

Name of the Teaching Staff	Dr. V. VIJAIKANTH			
Designation	ASSOCIATE PROFESSOR			
Department / School	CHEMISTRY / SSAMM			
Date of Joining the Institution	8 th April 2010			
Qualification with Class / Grade	UG	PG	Ph.D.	
	B.Sc (First)	M.Sc (First)	Chemistry	
Area of Specialization	Organometallic Chemistry			
Research Interests	Bioorganometallic Chemistry, Model complexes of active sites of Hydrogenases and Vitamin B12 Hydrogen Production Electrochemical Kinetics			
Subjects Teaching	Under Graduate		Post Graduate	
	1) Applied Chemistry 2) Environmental Studies 3) Inorganic and Coordination Chemistry 4) Instrumental Methods of Analysis 5) Applied Chemistry Lab 6) Qualitative Analysis and Inorganic Preparations Lab		1) Inorganic Chemistry-I 2) Inorganic Chemistry-II 3) Inorganic Chemistry-III 4) Analytical Chemistry - II 5) Coordination Chemistry 6) Organometallic, Bioinorganic and Solid State Chemistry 7) Supramolecular Chemistry 8) Cheminformatics 9) Chemical Approach To Nanomaterials 10) Inorganic Chemistry Lab	
Total Experience in Years	Teaching	Industry	Research	
	8 Years		12 Years	
Papers Published	National	3	International	10
Papers Presented in Conference	National		International	
Conferences / Symposiums / Seminars / Workshops Participated	National		International	
FDP / STTP / MDP / Summer / Winter School attended	<ul style="list-style-type: none">Participated in three day workshop on School on Applications of Functional Materials for electrochemical energy conversion, Amrita Vishwa Vidyapeetham University Coimbatore, December 26-28, 2017Completed the one day Workshop on Generic Workplace Hazardous Materials Information System Course presented by Environmental Health and Safety at University of Calgary, Canada on 19th April 2007			
M.Phil. / Ph.D. Guide ship	Field		University	
	Organometallic Chemistry		Karunya Institute of Technology and Sciences	
Ph.D. Projects Guided	Ph.D.s	2 (Under Guidance)	Project at Master's Level	7

Professional Memberships	-	
Consultancy Activities	-	
Awards & Honours	<ul style="list-style-type: none"> ➤ Postdoctoral Fellowship from University of Calgary, Canada in 2007 ➤ Postdoctoral Fellowship from University of Toronto, Canada in 2006 ➤ Postdoctoral Fellowship from Conseil General du Finistere (CG 29), France in 2004 ➤ Senior Research Fellowship (Extended) from CSIR, India in 2003 ➤ Senior Research Fellowship from CSIR, India in 2000 	
Grants Fetched	<p>Major Projects: (Total Cost: 64.63 Lakhs) Funding Agency : Science and Engineering Research Board, Department of Science and Technology, Government of India under Extra Mural Research Funding Scheme Project Title: Vitamin B12 Model Complexes: Cobaloximes with substituted aromatic dioximes: Synthesis, Structure-Property Relationship Studies and their application in Electrocatalytic Hydrogen Generation Minor Projects : _ Karunya Short term research Grants</p>	
Interaction with Professional Institutions	University of Brest- France, IISER-Pune-India, University of Calgary-Canada, Central University of Hyderabad, India IIT-Madras, India Central Electrochemical Research Institute, Karaikudi, India	
Educational Details	B.Sc. –Madura College, Madurai, India (1995) M.Sc. – Madura College, Madurai, India (1997) M.Phil. – Ph.D. – Indian Institute of Technology-Kanpur, Kanpur, India (2003)	
Experience	Present Position 2010-2017 2007-2009 2006 2004-2005 2003-2004	Associate Professor, Department of Chemistry, KITS Assistant Professor (SG), Department of Chemistry, KITS Postdoctoral Research Fellow, Department of Chemistry, University of Calgary, Calgary, Canada Postdoctoral Research Fellow, Department of Chemistry, University of Toronto, Toronto, Canada Postdoctoral Research Fellow, Department of Chemistry, University of Brest, France Senior Research Fellow (Extended), Department of Chemistry, I,I,T-Kanpur, India
Contact Details	Room No: 016 Building : Sciences and Humanities Block Mobile : 9944844030 Intercom : 4483 E-mail : vvijaikanth@karunya.edu, vvijaikanth@gmail.com Webpage(if any)	

Papers Published

1. Kinetics of Reduction of Aqueous Hexaammineruthenium(III) Ion at Pt and Au Microelectrodes: Electrolyte, Temperature and Pressure Effects
V. Vijaikanth, G. Li, T. W. Swaddle*
Inorganic Chemistry 2013, 52, 2757-2768
2. Carboxy-functionalized dithiolate di-iron complexes related to the active site of Fe-only hydrogenase
V. Vijaikanth, J.-F. Capon, F. Gloaguen, F. Y. Petillon, P. Schollhammer, J. Talarmin
J. Organomet. Chem. 2007, 692, 4177-81
3. 2-Substituted m-Xylylene Bridged Dicobaloximes: Structure-Property Relationship Using Variable Temperature ^1H NMR Study
V. Vijaikanth, B. D. Gupta*, D. Mandal and S. Shekhar
Organometallics 2005, 24, 4454-4460
4. Chemically modified electrode based on an organometallic model of the [FeFe] hydrogenase active center.
V. Vijaikanth*, J. -F. Capon, F. Gloaguen*, P. Schollhammer, J. Talarmin
Electrochem. Commun. 2005, 7, 427-430
5. Synthesis, Characterization, and Variable-Temperature ^1H NMR Behavior of Organo-Bridged Dicobaloximes.
B. D. Gupta*, **V. Vijaikanth** and V. Singh
Organometallics 2004, 23(9), 2069-2079
6. Reactions of organocobaloximes with aryldisulfonyl chlorides
B. D. Gupta* and **V. Vijaikanth**
J. Organomet. Chem. 2004, 689(7), 1102-1109
7. Homolytic displacements at carbon in organocobaloximes: Reactions of organocobaloximes with free radical precursor with two radical centres
B. D. Gupta*, M. Oberoi, D. Mandal, U. Tiwari, R. Yamuna, **V. Vijaikanth** and V. Singh
Ind. J. Chem. 2001, 40A, 986-988
8. Synthesis, characterization and cis-trans influence in cobaloximes with nioxime
B. D. Gupta*, K. Qanungo, R. Yamuna, A. Pandey, U. Tewari, **V. Vijaikanth**, V. Singh, T. Barclay and W. Cordes
J. Organomet. Chem. 2000, 608, 106-114
9. Organocobaloximes with mixed-dioxime equatorial ligands: a one-pot synthesis
B. D. Gupta*, V. Singh, K. Qanungo, **V. Vijaikanth**, R. Yamuna, T. Barclay and W. Cordes
J. Organomet. Chem. 2000, 602, 1-4

10. Homolytic bimolecular displacement at carbon in organocobaloximes: intramolecular cyclizations
B. D. Gupta*, **V. Vijaikanth** and I. Das
Ind. J. Chem. 2000, 39A, 835-837
11. Cleavage of Co-C bond in allyl cobaloximes with Arenesulphenyl chloride
B. D. Gupta*, V. Dixit, V. Singh and **V. Vijaikanth**
Ind. J. Chem. 2000, 39A, 830-834
12. Homolytic displacements at two reactive centers: Organodicobaloximes and organodisulfonyl chloride
B. D. Gupta*, V. Singh, K. Qanungo, **V. Vijaikanth** and R. S. Sengar
J. Organomet. Chem. 1999, 582, 279-81
13. Organocobaloximes : synthesis, oxygen insertion and kinetics
B. D. Gupta*, **V. Vijaikanth** and V. Singh
J. Organomet. Chem. 1998, 570, 1-7

Papers Presented in Conference

International Conference

1. Modern Trends in Inorganic Chemistry (MTIC-XVII) held at CSIR-NCL, Pune and IISER Pune, India during December 11-14, 2017
Title: Synthesis, Characterization and Antimicrobial Activity Studies of Chlorocobaloximes
V. Vijaikanth*, S. Vasuki and S. Murugan
2. International Conference on "Electrochemical Science and Technology (ICONEST-2014) held at Indian Institute of Science Campus, Bangalore during August – 7th-9th, 2014
Title: Effect of Electrolyte and Pressure on the kinetics of reduction of aqueous Hexaammineruthenium(II) Ion at Pt and Au Microelectrode
V. Vijaikanth and T. W. Swaddle*
3. Modern Trends in Inorganic Chemistry –MTIC-XIV held at University of Hyderabad, Hyderabad, India, December 10-13, 2011
Title: Novel functionalized organometallic model complexes of the [fefe] hydrogenase active center – synthesis, characterization and electrochemical studies
V. Vijaikanth*, Frédéric Gloaguen, Philippe Schollhammer*

National Conference

1. National Seminar on Innovations In Chemical Sciences And Green Technology held at P.S.G.R.Krishnammal College for Women, Coimbatore during September 6th – 7th, 2018.
Title: Synthesis and Characterization of Cobaloxime Complexes with Functionalized Bases
S.Boopalan, V.Vijaikanth*
2. Symposium on Inorganic Chemical Biology held at Madurai Kamraj University, Madurai, India during March 17-18, 2017
Title: Synthesis, Characterization and Trans Influence Studies of Vitamin B12 Model complexes with base containing amino group
V. Vijaikanth*, C. Immanuel david and S. Vasuki

3. 3rd National Symposium in Chemistry, Panjab University, Chandigarh, India, Feb 2-4, 2001
Title: Synthesis and Characterization of Organobridged Dicobaloximes: NMR Studies
B. D. Gupta, V. Vijaikanth and V. Singh

Local-University/College Level

1. Delivered Invited Lecture at P.S.G.R.Krishnammal College for Women, Coimbatore, India on 20th August 2015
Title: Bioorganometallic Chemistry: Recent Advances
2. Delivered Guest Lectures P.S.G.R.Krishnammal College for Women, Coimbatore,
Title: Electronic Spectra of metal complexes

Lecture delivered Abroad

1. Delivered lecture at Universite de Bretagne Occidentale, Brest, France on Feb 24, 2005.
Title: Organocobaloximes and Organobridged Dicobaloximes
V. Vijaikanth and B. D. Gupta

Conferences / Symposiums Participated

1. One day national Seminar on Crystallography – an outreach program by the International Union of Crystallography -2017 (IUCR-2017), Karunya University, 17th February 2017
2. Two day Science Academies' Lecture Workshop on "Recent Advances in Chemical Sciences (RACS-15)" held at Karunya University on 18th and 19th February 2015
3. International Conference on Emerging Trends in Chemical sciences held at VIT university, Vellore during 5th December – 7th December 2014
4. 3rd National Conference on "Innovations in Chemistry-Health and Energy (i-CHEM-HE 2014)" organized by the Department of Chemistry, School of Sciences and Humanities, Karunya University, Coimbatore from 6th February to 8th February 2014.
5. National Symposium on Nanoscience and Nanotechnology-(nsnn-2013) at Department of Nanosciences and Nanotechnology, Karunya University, Coimbatore, India on 30th September and 1st October 2013.
6. Attended One day Seminar on "Phytochemistry and Analytical Techniques" held at Karunya University on 14th September 2013
7. Attended Workshop on "Nuclear Chemistry and Radioisotopes Detection Techniques" held at Karunya University on 23rd and 24th August 2013
8. Attended Workshop on "Structural Elucidation of Organic Compounds using NMR Spectroscopy" held at Karunya University on 17th and 18th October 2012
9. Attended Workshop on "Schrodinger Software for Chemistry Application" held at Karunya University on 17th and 18th October 2012
10. Attended Symposium on Modern Trends in Inorganic Chemistry – MTIC – XIII held at Indian Institute of Science, Bangalore during December 7-10, 2009.

Patents

Books / Book Chapters

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Research Group Members

Present Group Members

Doctoral Students

1. Mr. Boopalan
2. Ms. Sowmya

Masters Student

1. Mr. L. Sridhar

Past Group Members

M. Phil.Students

1. Mr. C. Immanuel David

Title: Synthesis, Characterization, Trans Influence and Antimicrobial Activity Studies of Chloro And benzyl Cobaloximes

Masters Student

1. N. Sebulon Prabhu

Title: Vitamin B12 Model Compounds: Synthesis and Characterization of Inorganic Cobaloxime Complexes Containing Aniline based Neutral Ligands

2. M. Likha Chandran

Inorganic Cobaloximes with bases containing Amino Group: Synthesis, Characterization and Cis-Trans Influence Studies

3. Dandamudi Alekhya

Title: Vitamin B12 Model Compounds: Inorganic and Organocobaloximes containing Pyridine: Synthesis, Characterization and Cis-Trans Influence Studies

4. Gabriella Raishma

Title: Vitamin B12 Model Compounds: Synthesis, Characterization and Cis-Trans Influence Studies of Cobaloximes and Antibacterial Studies of Copper Containing Cobaloximes

5. S. Vasuki

Title: Synthesis, Characterization and Antimicrobial Studies of Chlorocobaloximes

6. Aneesha Antony

Title: Synthesis, Characterization and Structure-Activity Relationship Studies of Functionalized Cobaloximes

Organizing Committee Member

- Member of Scientific Advisory Committee for the National Seminar on Innovations in Chemical Sciences and Green Technology held at P.S.G.R.Krishnammal College for Women, Coimbatore during September 6th – 7th, 2018.
- Worked as a Organizing Committee member for the Two day Science Academies' Lecture Workshop on "Recent Advances in Chemical Sciences (RACS-15)" held at Karunya University on 18th and 19th February 2015

- Worked as a conference facilitator for the 3rd National Conference on “Innovations in Chemistry – Health and Energy (i-CHEM HE 2014)” – held at Karunya University during 6th-8th February 2014
- Worked as a conference facilitator for the National Conference on Molecules to Materials – Solving Problems of mankind– held at Karunya University during 15th-16th February 2013