

VINOD P. RAPHAEL

Assistant Professor in Chemistry



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Education and Qualifications

Degree	Awarded by	Year	Div.
M. Sc (Polymer Chemistry)	University of Calicut	1998	First Class
M. Phil (Chemistry)	University of Calicut	2000	First Class
State Eligibility Test (Chemical Science)	Dept. of Education, Govt. of Kerala	2000	Qualified for teachership in Higher Secondary School
National Eligibility Test	UGC-CSIR	2000	Qualified for Lectureship

Research Experience: Five years

Research Interests: Corrosion, Electrochemistry, Coordination Chemistry

Publications:

(A) in Journals

- 1) **Vinod P Raphael**, K. Joby Thomas, K. S. Shaju, Aby Paul, “*Corrosion Inhibition Investigations of 3-Acetylpyridine Semicarbazone on Carbon Steel in Hydrochloric Acid Medium*”, **Res. Chem. Intermed.**, (2013) doi: 10.1007/s11164-013-1122-3
- 2) **Vinod P Raphael**, K. Joby Thomas, K. S. Shaju, Aby Paul, “*Study of Synergistic Effect of Iodide on the Corrosion Antagonistic Behaviour of a Heterocyclic Phenylhydrazone in Sulphuric Acid Medium on Carbon Steel*”, **ISRN Corrosion**, (2013) doi:10.1155/2013/390823
- 3) Joby Thomas K, **Vinod P Raphael**, Nimmy Kuriakose, Shaju K S, “*Spectroscopic and Corrosion Inhibition investigations on Schiff Bases derived from Aromatic Aminosulphonic Acids*”, **ISST J. App. Chem.**, 3 (2012) 2
- 4) Aby Paul, Joby Thomas K, **Vinod P Raphael**, K. S. Shaju, “*Electrochemical and Gravimetric Corrosion Inhibition Investigations of a Heterocyclic Schiff Base Derived from 3- Formylindole*”, **IOSR J. Appl. Chem.**, 1-6 (2012) 17
- 5) Aby Paul, K. Joby Thomas, **Vinod P Raphael**, K. S. Shaju, “*Chelating Efficacy and Corrosion Inhibition Capacity of Schiff Base Derived from 3-Formylindole*”, **Oriental J. Chem.**, 28-3 (2012) 1501
- 6) Aby Paul, Joby Thomas K, **Vinod P Raphael**, K. S. Shaju, “*3-Formylindole-4-aminobenzoic Acid: a Potential Corrosion Inhibitor for Mild Steel and Copper in Hydrochloric Acid Media*”, **ISRN Corrosion**, (2012) doi:10.5402/2012/842836
- 7) K. S. Shaju, K. Joby Thomas, **Vinod P Raphael**, Aby Paul, “*Synergistic Effect of KI on Corrosion Inhibition of Mild Steel by Polynuclear Schiff Base in Sulphuric Acid*”, **ISRN Corrosion**, (2012) doi: 10.5402/2012/425878
- 8) K. S. Shaju, K. Joby Thomas, **Vinod P Raphael**, Aby Paul, “*Electrochemical and Surface Morphological Studies of Carbon Steel Corrosion by a Novel Polynuclear Schiff Base in HCl Solution*”, **ISRN Electrochemistry** (2013) doi:10.1155/2013/820548
- 9) Nimmy Kuriakose, Joby Thomas K, **Vinod P Raphael**, Shaju K S, “*Electrochemical Impedance Spectroscopy and Potentiodynamic Polarization Analysis on Anticorrosive Activity of Thiophene-2-carbaldehyde Derivative in Acid Medium*”, **Indian J. Mater. Sci.**, (2014) doi.org/10.1155/2014/124065
- 10) Shaju K S, Joby Thomas K, **Vinod P Raphael**, “*Effect of Iodide on the Corrosion Inhibitive Behaviour on Carbon Steel by an Azomethine Compound Derived from Anthracene-9(10 H)-one*”, **Oriental. J. Chem.**, (in press)

(B) in Conferences

- 11) **Vinod P Raphael**, Joby Thomas K, Shaju K. S, Aby Paul, “*Electrochemical Investigations on Heterocyclic Hydrazones on Copper in Nitric Acid*”, Proceedings of International Corrosion Prevention Symposium (CORSYM- 2014), held at IIT Bombay on February 20-21, 2014, p. 117
- 12) **Vinod P Raphael**, Joby Thomas K, Shaju K. S, Nimmy Kurialose, “*Corrosion Inhibition Investigations of 3-Acetylpyridine Thiosemicarbazone on Carbon Steel in Hydrochloric Acid Medium*”, Proceedings of

International Corrosion Prevention Symposium(CORSYM-2013), held at Chennai on February 28 – March 02, 2013, p.16

- 13) Shaju K. S, Joby Thomas K, **Vinod P Raphael**, Aby Paul, “*Electrochemical Study and Temperature Effect on Carbon Steel Corrosion by a Novel Polynuclear Schiff Base in HCl Solution*”, Proceedings of International Corrosion Prevention Symposium(CORSYM-2014), held at IIT Bombay on February 20-21, 2014, p. 114
- 14) Aby Paul, K. Joby Thomas, **Vinod P Raphael**, K. S. Shaju, “*Protection of Mild Steel With a Schiff Base Derived from 3-Formylindole in 1.0 M HCl*” Proceedings of International Corrosion Prevention Symposium(CORSYM-2014), held at IIT Bombay on February 20-21, 2014, p. 109
- 15) Aby Paul, Joby Thomas K, **Vinod P Raphael** and Shaju K.S, “*Structural Evaluation and Thermoanalytical Investigations of Mn(II) and Cu(II) Chelates of a Novel Heterocyclic Schiff Base Derived from 3-Formylindole*”, Proceedings of International Conference on Advances in Material Science (ICAMS 2013), held at Sree Sankara College, Kalady, Kerala, 23-24, October 2013, p.147
- 16) Shaju K S, Joby Thomas K, **Vinod P Raphael**, Nimmy Kuriakose, “*Corrosion Inhibition on Carbon Steel by Schiff Base Derived from 2-Amino -3 Phenyl Propanoic Acid and it's Synergistic Effect with Iodide*”; Proceedings of International Conference on Advances in Material Science (ICAMS 2013) held at Sree Sankara College, Kalady, Kerala, 23-24, October 2013, p.136
- 17) Shaju K. S, Joby Thomas K, **Vinod P Raphael**, Aby Paul, “*Inhibition of Carbon Steel Corrosion by A Novel Polynuclear Schiff Base in HCl Solution*”, Proceedings of International Corrosion Prevention Symposium(CORSYM-2013), held at Chennai on February 28 – March 02, 2013, p.13
- 18) K. Joby Thomas, **Vinod P Raphael**, Aby Paul, K. P. Mary, K. S. Shaju, “*Structural Evaluation of Schiff Base Derived from 4-Hydroxy-3-Methoxy Benzaldehyde and its Transition Metal Chelates*”, Proceedings of 22nd Kerala Science Congress held at Kerala Forest Research Institute, Peechi, 28-31 January 2010, p. 903
- 19) Joby Thomas K, **Vinod P Raphael**, K. S. Shaju, Mary K P, Aby Paul, “*Physicochemical Studies on Co(II), Ni(II) and Cd(II) Complexes of Schiff Base, Vanillin Anthranilic Acid*”, Proceedings of 19th Swadesi Science Congress held in Kerala Agricultural University, Mannuthy on 10-12 December 2009, p. 21
- 20) Joby Thomas K, **Vinod P Raphael**, Shaju K S, Aby Paul, Vidya T K, “*Structural Evaluation and Corrosion Inhibition Studies of a Phenylhydrazone and its Complexes Derived from Furan-2-carboxaldehyde*”, Proceedings of the UGC sponsored National Seminar on ‘Green Strategies in Organic Synthesis’, held in Sree Neelakanta Govt. Sanskrit College, Pattambi on 3 - 4 November 2011, p 55
- 21) Joby Thomas K, Shaju K S, **Vinod P Raphael**, Aby Paul, Mary K P, “*Physico-chemical and Antimicrobial Studies on Copper Complexes of Schiff bases Derived from 4-Hydroxy-3-methoxybenzaldehyde*”, Proceedings of UGC Sponsored National Seminar on ‘Emerging Trends in Biopharmaceuticals’, held in St. Mary’s College, Thrissur on 26 - 27 August 2011, p 39
- 22) Joby Thomas K, Aji C V, **Vinod P Raphael**, Shaju K S, Aby Paul, “*Structural Investigation on 4-Hydroxy-3-methoxybenzylidene-2-amino Benzoic Acid and its’ Fe(III) and Al(III) Complexes*”, Proceedings

of the 10th National Seminar on 'Recent Trends and the Sequels in Chemistry'(RTSE 2011), held in Sacred Heart College, Thevara, Kochi on 7 - 8 December 2011, p 31

Guided Four M. Sc Chemistry projects

Teaching Experience

Higher Secondary level: 7 years

College Level: UG 4 years, PG: 3 Years

Memberships in Professional bodies

Member, All Kerala Govt. College Teachers Association

Awards & Achievements: Best paper award "*Protection of Mild Steel With a Schiff Base Derived from 3-Formylindole in 1.0 M HCl*", International Corrosion Prevention Symposium (CORSYM-2014), held at IIT Bombay on February 20-21, 2014, p. 109