

Dr. K. N. MOHANA
Professor
Department of Studies in Chemistry
Manasagangotri
University of Mysore, Mysuru – 570 006
Karnataka, INDIA



ACADEMIC AND RESEARCH BACKGROUND

Dr. K. N. Mohana, Professor of Chemistry (specialized in physical chemistry), at the department of Studies in Chemistry, University of Mysore, Manasagangotri, Mysuru, has more than 34 years of teaching experience both at post graduate and undergraduate levels, teaching chemical Thermodynamics, Chemical Kinetics, Electrochemistry, Photochemistry, Radiation Chemistry, Nuclear Chemistry and Molecular spectroscopy. Actively engaged in research since 1993 and developed several graphene based anti-corrosion coating materials. Many of the developed graphene oxide and multi-walled carbon nanotube based synthetic and bio-polymer composites exhibited superior anti-corrosion and barrier properties for mild steel in highly corrosive environment. Also, fabricated graphene oxide and carbon nano ribbon based electrochemical sensors for the determination of bioactive compounds. Designed and synthesized several organic compounds for the corrosion inhibition of mild steel. Completed one minor and one major research projects funded by the University of Mysore, under Institution of Excellence. Successfully guided 16 students for their Ph. D. degree in chemistry, 3 students of their M. Phil. research work, and more than 120 students for their M. Sc. degree dissertation work in the above areas of research. At present 7 students are working for their Ph. D. degree programme. Published more than 156 research papers in peer reviewed international and national journals of repute, and presented the research findings in more than 45 national and international conferences. Member of many scientific and professional bodies such as Indian Science Congress Association (ISCA), Indian Association of Nuclear Chemists and Allied Scientists (IANCAS), and so on. *A patent on his credit entitled “Novel study on surface dynamics with passivation as an isotherm on metal surface – theoretical and experimental approach” by protection of metal centre, Netherlands.* Organized many national and international conferences under various capacities. Served as the chairman and member of board of studies and board of examinations of several Universities, Autonomous institutions within and outside the state. He is a member of syllabus framing committee for NEP (UG, Physical chemistry). Delivered several invited lectures at the conferences/symposia/workshops/refresher courses. Authored books entitled *“Advanced physical chemistry experiments – Volume – I and II.*

PERSONAL DETAILS

Date of birth: July 20th, 1966

Marital status: Married



+91-94496 27573



+91-821-2419654 (Department)



drknmohana@gmail.com



[linkedin.com/in/kn-mohana-4bb032213](https://www.linkedin.com/in/kn-mohana-4bb032213)



B. Sc. (*UOM-1987); M.Sc. (*UOM-1989); Ph. D. (*UOM-1998) *UOM – University of Mysore

Title of the thesis: “Physicochemical Aspects of Bromamine-B”

Designation: PROFESSOR

TEACHING EXPERIENCE



Teaching since 1989: Teaching M. Sc. Chemistry, M. Sc. Organic Chemistry, and M. Phil., Chemistry. Teaching Chemical Thermodynamics, Chemical Kinetics, Electrochemistry, Photochemistry, Nuclear Chemistry, Radiation Chemistry and Molecular Spectroscopy for M. Sc. and M. Phil. Courses.

RESEARCH EXPERIENCE: Actively engaged in Research since 1993



RESEARCH AREA

- Development of nanohybrids / nanocomposites for anti-corrosion and electrochemical applications.
- Design and synthesis of organic compounds for corrosion inhibition of metals.
- Kinetics and mechanistic study of some biologically active / pharmaceutical compounds.

PROJECTS COMPLETED / ON-GOING

1. Minor research project entitled “Mechanistic studies on the oxidation of some biologically active compounds” funded by University of Mysore, Mysore during the year 2006 - 2008.
2. Major research project entitled “Phytochemical and inhibitive performance studies of some plants of Western Ghats of Karnataka on the corrosion of mild carbon steel in industrial water medium” funded by University of Mysore, Institution of Excellence under Centre of Excellence in Biodiversity, Bio- prospecting and Sustainable Development, during the year 2010-2013.
3. Coordinator for DST-FIST-2023, DST funded Rs. 100 Lakhs for the Department of Studies in Chemistry, Manasagangotri, Mysore, Mysuru – 570 006.

RESEARCH PUBLICATIONS: 156

RESEARCH PAPERS COMMUNICATED FOR PUBLICATION: 04

PAPERS PRESENTED AT CONFERENCES / SYMPOSIA: 38

NUMBER OF Ph.D. STUDENTS GUIDED SUCCESSFULLY: 16

NUMBER OF Ph. D. STUDENTS WORKING: 07

NUMBER OF M. Phil. STUDENTS GUIDED SUCCESSFULLY: 03

GOOGLE SCHOLAR CITATIONS: 2633

h-INDEX: 27; i10-index: 64

DETAILS OF Ph. D. DEGREE SUCCESSFULLY GUIDED

1. N. Prasad - Awarded Ph. D. in 2008, "**Oxidation of bio-active compounds with sodium N-haloaryl sulphonamides: A kinetic and mechanistic study**". Uni. Notification No. Ex. 9.2/Ph. D/NP/2005-06 dated 25-01-2008.
2. Badea Abdullah Mohammed Mahyoub - Awarded Ph. D. in 2009, "**Corrosion and corrosion inhibition behaviour studies on low and medium carbon steel pipes in industrial water**". Uni. Notification No. Ex. 9.2/Ph. D/BA/2006-07 dated 08-10-2009.
3. P. M. Ramadas Bhandarkar - Awarded Ph. D. in 2010, "**Oxidation of certain drugs of pharmaceutical interest with N-bromosuccinimide: A kinetic and mechanistic study**". Uni. Notification No. Ex. 9.2/Ph. D/PMRB/2005-06 dated 01-03-2010.
4. L. Mallesha - Awarded Ph. D. in 2011, "**Synthesis, characterization, crystal structure and biological studies of some organic compounds of pharmaceutical importance**". Uni. Notification No. Ex. 9.2/Ph. D/LM/2007-08 dated 30-07-2011.
5. K. P. Harish - Awarded Ph. D. in 2014. "**Synthesis, characterization and biological screening of new heterocycles containing oxadiazole, thiadiazole, Indazole, pyrazine and pyridine groups**". Uni. Notification No. Ex. 9.2/Ph. D/KPH/2008-09 dated 11-03-2014.
6. S. S. Shivakumar - Awarded Ph. D. in 2014, "**Corrosion inhibitors behaviour studies on mild steel in industrial water and acid medium**". Uni. Notification No. Ex. 9.2/Ph. D/SSS/2008-09 dated 15-03-2014.
7. C. B. Pradeep Kumar - Awarded Ph. D. in 2014, "**Antioxidant activities of new thiazole, oxadiazole, piperidine derivatives and certain plants extracts, and their anticorrosion properties on mild steel**". Uni. Notification No. Ex. 9.2/Ph. D/CBP/2011-12 dated 26-05-2014.
8. B. N. Prasanna Kumar - Awarded Ph. D. in 2014, "**Synthesis and biological screening of new Pyrimidine, oxadiazole and triazole derivatives**". Uni. Notification No. Ex. 9.2/Ph. D/BNP/2009-10 dated 30-08-2014.
9. D. M. Gurudatt - Awarded Ph. D. in 2014, "**Synthesis of some novel nitrogen containing heterocycles and study of their antioxidant activity, and corrosion inhibition performance on mild steel**". Uni. Notification No. Ex. 9.2/Ph. D/GDM/2009-10 dated 05-12-2014.
10. M. P. Chakravarthy - Awarded Ph. D. in 2014, "**Synthesis and corrosion inhibition study of isoniazide, nicotinamide and dapsone derivatives for mild steel in acid media**". Uni. Notification No. Ex. 9.2/Ph. D/CMP/2010-11 dated 25-02-2015.
11. T. K. Chaitra – Awarded Ph. D. in 2017, "**Synthesis and Corrosion Inhibition Behaviour of Some New Heterocyclic Derivatives on Mild Steel in Acid Media**" Uni. Notification No. Ex. 9.9/Ph. D/CTK/2012-13 dated 04-07-2017.

12. Rajitha K – Awarded Ph.D. in 2020, “**Synthesis of carbon based nanomaterials and their anti-corrosion properties on mild steel**” Uni. Notification No. Ex. 9.4/Ph. D./RK/2015-16 dated 15-12-2020.
13. Mahesh Bhaskar Hegde - Awarded Ph.D. in 2020, “**Synthesis of graphene based nanomaterials and their selected applications**” Uni. Notification No. Ex. 9.4/Ph. D./MBH/2015-16 dated 15-12-2020.
14. Saurav Ramesh Nayak - Awarded Ph.D. in 2020, “**Modification of carbon based nanomaterials and their anti-corrosion and photocatalytic applications**” Uni. Notification No. Ex. 9.4/Ph. D./SRN/2014-15 dated 15-12-2020.
15. Kumara Swamy N. - Awarded Ph.D. in 2022, “**Synthesis of carbon based nanoribbons and their applications**” Uni. Notification No. Ex. 9.4/Ph. D./KSN/2014-15 dated 26-07-2022.
16. A. M. Madhusudhana - Awarded Ph.D. in 2023, “**Synthesis of carbon based nanomaterials and their electrochemical applications**” Uni. Notification No. Ex. 9.2/Ph. D./MAM/2016-17 dated 11-01-2023.

DETAILS OF M. Phil. STUDENTS

1. **K. R. Ramya** - Awarded M. Phil. in 2007, “**Kinetic and mechanistic studies on ruthenium (III)-catalyzed oxidation of bio-active compounds with N-bromosuccinimide**”.
2. **H. N. Deepakumari** - Awarded M. Phil. in 2009, “**Corrosion and corrosion inhibition mechanism of imatinib mesylate on mild carbon steel in sulphuric acid medium**”.
3. **Sameer Ahmed Bhat** - Awarded M. Phil. in 2014, “**Adsorption and corrosion inhibition characteristics of some triazole Schiff bases on mild steel in hydrochloric acid solution**”.

RESEARCH PAPERS PUBLISHED IN SOME IMPORTANT JOURNALS

1. Functionalized graphene oxide-epoxy phenolic novolac nanocomposite: An efficient anticorrosion coating on mild steel in saline medium, **Advanced Composites and Hybrid Materials**, (2020) **3(2)**, 141–155. (Impact Factor: 11.806).
2. Effect of temperature and fluid velocity on corrosion mechanism of low carbon steel in presence of 2-hydrazino-4,7-dimethylbenzothiazole in industrial water medium, **Corrosion Science**, **51** (2009) 2231–2241. (Impact Factor: 7.72).
3. Effect of sodium nitrite–borax blend on the corrosion rate of low carbon steel in industrial water medium, **Corrosion Science**, **50** (2008) 2939–2947. (Impact Factor: 7.72).
4. Synthesis of novel 1-[5-(4-methoxy-phenyl)-[1, 3, 4] oxadiazol-2-yl]-piperazine derivatives and evaluation of their in vivo anticonvulsant activity, **European Journal of Medicinal Chemistry** (2013) **65**, 276 – 283. (Impact Factor: 6.514)
5. Thermodynamic, electrochemical and quantum chemical evaluation of some triazole Schiff bases as mild steel corrosion inhibitors in acid media, **Journal of Molecular Liquids**, **211** (2015) 1026–1038. (Impact Factor: 6.165).

6. Fluorine Substituted Thiomethyl Pyrimidine Derivatives as Efficient Inhibitors for Mild Steel Corrosion in Hydrochloric Acid Solution: Thermodynamic, Electrochemical and DFT Studies, *Journal of Molecular Liquids*, (2020) **311**, 113311. (Impact Factor: 6.165).
7. Inhibition activity of new thiazole hydrazones towards mild steel corrosion in acid media by thermodynamic, electrochemical and quantum chemical methods, *Journal of the Taiwan Institute of Chemical Engineers*, (2016), **67**, 521 – 531. (Impact Factor: 5.477).
8. Corrosion inhibition efficiency and adsorption characteristics of some Schiff bases at mild steel/hydrochloric acid interface, *Journal of the Taiwan Institute of Chemical Engineers*, (2014) **45**, 1031–1042. (Impact Factor: 5.477).
9. Functionalized multi-walled carbon nanotube/polyindole incorporated epoxy: An effective anti-corrosion coating material for mild steel, *Journal of Alloys and Compounds*, (2020). (Impact Factor: 6.371).
10. Fabrication of ZnO/rGO and ZnO/MWCNT nanohybrids to reinforce the anticorrosion performance of polyurethane coating, *FlatChem*, (2020) **24**, 100208. (Impact Factor: 5.57).
11. Reduced Graphene Oxide-Epoxidized Linseed Oil Nanocomposite: A Highly Efficient Bio-based Anti-Corrosion Coating material for Mild Steel, *Progress in Organic Coatings*, (2021) **159**,106399. (Impact Factor: 6.206).
12. Development of Al₂O₃.ZnO/GO-phenolic formaldehyde amine derivative nanocomposite: A new hybrid anticorrosion coating material for mild steel, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2020) **601**,125036. (Impact Factor:5.518)
13. Evaluation of anti-corrosion performance of modified gelatin-graphene oxide nanocomposite dispersed in epoxy coating on mild steel in saline media, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2020), **587**, 124341. (Impact Factor: 5.518).
14. Corrosion protection performance of functionalized graphene oxide nanocomposite coating on mild steel, *Surfaces and Interfaces*, (2018), **11**, 63 – 73. (Impact Factor: 6.137).
15. Protection of Mild Steel Corrosion by three New Quinazoline Derivatives: Experimental and DFT Studies, *Surfaces and Interfaces*, (2020) **18**, 100446. (Impact Factor: 6.137)
16. An efficient and eco-friendly anti-corrosive system based on Beeswax- Graphene oxide nanocomposites on mild steel in saline medium, *Surfaces and Interfaces*, (2020), **18**,100393. (Impact Factor: 6.137)
17. Synthesis of New Pyridine Based 1,3,4-Oxadiazole Derivatives and their Corrosion Inhibition Performance on Mild Steel in 0.5 M Hydrochloric Acid, *Industrial and Engineering Chemistry Research*, (2014) **53**, 2092–2105. (Impact Factor: 3. 72).
18. Centella asiatica extracts as green corrosion inhibitor for mild steel in 0.5 M sulphuric acid medium, *Advances in Applied Science Research*, (2012) **3(5)**, 3097-3106. (Impact Factor: 3.52).
19. Application of modified graphene oxide – Polycaprolactone nanocomposite coating for corrosion control of mild steel in saline medium, *Materials Chemistry and Physics*, **241** (2020) 122050. (Impact Factor: 4.778).
20. Synthesis of graphene oxide-based nanofillers and their influence on the anticorrosion performance of epoxy coating in saline medium, *Diamond and Related Materials*, **108** (2020) 107974. (Impact Factor: 3.806).

21. Synthesis and antiproliferative activity of some new fluorinated Schiff bases derived from 1,2,4-triazoles, *Journal of Fluorine Chemistry*, (2013), **156**, 15–20. **(Impact Factor: 2.05)**.
22. Garcinia gummigutta vegetable oil-graphene oxide nano-composite: An efficient and eco-friendly material for corrosion prevention of mild steel in saline medium, *Journal of Polymers and the Environment*, (2020) **28**, 483. **(Impact Factor: 3.667)**.
23. Anticorrosion performance of 4- fluoro phenol functionalized graphene oxide nanocomposite coating on mild steel, *Journal of Fluorine Chemistry*, (2019), **228**, 109392. **(Impact Factor: 2.33)**.
24. Fabrication of graphene nanoribbon-based enzyme-free electrochemical sensor for the sensitive and selective analysis of rutin in tablets, *J. Applied Electrochemistry*, (2021) **51**, 1047–1057. **(Impact Factor: 2.8)**.
25. A sustainable and eco-friendly polymer based graphene oxide nanocomposite anti-corrosion coating on mild steel, *ChemistrySelect*, (2020), **5(4)**, 1506-1515. **(Impact Factor: 2.109)**.
26. Corrosion Mechanism of Low-Carbon Steel in Industrial Water and Adsorption Thermodynamics in the Presence of Some Plant Extracts, *Journal of Materials Engineering and Performance*, (2009) **18**, 1264 – 1271. **(Impact Factor: 1.889)**.

MOST CITED RESEARCH PAPERS

1. Effect of temperature and fluid velocity on corrosion mechanism of low carbon steel in presence of 2-hydrazino-4,7-dimethylbenzothiazole in industrial water medium, *Corrosion Science*, **51** (2009) 2231–2241. **(Impact Factor: 7.72)**.
27. Thermodynamic, electrochemical and quantum chemical evaluation of some triazole Schiff bases as mild steel corrosion inhibitors in acid media, *Journal of Molecular Liquids*, **211** (2015) 1026–1038. **(Impact Factor: 6.165)**.
28. Functionalized graphene oxide-epoxy phenolic novolac nanocomposite: An efficient anticorrosion coating on mild steel in saline medium, *Advanced Composites and Hybrid Materials*, (2020) **3(2)**, 141–155. **(Impact Factor: 11.806)**.

PAPERS PRESENTED IN CONFERENCES / SYMPOSIA

1. X-Ray Debye Temperature in a Series of Organic Haloamines. Presented (in absencia) at the 212th American Chemical Society National Meeting held at ORLANDO, FLORIDA, USA from Aug. 25 to 29, 1996 (PHYSICAL - Paper No. 96).
2. Conductometric study of the Interaction of Bromamine-B with Siliver(I), Mercury(II), Thorium(IV) and Zirconium(IV) Solutions. Presented at the 32nd Annual Convention of Chemists, held at Jaipur, India, from Dec. 26 to 29, 1995 (PHYSICAL - 92).
3. Kinetics and Mechanism of Oxidation of Cyclopentanone and Cyclohexanone by Bromamine-B in Perchloric Acid Medium. Presented at the 33rd Annual Convention of Chemists, held at Coimbatore, India from Dec. 26 to 29, 1996 (PHYSICAL - 20).

4. Thermal and Photochemical Decomposition of Aqueous Bromamine-B. Presented at the 33rd Annual Convention of Chemists, held at Coimbatore, India from Dec. 26 to 29, 1996 (PHYSICAL - 24).
5. Silver salt of N-Bromo-4-methyl benzenesulphonamide as a new oxidimetric reagent. Presented at the 19th Indian Council of Chemists, held at Shimoga, India from Dec. 22 to 24, 2000 (AO-23).
6. Determination of Quantum yield for the photolysis of aqueous solution of chloramines-B. Presented at the 37th Annual Convention of Chemistry held at Gurukula Kangri University, Harwar, U, P, India, from Nov. 15 – 18, 2000 (PHYSICAL OP 46).
7. The O-Na Interaction and Octahedral Geometry around Sodium Moiety in Sodium salt of N-bromo-4-methyl benzenesulphonamide. Presented at the 37th Annual Convention of Chemistry held at Gurukula Kangri University, Harwar, U. P., India, from Nov. 15 – 18, 2000 (PHYSICAL OP 29).
8. Crystal structure of 2-N-butyl-4-chloro-1[(2'-cyanobiphenyl-4-yl) methyl]-5-hydroxymethyl imidazole. Presented (in absencia) at the IV meeting of Asian Crystallographic Association held at Indian Institute of Science, Bangalore, India from Nov. 28 to 21, 2001 (A4-32).
9. 20th Conference of Indian Council of Chemists held at the Department of Studies in Chemistry, Manasagangotri, Mysore, from Dec. 22 to 24, 2001.
10. 90th Indian Science Congress held at Bangalore from Jan. 3 to 6, 2003.
11. National seminar on Role of Chemistry in emerging areas of applied sciences held at S.V. University, Tirupathi, from March 15th to 17th, 2004.
12. International conference on water and health, WAH 2005, held at Jayachamarajendra College of Engineering, Mysore, January, 22-23, 2005. Title: Facile Spectrophotometric determination of trace amount of nitrites in water and soil samples, S2-pp110, Page.No.175.
13. National Symposium on Bioorganic and Medicinal Chemistry-NSBM 2005 held at Department of Studies in Chemistry, Manasagangotri, Mysuru from October 5-7 2005. Title: Oxidation of 2-phenylethylamine with sodium N-chlorobenzenesulphonamide using ruthenium (III) chloride as catalyst in hydrochloric acid solution: A kinetic and mechanistic study. PP40, page No.656.
14. National conference on Chemical Sciences for Industry and Society held at Department of Industrial Chemistry, Kuvempu University, Shankaraghatta-577 451 from January 6-8, 2006. Title: Oxidation of 2-phenylethylamine with N-bromosuccinimide in acid and alkaline media: A kinetic and mechanistic study. PP50, page No.35.
15. International conference on Materials for the Millennium held at Department of Applied Chemistry, Cochin University of Science and Technology, Kochi, India from March 1-3, 2007. Title: Ruthenium (III)-catalyzed oxidation of vitamin B6 with sodium N-chlorobenzenesulfonamide in hydrochloric acid medium: A kinetic and mechanistic approach. OP-7, page No.30.
16. Three days International conference on Frontiers in Chemical Research (ICFCR-2008) held at Department of Chemistry, Mangalore University, Mangalagangotri, Mangalore, India from December 29-31, 2008. Title: Oxidative cleavage of salbutamol with N-bromosuccinimide in acid and alkaline media: A kinetic and Mechanistic Study. PP- 43, page No.73.

17. Three days International conference on Frontiers in Chemical Research (ICFCR-2008) held at Department of Chemistry, Mangalore University, Mangalagangothri, Mangalore, India from December 29-31, 2008. Title: Corrosion Mechanism of low carbon steel in industrial water and adsorption thermodynamics in presence of some plant extracts. PP-89, page No.104.
18. Two days National Conference on Chemistry and Molecular Nanotechnology for Industry and Society (NCMNIS-2009) held at Department of Industrial Chemistry, Kuvempu University, Shimoga from 16-17th January, 2009. Title: Preparation and Crystal Structure analysis of 2',3'-Di-O-Acetyl-5'-Deoxy-5-fluorocytidine. PP (OC)-06, page No. 49.
19. Two days national conference on the emerging areas in chemistry held at Department of chemistry, Manasagangothri, University of Mysore, Mysore, from July-August, 2009. Title: (1). Novel study of passivation as an isotherm on metals surface: theoretical and experimental approach. PP-37, page No.60. (2).Oxidative Cleavage of Gabapentin with *N*-bromosuccinimide in acid medium: A kinetic and mechanistic study. PP-48, page No.66. (3).Synthesis and antimicrobial activity of charge-transfer complexes of *N*-(5-Amino-2-methylphenyl)-4-(3-pyridyl)-2-pyrimidinamine with some acceptors. PP-93, page No.92.
20. The 238th ACS national meeting held at Washington, DC, USA, from August 16-20, 2009. Title: (1). Unusual hydrogen bonding effects in biomolecules, PP INOR-486-487, (presented inabsencia). (2). Intermolecularly associated carboxylic acid dimers in the supermolecular assembly of 1, 4-benzodioxane 2-carboxylic acid. PP INOR-137, (presented inabsencia).
21. Two days international conference on current trends in chemistry and biochemistry held at Department of Chemistry and Biochemistry, Central college campus, Bangalore University, Bangalore from December 18-19, 2009. Title: Mechanistic investigation of oxidation of metronidazole and tinidazole with *N*-bromosuccinimide in acid medium: A kinetic approach. PP-295, page No.260.
22. Two days national conference on Materials: Nano to macro dimensionality and their varied applications held at Department of chemistry, Manonmanian Sundaranar University, Tirunelveli, Tamil Nadu from January 28-29, 2010. Title: Synthesis, Characterization and *In Vitro* Antimicrobial Activity of Novel 2-Methyl-5-nitroaniline Derivatives. PP-36, page No.68.
23. Two days national seminar on recent research trends in synthetic organic and natural products chemistry held at Department of Chemistry, Sri Venkateswara University, Tirupati from March 29-30, 2010. Title: Synthesis and antioxidant activity of novel 1-(1, 4-benzodioxane-2-carbonyl)piperazine derivatives. PP-74, page No.81.
24. Two days National conference on Social relevance to chemical sciences (SRCS-2011) held at the department of chemistry, Kuvempu University, Shankaraghatta, Shimoga District from March 26 – 27, 2011. Title: Corrosion inhibition and adsorption properties of syzygium cumini leaves extracts on mild steel in acid medium. PP-90, Page No. 44.
25. Participated in the one day work shop for revising and designing syllabi (UG) organised by the department of chemistry, JSS College of Arts, Commerce and Science, Mysore on December 31st 2013.
26. Participated in the one day work shop for formulation of syllabus for PG chemistry organised by the department of chemistry, JSS College for women, Mysore on January 23rd 2013.

27. Two days International symposium on "Chemical biology-Drug discovery programme" held at the University of Mysore, Mysore from January 9 – 10, 2014. Title: Synthesis and antioxidant activity of 2-amino-5-methylthiazol derivatives containing 1,3,4-oxadiazole-2-thiol moiety. PP-24, page No. 22.
28. Two days National conference on "Recent Trends in Chemical Research" held at Sri Jayachamarajendra College of Engineering, Mysore from January 3 – 4, 2014. Title: Influence of some synthesized Pyrimidine derivatives on corrosion inhibition of mild steel in hydrochloric acid medium. PP-01, Page No. 49 and "Synthesis of Pyrimidine base piperidine sulphonamides as new class of anticorrosive agents: Chemical and electrochemical studies" PP-24, page No. 66.
29. Two day UGC sponsored National Conference on "Supramolecules and Nanomaterials" held at St. Phil. College, Mysore from August 22 – 23, 2014. Title: Synthesis of some new 1, 2, 4-triazole derivatives and their anticorrosion properties on mild steel in hydrochloric acid medium.
30. Two day UGC sponsored National Conference on "Recent Trends in Bioorganic Chemistry and its Applications to Society" RTBAS-2014 held at the Department of Chemistry and Biochemistry, Sarada Vilas College, Mysore from September 26 – 27, 2014. Title: Corrosion inhibition of mild steel in hydrochloric acid solution by some new nitrogen containing organic molecules.
31. Three day National Conference on Pure and Applied Chemistry (NACOPAC-2014) held at the Department of Studies in Chemistry, University of Mysore, from December 29 – 31, 2014, Title: Investigation of the Inhibiting Effect of Some Schiff bases of Triazole for the Corrosion of Mild Steel in Acid medium.
32. Participated in one day seminar on Recent Innovations in Bio-inorganic and Medicinal Chemistry held at the department of chemistry, The National Institute of Engineering, Mysore on January 28, 2015.
33. Participated in Five day Indian Science Congress held at the University of Mysore, Mysore from January 03-07, 2016.
34. Participated in Recent Innovations in Medicinal and Material Chemistry (RIMMC-2019) held in the Department of Studies in Chemistry, Manasagangotri, Mysuru from March 8 – 9, 2019.
35. Participated in Advanced Functional Materials for Energy, Environment and Health Care (AFMEEHC) held at Centre for Material Science and Technology, University of Mysore, Manasagangotri, Mysuru from March 18 – 20, 2019.

PROFESSIONAL AFFILIATIONS

Life Member: Indian Science Congress Association (ISCA)

Life Member: Indian Association of Nuclear Chemists and Allied Scientists (IANCAS)

Life member: Mysore University Teachers Association

Life member: Mysore University Post-graduate Teachers Association

MEMBER: BOARD OF STUDIES AND BOARD OF EXAMINATIONS

Chairman/Member - BOS

1. Chairman, PG, Mandya University, Mandya, M. Sc. In Polymer Science, since 2024.
2. Chairman, PG, University of Mysore, Mysuru, M. Sc. In Polymer Science (Specialized program), since 2023.
3. Chairman, PG, University of Mysore, Mysuru, Organic Chemistry, since 2022.
4. Chairman, Civil and Environmental Engineering, since 2023.
5. Member, PG, Yuvaraja's College, University of Mysore, Chemistry, since 2020.
6. Member, PG, University of Mysore, Mysuru, Chemistry, since 2019.
7. Member, PG, KSOU, Mysuru, since 2019.
8. Member, UG, Gulbarga University, Chemistry, since 2000.
9. Member, PG, Karnatak University, Chemistry, since 2000.
10. Member, PG, Bangalore City University, Chemistry, since 2021.
11. Member, UG, Govt. Science College (Autonomous), Hassan, Chemistry, since 2021.
12. Member, PG, PC Jabin College (Autonomous), Hubli, Chemistry, since 2021.
13. Member, PG, Bangalore University, Chemistry, since 2000.
14. Member, PG, Bangalore University, Chemistry, since 2000.
15. Member, PG, Bangalore University, Forensic Science, since 2000.
16. Member, PG, University of Mysore, Mysuru, Sugar technology, since 2019.
17. Member, PG, Kuvempu University, Chemistry, since 2019.
18. Member, PG, University of Mysore, Mysuru, Organic Chemistry, since 2019.
19. Member, UG, Government college for women(autonomous), Mandya, Chemistry, since 2019
20. Member, UG, Maharani's Science College for women (Autonomous), Mysuru, since 2019.
21. Member - PG and UG, Davangere University, Tholahunase, since 2018.
22. Member, SBRR Mahajana Post graduate Centre (Autonomous), Mysuru, since 2019.
23. Member, UG, St. Philominas College (Autonomous), Mysuru (2017 – 18), 2020 - 2022.
24. Member, UG, JSS College of Arts, Commerce and Science (Autonomous), Mysuru (2011 – 2013 and 2013 – 15).
25. Member, PG, JSS College for Women (Autonomous), Mysuru (2014 – 16).
26. Member, PG, Geographical Information Systems, University of Mysore, Mysure (2015 – 2018).

Chairman/Member - BOE

1. Chairman, BOE in Chemistry (PG), University of Mysore, Mysuru, 2016.
2. Member, Mangalore University, Mangalagangothri, Chemistry, 2021.

3. Member, Bangalore Central University, Central College Campus, Bangalore, Chemistry, 2019-20.
4. Member, Bangalore University, Jnana Bharithi, Bangalore, Forensic Science, 2019-20.
5. Member, Bangalore University, Jnana Bharithi, Bangalore, Chemistry, 2019-20.
6. Member, Tumkur University, Tumkur, Chemistry, 2019-20.
7. Member, Bangalore Central University, Bangalore, Chemistry, 2018-19
8. Member, Bangalore University, Bangalore, Chemistry, 2018-19.
9. Member, Kuvempu University, Shankaraghatta, Chemistry, 2019.
10. Member, University of Mysore, Mysuru, Chemistry, 2019-20.
11. Member, JSS College, BN Road, Mysuru, Chemistry, 2017-18.
12. Member, Davangere University, Shivagangotri, Chemistry, 2017-18.
13. Member, Mangalore University, Mangalagangotri, Industrial Chemistry, 2017.
14. Member, Kuvempu University, Shankaraghatta, Shimoga district, Chemistry, and Industrial Chemistry 2017.
15. Member, Mangalore University, Mangalagangotri, Chemistry, 2016.
16. Member, Kuvempu University, Shankaraghatta, Shimoga district, Chemistry, 2016.
17. Member, Davangere University, Davangere, 2015.
18. Member, University of Mysore, Chemistry (2012 and 2014); Organic Chemistry (2009, 2010, 2012, 2015, 2021, 2022).
19. Member, Karnatak University, Dharwad (2010, 2012 and 2013).
20. Member, Kuvempu University, Shankaraghatta, Shimoga district, Chemistry (2012 and 2014); Industrial Chemistry (2013).
21. Member, Tumkur University, Tumkur (2010, 2011, 2012 and 2013, 2016).
22. Member, Vijayanagara Sri Krishnadevaraja University, Bellary (2013, 2014, 2015).
23. Member, Rani Channamma University, Belagavi (2014).
24. Member, Karnataka State Open University, Mysore (2014).
25. Member, Sahyadri Science College (Constituent College of Kuvempu University), Shimoga (2011 and 2013).
26. Member, Yuvaraja College (Constituent College of University of Mysore), Mysore (2010 and 2011, 2016).

MEMBER

- **Task force for the implementation of NEP - 2020 in the University of Mysore**
- **State level syllabus framing committee for NEP (UG, Physical Chemistry)**

- **Academic Council 2022 – 24, Yuvaraja’s College, Constituent Autonomous College of University of Mysore, Mysuru - 05**
- **Administrative Council 2023-24, St. Joseph First Grade College, Jayalakshimpuram, Mysuru – 06**
- **Academic Council 2023 – 25, JSS College of Arts, Commerce and Science (Autonomous College of University of Mysore) Ooty Road, Mysuru - 25**

CONFERENCE / SYMPOSIA ORGANIZED

1. Organizing Committee Member - 12th Indian Council of Chemists, December 22-24, 2002.
2. Organizing Committee Member - National Symposium on Bioorganic and Medicinal Chemistry, 2005.
3. Organizing Committee Member – National Conference on Emerging areas in Chemistry (NACEAC-2009), July 31 – Aug 1, 2009.
4. Organizing Committee Member – New Advances and Opportunities in Biomedical Imaging and Material Science, 26-4-2010.
5. Organizing Committee Member - Five day Indian Science Congress held at the University of Mysore, Mysore from January 03-07, 2016.
6. Organizing Committee Member - Three day National Conference on Pure and Applied Chemistry (NACOPAC-2014) held at the Department of Studies in Chemistry, University of Mysore, from December 29 – 31, 2014.
7. Treasurer and Organizing Committee member – Recent Innovations in Medicinal and Material Chemistry (RIIMMC – 2019) held at the Department of Studies in Chemistry, Manasagangotri, Mysuru – 06 on 8th and 9th March 2019.
8. Organizing Committee Member - Advanced Functional Materials for Energy, Environment and Health Care (AFMEEHC) held at Centre for Material Science and Technology, University of Mysore, Manasagangotri, Mysuru from March 18 – 20, 2019.
9. Coordinator for the UGC sponsored Refresher course in Material Science held in January 2023 at Human Resource Development Centre, University of Mysore, Manasagangotri, Mysuru

Ph. D. THESIS ADJUDICATED

1. Kuvempu University, Shankaraghatta, Shimoga district, Karnataka.
2. Gulbarga University, Gulbarga, Karnataka.
3. Bangalore University, Gnanabharathi, Bengaluru
4. Karnatak University, Dharwad
5. Tumkur University, Tumkur.
6. Vijayanagara Sri Krishnadevaraya University, Ballary.
7. Sri Venkateshwara University, Tirupati, Andrapradesh.

8. Shivaji University, Kolhapur, Maharashtra.
9. Bharathidasan University, Tamil Nadu.
10. Manonmanian Sundarnar University, Tirunelveli, Tamil Nadu.
11. Osmania University, Hyderabad, Telangana.
12. Visvesvaraya Technological University, Jnana Sangama, Belagavi
13. Panjab University, Chandigarh
14. AMET (Deemed to be University), Chennai

INVITED LECTURES

1. Invited lecture on "Problems in chemical kinetics and thermodynamics" under the auspices of CSIR/NET special coaching classes held in the department of Chemistry, Karnatak University, Dharwad, on 4th March 2011.
2. Invited lecture in Two days faculty development program on "Recent trends on Engineering Chemistry" held at the department of chemistry, Vidya Vikas Institute of Engineering, Mysore, on 15th October 2011.
3. Invited lecture on "Metallic corrosion and its control by eco-friendly inhibitors" in one day National seminar on Role of Chemistry in Monitoring the Environment held at the department of chemistry, Sri Venkateshwara University, Tirupati, A. P., on 31st October 2011.
4. Delivered invited lecture on "Corrosion of metals and its control by inhibitors" in two days National seminar on Recent Developments in Electro-analytical Techniques (RDET – 2012) held at the department of chemistry, Sri Krishnadevaraya University, Ananthapur, A. P., on 6th October 2012.
5. Delivered invited talk on "Application of corrosion inhibitors" at the Postgraduate department of chemistry, Maharani's Science College for women, Mysore, as part of the chemical society activities, on 23rd November 2012.
6. Delivered special lecture for the participants of 6th Refresher course in material science organised by the UGC-academic staff college, University of Mysore, Mysore, on 13th December 2012.
7. Delivered invited lecture on "Principles of rotation and vibration spectroscopy" in two days state level seminar on Basics of spectroscopy held at JSS Banashankari Arts, Commerce and S. K. Gubbi Science college, Dharwad, on 9th March 2013.
8. Invited lecture in Two day work shop on "Advances in Material research" organised by the Department of chemistry, Nitte Meenakshi Institute of Technology, Bangalore, on 24th October 2013.
9. Delivered special lecture for the participants of 7th Refresher course in material science organised by the UGC-academic staff college, University of Mysore, Mysore, on 25th October 2013.
10. Invited lecture on "Recent developments in corrosion control of metals" held at the post graduate department of chemistry, JSS College of Arts, Commerce and Science, Mysore, on 4th April 2014.

11. Delivered special lecture in the department of chemistry, National Institute of Engineering, Mysore under TEQUIP-II program, on 1st March 2014.
12. Delivered special lecture on “Recent methods of preventing corrosion” in the department of chemistry, Teresian College, Mysore on 16th September 2014.
13. Delivered special lecture for the participants of 8th Refresher course in material science organised by the UGC-academic staff college, University of Mysore, Mysore, on 31th October 2014.
14. Delivered special lecture at Shri Dharmastala Manjunatheshwara Girls PU College, Mysore, on 14th November 2014.
15. Delivered special lecture in the Post graduate department of Chemistry, Maharani Science College, Mysore, on 27th November, 2014.
16. Delivered special lecture for the participants of 9th Refresher course in material sciences organised by the UGC-academic staff college, University of Mysore, Mysore, on 27th February 2016.
17. Delivered special lecture for the participants of 14th Refresher course in Chemistry organised by the UGC-academic staff college, University of Mysore, Mysore, on 07th February 2018.
18. Delivered special lecture for the participants of 10th Refresher course in Materials Science organised by the UGC-academic staff college, University of Mysore, Mysore, on 24th March 2019.
19. Invited lecture in one-day work shop on “Emerging Trends in Electrochemistry” organised by Bharathi College, UG, PG and Research Centre, Bharathinagar, Mandya District, on 12th December 2019.
20. Delivered special lecture for the participants of 11th Refresher course in Materials Science organised by the UGC-Human resource development centre, University of Mysore, Mysore, on 12th and 17th February 2020.
21. Invited lecture on “Metallic corrosion and graphene based anti-corrosion coating materials” in National webinar organized by the department of chemistry, Vidyavardaka College of Engineering, Mysore on 17th July 2020.
22. Delivered special lecture for the participants of 12th Refresher course in Materials Science organised by the UGC- Human resource development centre, University of Mysore, Mysore, on 11th and 14th December 2020.

DISSERTATIONS SUPERVISED FOR M. Sc. PROGRAMME

Guided more than 120 M. Sc. Students for their dissertation work

PATENT

Title: “Novel study on surface dynamics with passivation as an isotherm on metal surface – theoretical and experimental approach” by protection of metal centre”

Patent Number: NL-008-EP/2008

Year and Country: 2008, Netherlands

BOOK AUTHORED

Advanced Physical Chemistry Experiments – Volume – I and II

LIST OF RESEARCH PUBLICATIONS

1. Syntheses of diphenolic resin based anti-corrosion coating material and reinforce its performance through MWCNT-Ag and MWCNT-Ag/ PANI nanofillers, Y. M. Harsha , **K. N. Mohana**, M. C. Sunilkumar, M. C. Hithesh , M. Sreelakshmi, A. M. Madhusudhana *Surface and Coating Technology*, (2024), **485**, 130871.
2. Graphene nanoribbon derived from multi-walled carbon nanotube: An efficient viral gene hosting and biosensing molecular platform for the electroanalysis of HIV-1 gene, N. Kumara Swamy, **K. N. Mohana**, A. M. Madhusudana, J. G. Manjunatha H. M. Manukumar, *Results in Chemistry*, (2024), **7**, 101393.
3. Effects of curing temperature and addition of functionalized graphene oxide on corrosion barrier performance of phenol furfural polymer-amino phenolic resin composite, M. C. Hithesh, **K. N. Mohana**, Y. M. Harsha, M. Sreelakshmi, A. M. Madhusudhana, M. C. Sunil Kumar, *Progress in Organic Coatings*, (2024), **188**, 109164.
4. Graphene nanoribbon doped PVA films for improved UVC blocking and luminescence down-shifting applications, N. Kumara Swamy, **K. N. Mohana**, and B. S. Madhukar, *Polymers for Advanced Technologies*, (2023) e6246. DOI: 10.1002/pat.6246. (IF-3.81).
5. Silver-Decorated Reduced Graphene Oxide–Sulfonated Polyaniline Ternary Nanocomposite: A Highly Reliable Anti-Corrosion Coating Material for Mild Steel, Saurav Ramesh Nayak, **K. N. Mohana**, K. Rajitha, A. M. Madhusudhana, and S. R. Naik, *Journal of Materials Engineering and Performance*, (2023) <https://doi.org/10.1007/s11665-023-08796-3>.
6. Preparation of Silver Decorated Reduced Graphene Oxide Nanohybrid for Effective Photocatalytic Degradation of Indigo Carmine Dye, Saurav Ramesh Nayak, **K. N. Mohana**, K. Rajitha, A. M. Madhusudhana, N. Kumara Swamy, and Mahesh Bhaskar Hegde, *Journal of Photocatalysis*, (2022) **3**, e220622206280.
7. Electrochemical sensor based on phenol formaldehyde amine polymer coated ZnO/GO nanocomposite: An innovative nano-framework for the determination of caffeine, A. M. Madhusudhana, **K. N. Mohana**, Mahesh Bhaskar Hegde, N. Kumara Swamy, S. A. Shivamurthy, *Diamond & Related Materials*, (2022) **130**, 109531.
8. Functionalized graphene oxide dispersed polyvinyl alcohol-epoxidized linseed oil composite: An eco-friendly and promising anticorrosion coating material, A. M. Madhusudhana, **K. N. Mohana**, Mahesh Bhaskar Hegde, Saurav Ramesh Nayak, K. Rajitha and M. C. Sunil Kumar, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2022)**650**, 129382.
9. Fabrication of 1D-graphene nanoribbon and melanized linseed oil based nanocomposite: A highly impervious bio-based anticorrosion coating material for mild steel", N. Kumara Swamy, **K. N. Mohana**, Mahesh Bhaskar Hegde and A. M. Madhusudhana *Journal of Applied Electrochemistry*, (2022) <https://doi.org/10.1007/s10800-022-01692-z>.

10. Synthesis of self-healing inhibitor releasing nanocapsules blended phenol novolac resin for high performance anticorrosion coating, A. M. Madhusudhana and **K. N. Mohana**, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2022) **643**, 128762.
11. GNR@CeO₂ heterojunction as a novel sonophotocatalyst: Degradation of tetracycline hydrochloride, kinetic modeling and synergistic effects, N. Kumara Swamy, **K. N. Mohana**, S. R. Yashas, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2022) **639**, 128324.
12. Solution combustion synthesis of rGO-Fe₂O₃ hybrid nanofiller for linseed oil based eco-friendly anticorrosion coating, Mahesh Bhaskar Hegde, **K. N. Mohana**, Saurav Ramesh Nayak and A. M. Madhusudhana, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2022) **633**, 127863.
13. Reduced Graphene Oxide-Epoxidized Linseed Oil Nanocomposite: A Highly Efficient Bio-based Anti-Corrosion Coating material for Mild Steel, Mahesh Bhaskar Hegde, **K. N. Mohana**, Saurav Ramesh Nayak, K. Rajitha and A. M. Madhusudhana, *Progress in Organic Coatings*, (2021) **159**,106399.
14. Fabrication of Reduced Graphene Oxide/Ruthenium Oxide Modified Graphite Electrode for Voltammetric Determination of Tryptophan, Mahesh Bhaskar Hegde, **K. N. Mohana**, A. M. and M. M. Vinay, Y. Arthoba Nayaka and, N. Kumara Swamy, *Graphene and 2D Materials Technology*, <https://doi.org/10.1007/s41127-021-00042-8>, (2021).
15. Fabrication of graphene nanoribbon-based enzyme-free electrochemical sensor for the sensitive and selective analysis of rutin in tablets, N. Kumara Swamy, **K. N. Mohana**, Mahesh Bhaskar Hegde, A. M. Madhusudana, K. Rajitha and Saurav Ramesh Nayak, *J. Applied Electrochemistry*, (2021) **51**, 1047–1057.
16. Effect of OH, NH₂ and OCH₃ groups on the corrosion inhibition efficacy of three new 2,4,5-trisubstituted imidazole derivatives on mild steel in acidic solutions: Experimental, surface and DFT explorations, M. K. Prashanth, C. B. Pradeep Kumar, B. S. Prathibha, M. S. Raghu, K. Yogesh Kumar, M. B. Jagadeesha, **K. N. Mohana**, Honnur Krishna, *Journal of Molecular Liquids*, (2021) **329**, 115587.
17. Functionalized multi-walled carbon nanotube/polyindole incorporated epoxy: An effective anti-corrosion coating material for mild steel, Saurav Ramesh Nayak, **K. N. Mohana**, Mahesh Bhaskar Hegde, K. Rajitha, A. M. Madhusudhana, S. R. Naik, *Journal of Alloys and Compounds*, (2020) **856**, 158057.
18. Fabrication of ZnO/rGO and ZnO/MWCNT nanohybrids to reinforce the anticorrosion performance of polyurethane coating, K. Rajitha, **K. N. Mohana**, Mahesh Bhaskar Hegde, Saurav Ramesh Nayak, Ningappa Kumara Swamy, *FlatChem*, (2020) **24**, 100208.
19. Development of Al₂O₃.ZnO/GO-phenolic formaldehyde amine derivative nanocomposite: A new hybrid anticorrosion coating material for mild steel, A. M. Madhusudhana, **K. N. Mohana**, Mahesh Bhaskar Hegde, Saurav Ramesh Nayak, Kamalraj Rajitha and N. Kumara Swamy, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2020) **601**,125036.

20. Fluorine Substituted Thiomethyl Pyrimidine Derivatives as Efficient Inhibitors for Mild Steel Corrosion in Hydrochloric Acid Solution: Thermodynamic, Electrochemical and DFT Studies, C.B. Pradeep Kumar, **K. N. Mohana**, M.S. Raghu, M.B. Jagadeesha, M.K. Prashanth, N.K. Lokanath and Mahesha, *Journal of Molecular Liquids*, (2020) **311**, 113311.
21. Synthesis of graphene oxide-based nanofillers and their influence on the anticorrosion performance of epoxy coating in saline medium, K. Rajitha and **K. N. Mohana**, *Diamond and Related Materials*, **108** (2020) 107974.
22. Functionalized graphene oxide-epoxy phenolic novolac nanocomposite: An efficient anticorrosion coating on mild steel in saline medium, A. M. Madhusudhana, **K. N. Mohana**, Mahesh Bhaskar Hegde, Saurav Ramesh Nayak, Kamalon Rajitha and N. Kumara Swamy, *Advanced Composites and Hybrid Materials*, (2020) **3(2)**, 141–155.
23. Protection of Mild Steel Corrosion by three New Quinazoline Derivatives: Experimental and DFT Studies, C.B. Pradeep Kumar, M.K. Prashanth, **K. N. Mohana**, M.B. Jagadeesha, K.K. Yogesh Kumar, N.K. Lokanath, Mahesha and M.S. Raghu, *Surfaces and Interfaces*, (2020) **18**, 100446.
24. A sustainable and eco-friendly polymer based graphene oxide nanocomposite anti-corrosion coating on mild steel, Mahesh Bhaskar Hegde, **K. N. Mohana**, *ChemistrySelect*, (2020), **5(4)**, 1506-1515.
25. Evaluation of anti-corrosion performance of modified gelatin-graphene oxide nanocomposite dispersed in epoxy coating on mild steel in saline media, K. Rajitha, **K. N. Mohana**, A. Mohanan and A. M. Madhusudhana, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (2020), **587**, 124341.
26. Garcinia gummigutta vegetable oil-graphene oxide nano-composite: An efficient and eco-friendly material for corrosion prevention of mild steel in saline medium, Mahesh Bhaskar Hegde, Saurav Ramesh Nayak, **K. N. Mohana** and Ningappa Kumara Swamy, *Journal of Polymers and the Environment*, (2020) **28**, 483.
27. Application of modified graphene oxide – Polycaprolactone nanocomposite coating for corrosion control of mild steel in saline medium, K. Rajitha, **K. N. Mohana**, *Materials Chemistry and Physics*, (2020), **241**, 122060.
28. An efficient and eco-friendly anti-corrosive system based on Beeswax-Graphene oxide nanocomposites on mild steel in saline medium, K. Rajitha, **K. N. Mohana**, Saurav Ramesh Nayak, Mahesh Bhaskar Hegde and A. M. Madhusudhana, *Surfaces and Interfaces*, (2020), **18**, 100393.
29. Anticorrosion performance of 4-fluoro phenol functionalized graphene oxide nanocomposite coating on mild steel, Saurav Ramesh Nayak, **K. N. Mohana**, Mahesh Bhaskar Hegde *Journal of Fluorine Chemistry*, (2019), **228**, 109392.
30. Synthesis and Potential Applications of Graphene Nanoribbons, N. Kumara Swamy and **K. N Mohana**, *Journal of Electrochem Society of India*, (2019) **68**, 52. DOI: 10.3578/jecsi .68.1&2.2019.52. (ISSN, 0013-466X).

31. Evaluation of newly synthesized hydrazones as mild steel corrosion inhibitors by adsorption, electrochemical, quantum chemical and morphological studies, T. K. Chaitra, **K. N. Mohana** and H. C. Tandon, *Arab Journal of Basic and Applied Sciences*, **25(2)**, (2018) 45 - 55.
32. Experimental and Theoretical Studies on the Corrosion Inhibition Performance of Molecules Containing Tert-Butyl Benzyl Group on Mild Steel in Acid Media, T. K. Chaitra, **K. N. Mohana** and H. C. Tandon, *Journal of Bio- and Tribo-Corrosion*, (2018) <https://doi.org/10.1007/s40735-018-0141-4>.
33. Corrosion protection performance of functionalized graphene oxide nanocomposite coating on mild steel, Saurav Ramesh Nayak, **K. N. Mohana**, *Surfaces and Interfaces*, (2018)11, 63 – 73.
34. Crystal structure studies, Hirshfeld surface analysis and DFT calculations of novel 1-[5-(4-methoxyphenyl)-[1,3,4]oxadiazol-2-yl]-piperazine derivatives, K. Kumara, K. P. Harish, N. Shivalingegowda, H. C. Tandon, **K. N. Mohana** and N. K. Lokanatha, *Chemical Data Collections*, (2017)**11 -12**, 40 – 58.
35. Inhibition activity of new thiazole hydrazones towards mild steel corrosion in acid media by thermodynamic, electrochemical and quantum chemical methods, T. K. Chaitra, **K. N. Mohana**, D. M. Gurudatt and H. C. Tandon, *Journal of the Taiwan Institute of Chemical Engineers*,(2016), **67**, 521 – 531.
36. Comparative study of Levofloxacin and its amide derivative as efficient water soluble inhibitors for mild steel corrosion in hydrochloric acid solution, T. K. Chaitra, **K. N. Mohana** and H. C. Tandon, *Int. J. Industrial. Chem.*, 2016, DOI 10.1007/s40090-016-0083-y.
37. Study of new thiazole based pyridine derivatives as potential corrosion inhibitors for mild steel: Theoretical and experimental approach, T. K. Chaitra, **K. N. Mohana**, H. C. Tandon, *Int. J. Corr.*, (2016) Volume 2016, Article ID 9532809, 21 pages, 1-21.
38. Adsorption and corrosion inhibition characteristics of some organic molecules containing methoxy phenyl moiety on mild steel in hydrochloric acid solution, D. M. Gurudatt, **K. N. Mohana** and H.C. Tandon, *Materials Discovery*, (2015), **2**, 24 – 43.
39. Thermodynamic, electrochemical and quantum chemical evaluation of some triazole Schiff bases as mild steel corrosion inhibitors in acid media, T. K. Chaitra, **K. N. Mohana** and H. C. Tandon, *J. Mol. Liquids*, (2015), **211**, 1026–1038.
40. Synthesis of 1, 2, 4 - triazole derivatives and their anticorrosion properties on mild steel in hydrochloric acid medium, D. M. Gurudatt, **K. N. Mohana** and H. C. Tandon, *J. Mol. Liquids*, (2015), **211**, 275–287.
41. Corrosion inhibition behaviour and adsorption characteristics of dapsone derivatives on mild Steel in acid Medium, M. P. Chakravarthy, **K. N. Mohana**, C. B. Pradeep Kumar and A. M. Badiea, *American Chemical Science Journal*, (2015), **8(2)**, 1 – 16.
42. Synthesis, adsorption, thermodynamic studies and corrosion inhibition behaviour of isoniazide derivatives on mild steel in hydrochloric acid solution, M. P. Chakravarthy, **K. N. Mohana** and C. B. Pradeep Kumar, *IOSR Journal of Applied Chemistry (IOSR-JAC)*, (2015), **4(2)**, 7 – 19.

43. Synthesis, characterization and hirshfeld surface analysis of a 2-thiophene acetic acid derivative, N. Latha Rani, M. P. Chakravarthy, **K. N. Mohana**, N. K. Lokanath, and M. A. Sridhar, *Mol. Cryst. Liq. Cryst.*, (2015) **607**, 223–231.
44. Corrosion inhibition effect and adsorption behaviour of nicotinamide derivatives on mild steel in hydrochloric acid solution, M. P. Chakravarthy, **K. N. Mohana** and C. B. Pradeep Kumar, *Int. J. Industrial. Chem.*, (2014) **5:19**, DOI 10.1007/s40090-014-0019-3.
45. *In Vitro* Antioxidant Activity of 1-[5-(4-Methoxy-phenyl)-[1,3,4]oxadiazol-2-yl]-piperazine Derivatives, L. Mallesha, K. P. Harish, **K. N. Mohana** and N. D. Rekha, *Canadian Chemical Transactions*, (2014) **2(4)**, 518-525.
46. The Inhibition of Mild Steel Corrosion in Sulfuric Acid by New Dapsone Derivatives, M. P. Chakravarthy, **K. N. Mohana** and C.B. Pradeep Kumar, *Journal of Advances in Chemistry*, (2014), **10(3)**, 2388 -2402.
47. Electrochemical and thermodynamic studies to evaluate the inhibition effect of synthesized piperidine derivatives on the corrosion of mild steel in acidic medium, C. B. Pradeep Kumar, **K. N. Mohana** and H. B. Muralidhara, *Ionics*, (2014), **21**, 263 - 281.
48. Phytochemical screening and corrosion inhibitive behavior of pterolobium hexapetalum and celosia argentea plant extracts on mild steel in industrial water medium, C. B. Pradeep Kumar and **K. N. Mohana**, *Egyptian Journal of Petroleum*, (2014) **23(3)**, 201 - 211 .
49. Synthesis and *In Vitro* Antimicrobial Activity of 2,4-Difluorophenyl (piperidin-4-yl)methanone Oxime Derivatives, L. Mallesha and **K. N. Mohana**, *Canadian Chemical Transactions*, (2014) **2(3)**, 343 – 352.
50. Adsorption and Corrosion Inhibition Characteristics of Some Nicotinamide Derivatives on Mild Steel in Hydrochloric Acid Solution, M. P. Chakravarthy and **K. N. Mohana**, *ISRN Corrosion*, Volume 2014, Article ID 687276, 13 pages.
51. Synthesis of New Pyridine Based 1,3,4-Oxadiazole Derivatives and their Corrosion Inhibition Performance on Mild Steel in 0.5 M Hydrochloric Acid D. M. Gurudatt and **K. N. Mohana**, *Industrial and Engineering Chemistry Research*, (2014) **53**, 2092–2105.
52. Influence of some synthesized pyrimidine derivatives on corrosion inhibition of mild steel in hydrochloric acid medium, D. M. Gurudatt and **K. N. Mohana**, *European Journal of Chemistry*, (2014) **5(1)**, 53-64.
53. Synthesis and in vitro antiproliferative activity of 2, 5-disubstituted-1,3,4-oxadiazoles containing trifluoromethyl benzenesulfonamide moiety, B. N. Prasanna Kumara, **K. N. Mohana** and L. Mallesha and B. Veeresh, *Medicinal Chemistry Research*, (2014), **23(7)**, 3363–3373.
54. Corrosion inhibition efficiency and adsorption characteristics of some Schiff bases at mild steel/hydrochloric acid interface, C. B. Pradeep Kumar and **K.N. Mohana**, *Journal of the Taiwan Institute of Chemical Engineers*, (2014), **45**, 1031–1042.

55. Synthesis, characterization, and in vitro antimicrobial evaluation of new 5-chloro-8-bromo-3-aryl-1,2,4-triazolo[4,3-c]pyrimidines, B. N. Prasanna Kumara, **K. N. Mohana** and L. Mallesha, *Medicinal Chemistry Research*, (2014), **23**, 445–453.
56. Synthesis of new 2, 5 – disubstituted-1,3,4-thiadiazole derivatives and their *in vivo* anticonvulsant activity, K. P. Harish, **K. N. Mohana** and L. Mallesha, *Russian Journal of Bioorganic Chemistry*, (2014) **40(1)**, 97 – 105.
57. A convenient synthesis of new substituted 1,2,4-triazole[4,3-c]pyrimidines by oxidative cyclisation using 1.3-dibromo-5,5-dimethyl hydantoin as oxidant, B. N. Prasanna Kumar and **K. N. Mohana**, *International Journal of Drug Design and Discovery*, 2013, **4(4)**, 1188-1192.
58. Synthesis and *In Vivo* Anticonvulsant Activity of 2-Methyl-2 [3-(5-piperazin-1-yl-[1,3,4]oxadiazol-2-yl)-phenyl]-propionitrile Derivatives, K. P. Harish, **K. N. Mohana**, L. Mallesha and B. Veeresh, *Arch. Pharm. Chem. Life Sci.*, (2013) **346**, 1–12.
59. Synthesis of Pyrazine Substituted 1,3,4-Thiadiazole Derivatives and Their Anticonvulsant Activity, K. P. Harish, **K. N. Mohana** and L. Mallesha, *Organic Chemistry International*, Volume 2013, Article ID 631723, 8 pages <http://dx.doi.org/10.1155/2013/631723>.
60. Synthesis and *in vitro* antioxidant activity of quinolin-5-ylamine derivatives, L. Mallesha, B. K. Kendagannaswamy and **K. N. Mohana**, *Current Chemistry Letters*, (2013) **2**, 119 –124.
61. Virtual Screening and Biological Evaluation of Piperazine Derivatives as Human Acetylcholinesterase Inhibitors, K. R. Varadaraju, J. R. Kumar, L. Mallesha, A. Muruli, **K. N. Mohana**, C. Mukunda, and U. Sharanaiah, *International Journal of Alzheimer's Disease*, Volume 2013, Article ID 653962, 13 pages.
62. Inhibition Behaviour of Some Isonicotinic Acid Hydrazides on the Corrosion of Mild Steel in Hydrochloric Acid Solution, M. P. Chakravarthy and **K. N. Mohana**, *International Journal of Corrosion*, Volume 2013, Article ID 854781, 13 pages.
63. Synthesis of thiazole based 1,3,4-oxadiazole derivatives and their corrosion inhibition characteristics at mild steel/hydrochloric acid interface, C. B. Pradeep Kumar and **K. N. Mohana**, *Journal of Chemical and Pharmaceutical Research*, (2013) **5(10)**, 289-305.
64. Pyrimidine based piperidine sulphonamides as new class of corrosion inhibitors for mild steel in hydrochloric acid solution: Adsorption and electrochemical studies, C. B. Pradeep Kumar and **K. N. Mohana**, *International Journal of Advanced Chemical Technology*, (2013), **4**, 10 – 22.
65. Synthesis of new benzimidazole derivatives and their corrosion inhibition performance on mild steel in 0.5 M hydrochloric acid, D. M. Gurudatt and **K. N. Mohana**, *Journal of Applicable Chemistry*, (2013) **2(5)**, 1296-1314.
66. Synthesis and biological activity of some pyrimidine derivatives, **K. N. Mohana**, B. N. Prasanna Kumara and L. Mallesha, *Drug Invention Today*, (2013), **5**, 216 - 222.
67. Synthesis and antiproliferative activity of some new fluorinated Schiff bases derived from 1,2,4-triazoles, B. N. Prasanna Kumar and **K. N. Mohana** and L. Mallesha, *Journal of Fluorine Chemistry*, (2013), **156**, 15–20.

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