S, O donor heterocycles and some of their transition metal complexes – Dr. Rugmini Ammal P.
2017	Corrosion inhibition study of medicinal plant extracts and some of their components for mild steel in acid media – Dr. Prajila M.
2017	Synthesis, characterization and anticorrosion screening of N, S, O donor ligands and some of its metal complexes – Dr. Shiny K. M.
2016	Amino acid based green inhibitors for the corrosion of mild steel and copper in different media – Dr. Mathew Kuruvila
2016	Electrochemical studies on N, S, O donor heterocycles as corrosion protection agents for commercial metals in different environments – Dr. Revathy Mohan
2016	Corrosion inhibition study of medicinal plant extracts and some of their components for mild steel in acid media – Dr. Anupama K. K.
2016	N,S,O donor mixed ligand system as corrosion inhibitors for commercial metals in acid solutions – Dr. Ramya K.
2013	Theoretical and electrochemical studies on the corrosion inhibition properties of triazine and triazole based Schiff bases towards mild steel and aluminium in acid solutions Dr. Sam John
2011	Nitrogen Donor Heterocycles and their Schiff Bases as Analytical Reagents, Complexing Agents and Corrosion Inhibitors – Dr. Bincy Joseph

ACADEMIC/ADMINSTRATIVE/RESEARCH POSITIONS HELD

2024	Member, Governing body, S. H. college (Autonomous), Chalakkudy
2024	Academic Council Member, LEAD College (Autonomous), Palakkad
2023-2027	Coordinator, DST PURSE Project, University of Calicut
2022-Present	Director, Directorate of Consultancy, University of Calicut
2021-Present	Director, Project Cell, University of Calicut
2021-Present	Member, Board of Studies in Chemistry, St Joseph's College, Irinjalakkuda (Autonomous), Kerala- India
2020- Present	Member, Board of Studies in Chemistry, Mangalore University, India
2020-Present	Member Library Advisory Committee, Department of Lifelong Learning and Extension, University of Calicut- India
2019-Present	Member, Board of Studies in Applied Chemistry, Cochin University of Science and Technology (CUSAT), India
2019-Present	Member Research Advisory Committee (RAC) of St. Joseph's College, Devagiri (VC Nominee), Kerala- India
2018-Present	Member, Governing body, Christian Chair, University of Calicut -India
2018-Present	Member Research Advisory Committee (RAC) of Govt. college, Madappally (VC Nominee), Kerala- India
2018- Present	Member Research Advisory Committee (RAC) of MES Mannarkkad College (VC Nominee) Kerala- India
2016- Present	Member Governing Body, Nirmalagiri College, Kerala- India. 2015-Present : Member IQAC board, University of Calicut- India
2015- Present	Member University of Calicut Research Advisory Committee (RAC)
2019-2021	Member Governing Body, St Joseph's College, Devagiri, (Autonomous), India
2018-2021	Member, Board of Studies in Chemistry, St Joseph's College, Devagiri (Autonomous), Kerala- India
2017-2020	Member, Board of Studies in Chemistry, St Thomas College (Autonomous), Thrissur, Kerala- India
2018-2020	Member Library Advisory Committee, University of Calicut-India
2016-2019	Chairman PGBOS Chemistry, University of Calicut-India
2016-2018	Dean, Faculty of Science, University of Calicut- India
2016-2018	Member Academic Council, University of Calicut- India
2015	Director Research (ic), University of Calicut- India
2015-2020	Member, University Planning Board, University of Calicut- India
2014-2015	Director, College Development Council, (CDC)University of Calicut-India
2012-2014	Registrar Kerala University of Fisheries and Ocean Studies (KUFOS), India

Life Member, Indian Chemical Society, F/6754 (LM) (2007)
Life Member, Chemical Research Society of India (CRSI) LM/1151
Co-Chairman, Kerala Science Congress- at University of Calicut (Jan28-30 2016)

RESEARCH PUBLICATIONS (2010 ONWARDS)

2024

- Arshad, M.; Williams, L.; Ajayan, A.; Joseph, A. 2-hydroxy-1- Naphthaldehyde Based Colorimetric Probe for the Simultaneous Detection of Bivalent Copper and Nickel with High Sensitivity and Selectivity. *Journal of Fluorescence 2024, 1*.
- Ajayan, A.; Joseph, V.; Paul, A.; Joseph, A., Coating Characterization with Electrochemical Techniques. In Encapsulated Corrosion Inhibitors for Eco-Benign Smart Coatings, CRC Press: pp 205-224.

- T, S.; Prasad, A. R.; Joseph, A., Synthesis, characterization, and effective removal of dye pollutants from water bodies using a new ZnO nanocomposite. J. Indian Chem. Soc. 2024, 101 (8), 101183.
- Arshad, M.; Ajayan, A.; Joseph, V.; Joseph, A., Highly sensitive detection of copper in aqueous media using a fluorescent probe developed from isophthaldehyde and (E)-1-(hydrazonomethyl) naphthlen-2-ol. Sensors and Actuators A: Physical 2024, 373, 115436
- Iyer, R. S.; Iyer, N. S.; P, R. A.; Joseph, A., Harnessing machine learning and virtual sample generation for corrosion studies of 2-alkyl benzimidazole scaffold small dataset with an experimental validation. J. Mol. Struct. 2024, 1306, 137767
- Paul, A.; Ajayan, A.; Joseph, A. Protection of mild steel in acidic and saline media using a novel surface coat developed with Pueraria phaseoloides seed extract and epoxy resin. Next Materials 2024, 2, 100130.
- Arshad, M.; Sowmya, P.; Paul, A.; Joseph, A. Sensing of picric acid using an AIEE active "Turn Off" fluorescent probe derived from hydroxy naphthaldehyde and benzyloxy benzaldehyde. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 2024, 305, 123465

2023

- Arshad, M.; Ajayan, A.; Joseph, A. Exploring the dual sensing properties of an anthraldehyde based Schiff base for the successive determination of picric acid using AIEEF and copper using colorimetric methods. Sensors and Actuators A: Physical 2023, 364, 114787.
- Arshad, M.; Jeejarani, A. T.; Ajayan, A.; Sebastian, C. D.; Joseph, A. Successive detection of bivalent zinc and picric acid using an organo-fluorescent sensor derived from 2-hydroxy-1- naphthaldehyde. Sensors and Actuators A: Physical 2023, 358, 114418.
- Arshad, M.; Paul, A.; Joseph, A. Nanoscale detection of copper using an aggregation induced emission enhancement fluorescent sensor derived from hydroxy naphthaldehyde and benzyloxy benzaldehyde. Journal of Photochemistry and Photobiology A: Chemistry 2023, 444, 114983.
- Arshad, M.; Jeejarani, A. T.; Joseph, V.; Joseph, A. Selective detection of picric acid in aqueous medium using a novel naphthaldehyde-based aggregation induced emission enhancement (AIEE) active "turn-off" fluorescent sensor. Journal of Luminescence 2023, 258, 119818.
- Sowmya, P.; Williams, L.; Prakash, S.; Joseph, A. Design and synthesis of thiophene containing bis-chalcone-based mesoporous polymers for volatile iodine capture. Journal of Hazardous Materials Advances 2023, 10, 100272.
- Sowmya, P.; Prakash, S.; Joseph, A. Adsorption of heavy metal ions by thiophene containing mesoporous polymers: An experimental and theoretical study. J. Solid State Chem. 2023, 320, 123836.
- Jeeja Rani. A.T.; Arshad, M.; Kuruvilla, M.; Joseph, A. Computational modelling and correlation of physical parameters of 1-heptatriacotanol, phytol and 3, 7, 11, 15-tetra methyl-2-hexadecen-1-ol with the corrosion inhibition efficiency of CIW for mild steel in HCl. Corrosion Engineering, Science and Technology 2023, 58 (3), 243-258.
- Garvasis, J.; Prasad, A. R.; Shamsheera, K. O.; Nidheesh Roy, T. A.; Joseph, A. A facile one-pot synthesis of phyto-conjugate superparamagnetic magnetite nanoparticles for the rapid removal of hexavalent chromium from water bodies. Materials Research Bulletin 2023, 160, 112130.
- Sowmya, P.; Prakash, S.; Joseph, A. A bis-chalcone based colorimetric probe for the selective detection of bisulfite/sulfite anions: exploring surfactant promoted Michael addition of anions to alpha, beta-unsaturated ketones. RSC Adv 2023, 13 (4), 2552-2560.

2022

- Jeeja Rani, A. T.; Sreelakshmi, T.; Joseph, A. Effect of the addition of potassium iodide and thiourea on the corrosion inhibition effect of aqueous extract of Ayapana triplinervis towards mild steel in HCl at elevated temperatures-theoretical, electrochemical and surface studies. Journal of Molecular Liquids 2022, 366, 120211.
- Garvasis, J.; Prasad, A. R.; Shamsheera, K. O.; Nidheesh Roy, T. A.; Joseph, A. Weed to nano seeds: Ultrasonic assisted one-pot fabrication of superparamagnetic magnetite nano adsorbents from Siam weed flower extract for the removal of lead from water. Journal of Hazardous Materials Advances 2022, 8, 100163.
- Jeeja Rani, A. T.; Thomas, A.; Williams, L.; Joseph, A. Effect of Lunamarine, the Major Constituent of Boerhaavia diffusa Leave Extract on the Corrosion Inhibition of Mild Steel in Hydrochloric Acid; Computational Modelling, Surface Screening and Electroanalytical Studies. Journal of Bio- and Tribo-Corrosion 2021, 8 (1), 18.
- Jeeja Rani, A. T..; Thomas, A.; Arshad, M.; Joseph, A. The influence of aqueous and alcoholic extracts of Garcinia cambogia fruit rind in the management of mild steel corrosion in hydrochloric acid: Theoretical and electroanalytical studies. Journal of Molecular Liquids 2022, 346, 117873.
- Jeeja Rani A.T,; Asha Thomas,; Mathew Kuruvilla,; Muhammed Arshad,; Abraham Joseph. The co-adsorption of thymohydroquinone dimethyl ether (THQ) and coumarin present in the aqueous extract of Ayapana triplinervis on mild steel and its protection in hydrochloric acid up to 323 K: computational and physicochemical studies. RSC Advances. 2022, 12, 14328–14341.
- Linda Williams,; Mohammed Arshad,; Jeeja Rani A.T,; Abraham Joseph. Biogenic MnO2 nanoparticles derived from a Cedrus deodara pine needle extract and their composites with

polyaniline/activated charcoal as an electrode material for supercapacitor applications. New J. Chem. 2022, 46, 4325–4333

- Shamsheera K. O,; Anupama R Prasad,; Muhammed Arshad,; Abraham Joseph. A sustainable method of mitigating acid corrosion of mild steel using jackfruit pectin (JP) as green inhibitor: Theoretical and electrochemical studies. Journal of the Indian Chemical Society. 2021, 99.

2021

- Asha Thomas,; Jeeja Rani A.T,; Abraham Joseph. Extended protection of mild steel in molar HCl using the Garcinia Indica fruit rind extract (GIW) and iodide ions; electrochemical, thermodynamic and kinetic studies. Journal of the Indian Chemical Society. 2021, 98.
- Anupama R. Prasad,; P. Sowmya,; Julia Garvasis,; Abraham Joseph. Gamma-ray induced thermoluminescence emission of green synthesized zinc oxide nanophosphors. Journal of the Indian Chemical Society. 2021, 98.
- Paul, A.; K.O, S.; Prasad, A. R.; Joseph, A. Electroanalytical and surface studies on the protective action of a coating of PVA@3WGO on mild steel in acidic and saline environment. Results in Surfaces and Interfaces 2021, 4, 100018.
- Jeeja Rani, A. T.; Thomas, A.; Joseph, A. Inhibition of mild steel corrosion in HCl using aqueous and alcoholic extracts of Crotalaria Pallida – A combination of experimental, simulation and theoretical studies. Journal of Molecular Liquids 2021, 334, 116515.
- Anupama R. Prasad,; Linda Williams,; Julia Garvasis,; K.O. Shamsheera,; Sabeel M. Basheer,; Mathew Kuruvilla,; Abraham Joseph. Applications of phytogenic ZnO nanoparticles: A review on recent advancements. Journal of Molecular Liquids. 2021, 331
- K.O. Shamsheera,; Anupama R. Prasad,; P.K. Jaseela,; Abraham Joseph. Effect of surfactant addition to Guar Gum and protection of mild steel in hydrochloric acid at high temperatures: Experimental and theoretical studies. Journal of Molecular Liquids. 2021, 331.
- Shamsheera K. O,; Anupama R Prasad,; Muhammed Arshad,; Abraham Joseph. A sustainable method of mitigating acid corrosion of mild steel using jackfruit pectin (JP) as green inhibitor: Theoretical and electrochemical studies. Journal of the Indian Chemical Society. 2021, 99.
- Rani, A. T. J.; Thomas, A.; Arshad, M.; Joseph, A. The influence of aqueous and alcoholic extracts of Garcinia cambogia fruit rind in the management of mild steel corrosion in hydrochloric acid: Theoretical and electroanalytical studies. Journal of Molecular Liquids 2022, 346, 117873.
- Anupama R. Prasad,; K.O. Shamsheera,; Abraham Joseph. Electrochemical and surface characterization of mild steel with corrosion resistant zirconia network fabricated by aqueous sol-gel technique. Journal of the Indian Chemical Society. 2021, 98.
- Prasad, A.; Kuruvilla, M.; Joseph, A. Applications of cysteine in health and industries. 2021; pp 13-41

2020

- K.O. Shamsheera,; Anupama R. Prasad,; Abraham Joseph. Extended protection of mild steel in saline and acidic environment using stearic acid grafted chitosan preloaded with mesoporous-hydrophobic silica (mhSiO2). Surface & Coatings Technology. 2020, 402.
- Ammal P, R.; Prasad, A. R.; Joseph, A. Synthesis, characterization, in silico, and in vitro biological screening of coordination compounds with 1,2,4-triazine based biocompatible ligands and selected 3d-metal ions. Heliyon 2020, 6 (10), e05144.
- P.K. Jaseela,; K.O. Shamsheera,; Abraham Joseph. Mesoporous Titania-Silica nanocomposite as an effective material for the degradation of Bisphenol A under visible light. Journal of Saudi Chemical Society. 2020, 24, 651–662.
- Julia Garvasis;, Anupama R. Prasad,; K.O. Shamsheera,; P.K. Jaseela,; Abraham Joseph. Efficient removal of Congo red from aqueous solutions using phytogenic aluminum sulfate nano coagulant. Materials Chemistry and Physics. 2020, 251.
- Asha Thomas,; P. Rugmini Ammal,; Abraham Joseph. A comprehensive study of mild steel corrosion in the aggressive acidic environment using CMPPC, a substituted pyrazole derivative. Chemical Papers. 2020, 74(9), 3025-3037.
- Asha Thomas,; M. Prajila,;, K.M. Shainy,; Abraham Joseph. A green approach to corrosion inhibition of mild steel in hydrochloric acid using fruit rind extract of Garcinia indica (Binda). Journal of Molecular Liquids. 2020, 312.
- P.K. Jaseela,; Mathew Kuruvilla,; Linda Williams,; Chinju Jacob'; K.O. Shamsheera,; Abraham Joseph. Excellent protection of mild steel in sodium chloride solution for a substantial period of time using a hybrid nanocoating of poly vinyl alcohol and Titania. Arabian Journal of Chemistry. 2020, 13, 6921–6930.
- Shamsheera K.O,; Anupama R. Prasad,; Jaseela PK,; Abraham Joseph. Development of self-assembled monolayer of stearic acid grafted chitosan on mild steel and inhibition of corrosion in hydrochloric acid. Chemical Data Collections. 2020, 28.
- Jaseela, P. K.; Shamsheera, K. O.; Joseph, A. HMDS–GPTMS Modified Titania Silica Nanocomposite: A New Material for Oil–Water Separation. Journal of Inorganic and Organometallic Polymers and Materials 2020, 30 (6), 2134-2141.

- Prasad, A. R.; Kunyankandy, A.; Joseph, A. Corrosion Inhibition in Oil and Gas Industry. In Corrosion Inhibitors in the Oil and Gas Industry, 2020; pp 135-150.
- Linda Williams,; Anupama R. Prasad,; P. Sowmya,; Abraham Joseph. Characterization and Temperature dependent DC conductivity study of bio templated nickel oxide nanoparticles (NiO) and their composites using polyaniline (PANI). Materials Chemistry and Physics. 2020, 242.
- Prasad, A. R.; Basheer, S. M.; Gupta, I. R.; Elyas, K. K.; Joseph, A. Investigation on Bovine Serum Albumin (BSA) binding efficiency and antibacterial activity of ZnO nanoparticles. Materials Chemistry and Physics 2020, 240, 122115.
- Prasad, A. R.; M, A.; K. O, S.; Joseph, A. Bio-fabricated ZnO nanoparticles: direct sunlight-driven selective photodegradation, antibacterial activity, and thermoluminescence-emission characteristics. New Journal of Chemistry 2020, 44 (20), 8273-8279, 10.1039/D0NJ01611J.
- K.O. Shamsheera,; R. Prasad Anupama,; Joseph Abraham. Computational simulation, surface characterization, adsorption studies and electrochemical investigation on the interaction of guar gum with mild steel in HCl environment. Results in Chemistry 2. 2020.

2019

- K. O. Shamsheera; Anupama R Prasad,;Julia Garvasis,; Sabeel M Basheer,; Abraham Joseph. Stearic acid grafted chitosan/epoxy blend surface coating for prolonged protection of mild steel in saline environment. Journal of Adhesion Science and Technology. 2019, (), 1–15.
- Rugmini Ammal P,; Anupama R Prasad,; K, Ramya; Sam John,; Abraham Joseph. Protection of mild steel in hydrochloric acid using methyl benzimidazole substituted 1, 3, 4-oxadiazole: computational, electroanalytical, thermodynamic and kinetic studies. Journal of Adhesion Science and Technology. 2019, (), 1–23.
- Anupama R Prasad,; Sabeel M Basheer,; Linda Williams,; Abraham Joseph. Highly selective inhibition of a-glucosidase by green synthesised ZnO nanoparticles - In-vitro screening and in-silico docking studies. International Journal of Biological Macromolecules. 2019, (), S0141813019318884.
- Jaseela P K,; Julia Garvasis,; Abraham Joseph. Selective adsorption of Methylene Blue (MB) dye from aqueous mixture of MB and Methyl Orange (MO) using Mesoporous Titania (TiO2) – Poly Vinyl Alcohol (PVA) nanocomposite. Journal of Molecular Liquids. 2019, S0167-7322(19)30484-2.
- Sam John,; Alfeena salam,; Anju Maria Baby,; Abraham Joseph. Corrosion inhibition of mild steel using chitosan / TiO2 nanocomposite coatings. Progress in Organic Coatings. 2019, 129(), 254–259.
- Anupama R Prasad,; Julia Garvasis,; Shamsheera Kunnekkat Oruvil,; Abraham Joseph. Bio-inspired green synthesis of zinc oxide nanoparticles using Abelmoschus esculentus mucilage and selective degradation of cationic dye pollutants. Journal of Physics and Chemistry of Solids. 2019, 127(), 265–274.
- Kuruvilla, M.; Prasad, A. R.; Shainy, K. M.; Joseph, A. Protection of Metallic Copper from the Attack of Sulphuric Acid Using HDMMA, a Schiff Base Derived from l-Cysteine and 2-Hydroxy-1-naphthaldehyde. Journal of Bio- and Tribo-Corrosion 2018, 5 (1), 9.
- Shainy, K.M.; Anupama R Prasad,; Asha Thomas,; Abraham Joseph. Synergistic interaction of 2-amino 4-methyl benzothiazole (AMBT) and benzotriazole (BTZ) offers excellent protection to mild steel exposed in acid atmosphere at elevated temperatures: Electrochemical, computational and surface studies. Egyptian Journal of Petroleum. 2019, (), S1110062118302496.

2018

- P. Rugmini Ammal,; Anupama R Prasad.; Abraham Joseph. Comparative studies on the electrochemical and physicochemical behaviour of three different benzimidazole motifs as corrosion inhibitor for mild steel in hydrochloric acid. Egyptian Journal of Petroleum. 2018, (), S1110062118300187.
- Rugmini Ammal, P.; Prajila, M.; Joseph, A. Effective inhibition of mild steel corrosion in hydrochloric acid using EBIMOT, a 1, 3, 4-oxadiazole derivative bearing a 2-ethylbenzimidazole moiety: Electro analytical, computational and kinetic studies. Egyptian Journal of Petroleum 2018, 27 (4), 823-833.
- Shainy, K. M.; Rugmini Ammal, P.; Joseph, A. Development of passive film and enhancement of corrosion protection of mild steel in hydrochloric acid through the synergistic interaction of 2-amino-4-methyl benzothiazole (AMBT) and (E)-2-methylbenzo[d]thiazol-2-yl) imino-4-methyl) phenol (MBTP). Egyptian Journal of Petroleum 2018, 27 (4), 621-632.
- Prajila, M.; Ammal, P. R.; Joseph, A. Comparative studies on the corrosion inhibition characteristics of three different triazine based Schiff's bases, HMMT, DHMMT and MHMMT, for mild steel exposed in sulfuric acid. Egyptian Journal of Petroleum 2018, 27 (4), 467-475.
- Rugmini Ammal, P.; Prajila, M.; Joseph, A. Physicochemical studies on the inhibitive properties of a 1,2,4-triazole Schiff's base, HMATD, on the corrosion of mild steel in hydrochloric acid. Egyptian Journal of Petroleum 2018, 27 (3), 307-317.
- Basheer, S.; Joseph, A.; Sreekanth, A. P2MM. 7-Host-Guest Interaction of Anthraldehyde Dithiosemicarbazone and Construction of Molecular Logic Gates. Proceedings IMCS 2018 2018, 837-839.

- Jaseela, P.; Joseph, A. Development of Flower Like Hierarchical Thiourea Loaded Titania–Poly Vinyl Alcohol Nano Composite Coatings for the Corrosion Protection of Mild Steel in Hydrochloric Acid. Journal of Inorganic and Organometallic Polymers and Materials 2018, 28.
- Anupama, K. K.; Joseph, A. Experimental and Theoretical Studies on Cinnamomum verum Leaf Extract and One of Its Major Components, Eugenol as Environmentally Benign Corrosion Inhibitors for Mild Steel in Acid Media. Journal of Bio- and Tribo-Corrosion 2018, 4 (2), 30.
- Prasad, A. R.; Rugmini Ammal, P.; Joseph, A. Effective photocatalytic removal of different dye stuffs using green synthesized zinc oxide nanogranules. Materials Research Bulletin 2018, 102, 116-121.
- Anupama, K. K.; Joseph, A. Experimental and Theoretical Studies on Cinnamomum verum Leaf Extract and One of Its Major Components, Eugenol as Environmentally Benign Corrosion Inhibitors for Mild Steel in Acid Media. Journal of Bio- and Tribo-Corrosion 2018, 4 (2), 30.
- John, S.; George, J. B.; Joseph, A. Photoluminescence of Co: ZnNiO and Zr: ZnNiO nanocomposites capped with biodegradable polymer poly (2-ethyl-2-oxazoline). In AIP Conference Proceedings, 2018; AIP Publishing: Vol. 1953.
- Mohan, R.; Joseph, A. Corrosion protection of mild steel in hydrochloric acid up to 313K using propyl benzimidazole: Electroanalytical, adsorption and quantum chemical studies. Egyptian Journal of Petroleum 2018, 27 (1), 11-20.
- Rugmini Ammal, P.; Prajila, M.; Joseph, A. Effect of substitution and temperature on the corrosion inhibition properties of benzimidazole bearing 1, 3, 4-oxadiazoles for mild steel in sulphuric acid: Physicochemical and theoretical studies. Journal of Environmental Chemical Engineering 2018, 6 (1), 1072-1085.
- Shainy, K.; Kuruvilla, M.; Joseph, A. Electrochemical studies on the adsorption interaction and corrosion inhibition properties of a substituted triazinone, BCATDT on mild steel in hydrochloric acid. 2018.

2017

- P Rugmini Ammal,; Prajila, M.; Abraham Joseph. Electroanalytical and Kinetic Studies on PBIMOT, a Benzimidazole Motif of 1,3,4-Oxadiazole as a Powerful Corrosion Inhibitor for Mild Steel in Nitric Acid. Journal of Bio- and Tribo-Corrosion. 2017, 3(4), 47.
- Prajila, M.; Rugmini Ammal, P.; Joseph, A. Protection of Mild Steel in Hydrochloric Acid Through Surface Finishing using HMMT, a Substituted 3-Mercapto-6-Methyl-1,2,4-Triazin(4H)-5-One. Protection of Metals and Physical Chemistry of Surfaces 2017, 53 (6), 1150-1160.
- Prajila, M.; Joseph, A. Inhibition of mild steel corrosion in hydrochloric using three different 1,2,4-triazole Schiff's bases: A comparative study of electrochemical, theoretical and spectroscopic results. Journal of Molecular Liquids 2017, 241, 1-8.
- John, S.; Joseph, A.; Sajini, T.; James Jose, A. Corrosion inhibition properties of 1,2,4-Hetrocyclic Systems: Electrochemical, theoretical and Monte Carlo simulation studies. Egyptian Journal of Petroleum 2017, 26 (3), 721-732.
- Prajila, M.; Thomas, A.; Joseph, A. Development of Passive Film and Enhancement of Corrosion Protection of Mild Steel Exposed in Hydrochloric Acid due to the Adsorption of Water Dispersed 4-[(E)-(3,4-Dihydroxybenzylidene)amino]-6-Methyl-3-Mercapto-1,2,4-Triazin-5(4H)-one(DHMMT). Journal of Bio- and Tribo-Corrosion 2017, 3 (2), 16.
- Ramya, K.; Anupama, K. K.; Shainy, K. M.; Joseph, A. Corrosion protection of mild steel in hydrochloric acid solution through the synergistic of alkylbenzimidazoles and semicarbazide pair – Electroanalytical and computational studies. Egyptian Journal of Petroleum 2017, 26 (2), 421-437.
- Kuruvilla, M.; Prasad, A. R.; John, S.; Joseph, A. Enhanced Inhibition of the Corrosion of Metallic Copper Exposed in Sulphuric Acid Through the Synergistic Interaction of Cysteine and Alanine: Electrochemical and Computational Studies. Journal of Bio- and Tribo-Corrosion 2016, 3 (1), 5.
- Mohan, R.; Anupama, K. K.; Joseph, A. Effect of Methyl, Ethyl, and Propyl Substitution on Benzimidazole for the Protection of Copper Metal in Nitric Acid: Theoretical and Electrochemical Screening Studies. Journal of Bio- and Tribo-Corrosion 2016, 3 (1), 2.
- Prajila, M.; Joseph, A. Controlling the Rate of Dissolution of Mild Steel in Sulfuric Acid Through the Adsorption and Inhibition Characteristics of (4-(4-Hydroxybenzylideneamino)-4H-1,2,4-Triazole-3,5-diyl)dimethanol (HATD). Journal of Bio- and Tribo-Corrosion 2017, 3 (1), 10.
- John, S.; Joseph, A.; Kuruvilla, M.; T, S. Inhibition of Mild Steel Corrosion using Chitosan–Polyvinyl Alcohol Nanocomposite Films by Sol–Gel Method: An Environmentally Friendly Approach. Journal of Bio- and Tribo-Corrosion 2016, 3 (1), 3.
- Anupama, K. K.; Ramya, K.; Joseph, A. Electrochemical measurements and theoretical calculations on the inhibitive interaction of Plectranthus amboinicus leaf extract with mild steel in hydrochloric acid. Measurement 2017, 95, 297-305.
- Prasad, A. R.; Joseph, A. Synthesis, characterization and investigation of methyl orange dye removal from aqueous solutions using waterborne poly vinyl pyrrolidone (PVP) stabilized poly aniline (PANI) core–shell nanoparticles. RSC advances 2017, 7 (34), 20960-20968.

2016

- Unni, K. N.; Priji, P.; Sajith, S.; Faisal, P. A.; Shainy, K. M.; Joseph, A.; Babu, M. G.; Benjamin, S. Type 2 pyoverdine from Pseudomonas aeruginosa strain BUP2 as turn-off biosensor for the rapid detection of iron and copper ions in contaminated water. Journal of Microbiology and Biotechnology 2016.
- Kuruvilla, M.; John, S.; Joseph, A. Electroanalytical Studies on the Interaction Of l-Serine-Based Schiff Base, HHDMP, with Copper in Sulphuric Acid. Journal of Bio- and Tribo-Corrosion 2016, 2 (3), 19.
- Shainy, K. M.; Rugmini Ammal, P.; Unni, K. N.; Benjamin, S.; Joseph, A. Surface Interaction and Corrosion Inhibition of Mild Steel in Hydrochloric Acid Using Pyoverdine, an Eco-Friendly Bio-molecule. Journal of Bio- and Tribo-Corrosion 2016, 2 (3), 20.
- Mohan, R.; Ramya, K.; Anupama, K. K.; Joseph, A. Density functional treatment and electro analytical measurements of liquid phase interaction of 2-ethylbenzimidazole (EBI) and ethyl (2-ethylbenzimidazolyl) acetate (EEBA) on mild steel in hydrochloric acid. Journal of Molecular Liquids 2016, 220, 707-717.
- Anupama, K. K.; Ramya, K.; Joseph, A. Electrochemical and computational aspects of surface interaction and corrosion inhibition of mild steel in hydrochloric acid by Phyllanthus amarus leaf extract (PAE). Journal of Molecular Liquids 2016, 216, 146-155.
- John, S.; Jeevana, R.; Aravindakshan, K.; Joseph, A. Corrosion inhibition of mild steel by N (4)-substituted thiosemicarbazone in hydrochloric acid media. Egypt. J. Pertol 2016.
- K, R.; K.K, A.; K.M, S.; Joseph, A. Synergistic and hydrogen bonded interaction of alkyl benzimadazoles and urea pair on mild steel in hydrochloric acid: Adsorption, electroanalytical and theoretical studies. Journal of the Taiwan Institute of Chemical Engineers 2016, 58, 517-527.
- Shainy, K.; Joseph, A. The Chemist. 2016

2015

- Anupama, K. K.; Ramya, K.; Shainy, K. M.; Joseph, A. Adsorption and electrochemical studies of Pimenta dioica leaf extracts as corrosion inhibitor for mild steel in hydrochloric acid. Materials Chemistry and Physics 2015, 167, 28-41.
- Joseph, A.; Mohan, R. Electroanalytical and computational studies on the corrosion inhibition behavior of ethyl (2-methylbenzimidazolyl) acetate (EMBA) on mild steel in hydrochloric acid. Research on Chemical Intermediates 2015, 41 (7), 4795-4823.
- K, R.; Joseph, A. Synergistic effects and hydrogen bonded interaction of alkyl benzimadazoles and thiourea pair on mild steel in hydrochloric acid. Journal of the Taiwan Institute of Chemical Engineers 2015, 52, 127-139.
- John, S.; Joseph, A.; Jose, A. J.; Narayana, B. Enhancement of corrosion protection of mild steel by chitosan/ZnO nanoparticle composite membranes. Progress in Organic Coatings 2015, 84, 28-34.
- Ramya, K.; Joseph, A. Dependence of temperature on the corrosion protection properties of vanillin and its derivative, HMATD, towards copper in nitric acid: theoretical and electroanalytical studies. Research on Chemical Intermediates 2015, 41 (2), 1053-1077.
- Ramya, K.; Mohan, R.; Anupama, K. K.; Joseph, A. Electrochemical and theoretical studies on the synergistic interaction and corrosion inhibition of alkyl benzimidazoles and thiosemicarbazide pair on mild steel in hydrochloric acid. Materials Chemistry and Physics 2015, 149-150, 632-647.

2014

- Ramya, K.; Mohan, R.; Joseph, A. Adsorption and electrochemical studies on the synergistic interaction of alkyl benzimadazoles and ethylene thiourea pair on mild steel in hydrochloric acid. Journal of the Taiwan Institute of Chemical Engineers 2014, 45 (6), 3021-3032.
- Ramya, K.; Mohan, R.; Joseph, A. Interaction of Benzimidazoles and Benzotriazole: Its Corrosion Protection Properties on Mild Steel in Hydrochloric Acid. Journal of Materials Engineering and Performance 2014, 23 (11), 4089-4101.

2013

- Kuruvilla, M.; John, S.; Joseph, A. Electrochemical studies on the interaction of l-cysteine with metallic copper in sulfuric acid. Research on Chemical Intermediates 2013, 39 (8), 3531-3543.
- John, S.; Joseph, A. Quantum chemical and electrochemical studies on the corrosion inhibition of aluminium in 1 N HNO3 using 1,2,4-triazine. Materials and Corrosion 2013, 64 (7), 625-632.
- John, S.; Kuruvilla, M.; Joseph, A. Surface morphological and impedance spectroscopic studies on the interaction of polyethylene glycol (PEG) and polyvinyl pyrrolidone (PVP) with mild steel in acid solutions. Research on Chemical Intermediates 2013, 39 (3), 1169-1182.
- John, S.; Joseph, A. Corrosion Protection Properties of 4-[(E)-[(2,4-Dihydroxy phenyl)methylidene] amino]-6-methyl-3-sulfanylidene-2,3,4,5-tetrahydro-1,2,4-triazin-5-one [DMSTT] Toward Mild Steel in Sulfuric Acid. Journal of Materials Engineering and Performance 2013, 22 (2), 483-491.
- John, S.; Kuruvilla, M.; Joseph, A. Adsorption and inhibition effect of methyl carbamate on copper metal in 1 N HNO3: an experimental and theoretical study. RSC Advances 2013, 3 (23), 8929-8938, 10.1039/C3RA40922H.

2012

- John, S.; Joseph, A. Electroanalytical and Theoretical Investigations of the Corrosion Inhibition Behavior of Bis-1,2,4-Triazole Precursors EBATTand BBATT on Mild Steel in 0.1 N HNO3. Industrial & Engineering Chemistry Research 2012, 51 (51), 16633-16642.

- John, S.; Joseph, A. Electroanalytical studies of the corrosion-protection properties of 4-amino-4H-1,2,4-triazole-3,5-dimethanol (ATD) on mild steel in 0.5 N sulfuric acid. Research on Chemical Intermediates 2012, 38 (7), 1359-1373.
- John, S.; Joseph, A. Adsorption, Surface Morphological, and Electrochemical Studies on the Inhibitive Properties of 4-(N, N-dimethylaminobenzilidine)-3-mercapto-6-methyl-1, 2, 4-triazin (4H)-5-one (DAMMT) on Mild Steel in 0.5 N H2SO4. Journal of Dispersion Science and Technology 2012, 33 (8), 1097-1105.
- Joseph, B.; Prajila, M.; Joseph, A. Inhibition of Mild Steel Corrosion in 1 M Hydrochloric Acid Using (E)-(4-(4-methoxybenzylideneamino)-4H-1,2,4-triazole-3,5-diyl) Dimethanol (MBATD). Journal of Dispersion Science and Technology 2012, 33 (5), 739-749.
- John, S.; Joseph, A. Electro analytical, surface morphological and theoretical studies on the corrosion inhibition behavior of different 1,2,4-triazole precursors on mild steel in 1M hydrochloric acid. Materials Chemistry and Physics 2012, 133 (2), 1083-1091.
- Forouzandeh, F.; Banham, D.; Feng, F.; Joseph, A.; Li, X.; Ye, S.; Birss, V. Improving the Corrosion Resistance of PEMFC Carbon Supports by PhF5 Surface Functionalization. ECS Meeting Abstracts 2012, MA2012-01 (2), 11.
- John, S.; Joseph, A. Effective inhibition of mild steel corrosion in 1 M hydrochloric acid using substituted triazines: an experimental and theoretical study. RSC advances 2012, 2 (26), 9944-9951
- John, S.; Joseph, A. Theoretical and electrochemical studies on the effect of substitution on 1, 2, 4-triazole towards mild steel corrosion inhibition in hydrochloric acid. 2012.

2011

- John, S.; Joy, J.; Prajila, M.; Joseph, A. Electrochemical, quantum chemical, and molecular dynamics studies on the interaction of 4-amino-4H,3,5-di(methoxy)-1,2,4-triazole (ATD), BATD, and DBATD on copper metal in 1N H2SO4. Materials and Corrosion 2011, 62 (11), 1031-1041
- John, S. A. M.; Ali, K. M.; Joseph, A. Electrochemical, surface analytical and quantum chemical studies on Schiff bases of 4-amino-4H-1, 2, 4-triazole-3,5-dimethanol (ATD) in corrosion protection of aluminium in 1N HNO3. Bulletin of Materials Science 2011, 34 (6), 1245-1256.
- Joseph, B.; Joseph, A. Inhibition of copper corrosion in 1 M nitric acid–electro analytical and theoretical study with (E)-(4-(4-Methoxybenzylideneamino)-4H-1, 2, 4-triazole-3, 5-diyl) dimethanol (MBATD). Portugaliae Electrochimica Acta 2011, 29 (4), 253-271.
- Joseph, B.; John, S.; Prajila, M.; Joseph, A. Spectrophotometric determination of osmium (VIII) in trace amounts using ethylene thiourea (ETU) as chromogenic reagent. 2011.

2010

- John, S.; Joseph, B.; Balakrishnan, K. V.; Aravindakshan, K. K.; Joseph, A. Electrochemical and quantum chemical study of 4-[(E)-[(2,4-dihydroxy phenyl) methylidine] amino]-6-methyl-3-sulphanylidine-2,3,4,5-tetra hydro-1,2,4-triazin-5-one [DMSTT]. Materials Chemistry and Physics 2010, 123 (1), 218-224.
- John, S.; Joseph, B.; Aravindakshan, K. K.; Joseph, A. Inhibition of mild steel corrosion in 1M hydrochloric acid by 4-(N,N-dimethylaminobenzilidine)-3-mercapto-6-methyl-1,2,4-triazin(4H)-5-one (DAMMT). Materials Chemistry and Physics 2010, 122 (2), 374-379.
- Joseph, B.; John, S.; Joseph, A.; Narayana, B. Imidazolidine-2-thione as corrosion inhibitor for mild steel in hydrochloric acid. 2010.
- Joseph, B.; John, S.; Aravindakshan, K.; Joseph, A. Inhibition of mild steel corrosion in 1 M hydrochloric acid using (E)-4-(2-chlorobenzylideneamino)-6-methyl-3-thioxo-3, 4-dihydro-1, 2, 4-triazin-5 (2H)-one (CBMTDT). 2010.