

CURRICULUM VITAE

A. Personal Information:

Name : Dr. Surendra Prasad
Present status & Mailing Address : Associate Professor of Chemistry,
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The University of the South Pacific (USP),
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Date of Birth : 02 February 1959
Sex & Marital status : Male & Married; Two daughters
Nationality : Indian

B. Key Experiences and Expertise:

I hold B.Sc. (Honours), M.Sc. and Ph.D. in Chemistry. I have 28 years of research experience along with 25 years of teaching and supervised postgraduate (M.Sc./Ph.D.) students. Organised and attended conferences, I have published 65 research papers in professional journals. My key experiences and expertise in brief are as follows:

- International reputation through outstanding research and scholarship and refereed publications in top ranked professional journals.
- Extensive experience of teaching at undergraduate and postgraduate levels by both Face to Face and Print/Distance & Flexible Learning (DFL) mode using modern technology.
- Created a focal point for research activity as demonstrated by attracting international scholars to undertake joint research/scholarly activities.
- Conspicuous scholar in the international/regional community being fellows of various learned academies, member of editorial boards of quality journals, article reviews & published works.
- Have a proven track record of successful supervision of postgraduate research students.
- Attended and presented research papers, invited/keynote lectures at many national, international conferences and chaired many sessions.
- Prepared project proposals, obtained internal, external funding for research/training & supporting research students in getting research grants for increasing resources to them.
- Edited books, conference proceedings and international journals.
- Developed and designed courses at undergraduate and postgraduate levels and short workshop and training in chemistry.
- Skills in analysing quantitative data and writing technical reports/research papers.
- Skills of planning work, leading academic groups, advising and communicating (both oral and written) with colleagues and higher authorities in the university system.
- Experience in administering and managing academic department and chairing committees.
- Organised conferences, workshops, public lectures and seminars at the university.
- Experience of working in diverse cultural and higher education settings.
- Established chemistry laboratories.

Details of my qualification, experiences and expertise are as follows:

C. Academic Qualifications:

Examination passed	Board/ University	Year of Passing	Class	Subjects taken
Ph.D.	IIT Kanpur	1990	Grade- I	Inorganic Reaction Kinetics*
Ph.D. (Course work)	IIT Kanpur	1987	CPI = 7.67/10	Advanced Courses in Chemistry
M.Sc. (Chemistry)	Univ. of Bihar Muzaffarpur	1984	1 st Class	Inorganic (Special) , Organic & Physical Chemistry
B.Sc. (Hons.)	Same	1980	1 st Class	Chemistry (Honours) , Physics & Maths.
Intermediate Science	Same	1978	1 st Class	Chem., Phys., Maths., Hindi, English & Logic
High School	B.S.E.B. Patna	1976	1 st Class	Chem., Phys., Maths., Hindi, Social Sc., English & Sanskrit

*Title of Ph.D. Thesis: Mechanistic Studies on Ligand Exchange Reactions of Hexacyanoferrate(II) and Their Applications for Trace Determination.

Other Academic Achievements:

- Passed Graduate Aptitude Test in Engineering (GATE) conducted by the Ministry of Human Resource Development, Government of India, which is equivalent to National Educational Test (NET) conducted by UGC-CSIR, Govt. of India.
- Passed a total of 24 units of pre-doctoral advanced courses (excluding Research, Graduate & Open Seminars) at Indian Institute of Technology (IIT) Kanpur, India.
- Passed Ph.D. Comprehensive Examination conducted by the Department of Chemistry, IIT Kanpur, India.
- Attended various specialized Workshops/Training.

D. Awards, Fellowships/Scholastic Achievements:

1. Rewarded Special Research Award, for five High Quality Research Publications in 2011, on 3rd December 2012 by the University of the South Pacific, Suva, Fiji.
2. Vice Chancellor's Prize for the Best Research Publication 2009 awarded on 7th April 2010 by the University of the South Pacific, Suva, Fiji.
3. Awarded Biotechnology National Associateship (1996) of the Department of Biotechnology, Government of India to work at the Centre for Biochemical Technology, Council of Scientific and Industrial Research (CSIR), Delhi, India.
4. Awarded Science and Engineering Research Council (SERC) Visiting Fellowship (1995) of Department of Science and Technology, Govt. of India to work at IIT Kanpur, India.
5. Awarded Senior Research Fellow from July 1988 to April 1990 by IIT Kanpur, India.
6. Awarded Junior Research Fellow from August 1986 to June 1988 by IIT Kanpur, India.
7. Awarded Junior Research Fellow from May 1985 to July 1986 by the Department of Environment & Forests, Government of India, New Delhi at IIT Kanpur, India.
8. Recipient of Merit Scholarship in M.Sc. (1982) by the University of Bihar, Muzaffarpur, India.

E. Professional Career/Work Experiences:

Teaching and Research Experience:

I have twenty five years in undergraduate and postgraduate teaching and twenty eight years in research experiences as shown below.

From	To	Position held	Employer
01.01.2008	Continue	Associate Professor of Chemistry	The University of the South Pacific, Suva, Fiji
01.01.2004	31.12.2007	Senior Lecturer in Chemistry	The University of the South Pacific, Suva, Fiji
01.03.2000	31.12.2003	Lecturer in Chemistry	The University of the South Pacific, Suva, Fiji
22.07.1997	26.02.2000	<i>Reader/Associate Professor of Chemistry</i>	CSJM University, Kanpur, India
20.08.1996	21.07.1997	Senior Lecturer in Chemistry	Delhi Institute of Technology (DIT), University of Delhi, Delhi, India
20.08.1991	19.08.1996	Lecturer in Chemistry	DIT, University of Delhi, Delhi, India
01.01.1987 Sem.I/1987	31.12.1990 Sem.II/1990	Senior Research Fellow and Tutor in Chemistry	Indian Institute of Technology (IIT), Kanpur, India
09.08.1984	15.05.1985	Lecturer in Chemistry	Bhagwanpur Degree College, Bhagwanpur, Siwan, Bihar, India
31.07.2006	30.11.2006	Short Term Scholar (Research Associate) on Sabbatical leave with Prof. P.K. Dasgupta, Texas Tech University, Lubbock, Texas, USA.	
22.07.2006	29.07.2006	Short Term Scholar with Dr. Ajay Kumar, Wyeth BioPharma, MA USA.	
15.12.2005	14.01.2006	Visiting Scientist with Prof. D. Kunzru, Department of Chemical IIT Kanpur, India.	
17.01.1996	16.10.1996	Biotechnology National Associate of the Dept. of Biotechnology, Govt. of India to work at the Centre for Biochemical Technology, Council of Scientific and Industrial Research (CSIR), Delhi, India.	
24.04.1995	23.07.1995	Science and Engineering Research Council (SERC) Visiting Fellow of Department of Science & Technology, Government of India to work at the Department of Chemistry, IIT Kanpur, India.	
10.05.1991	19.08.1991	Senior Project Scientist, Department of Chemical Engineering, IIT Kanpur, India.	
30.04.1990	09.05.1991	Project Scientist, Department of Chemical Engineering, IIT Kanpur, India.	
01.07.1988	30.04.1990	Senior Research Fellow in Chemistry, IIT Kanpur, India.	
01.08.1986	30.06.1988	Junior Research Fellow in Chemistry, IIT Kanpur, India.	
16.05.1985	31.07.1986	Junior Research Fellow in Chemistry of the Department of Environment and Forest, Govt. of India at IIT Kanpur, India.	

Subject/Courses Taught:

I have taught various undergraduate and postgraduate courses and supervised research students. While teaching, I was involved in curriculum development, have taught following courses:

(i) At Indian Institute of Technology (IIT), Kanpur, India

CHM101: General Chemistry; CHM102: General Chemistry Laboratory; CHM222: Physical Chemistry (Soft Core).

(ii) At Delhi Institute of Technology (DIT), University of Delhi, Delhi, India

ICE104: Chemistry; COE104: Chemistry; ECE104: Chemistry; ICE108: Chemistry Laboratory
COE108: Chemistry Laboratory; ECE108: Chemistry Laboratory; ECE204: Engineering Materials
and ICE302: Industrial & Analytical Instruments.

(iii) At Institute of Engineering and Technology, CSJM University, Kanpur, India

C-1: Chemistry (Physical Chemistry, Organic Chemistry and Inorganic Chemistry);
C-2: Applied Chemistry (all applied aspects).

(iv) At the University of the South Pacific, Suva, Fiji

CH100: Concepts and Compounds; CH101: Chemical Principles; CH105: Chemistry for Applied Sciences; CH203: Physical Chemistry; CH204: Inorganic Chemistry; CH303: Applied Chemistry, CH306: Selected Topics in Chemistry; CH312: Environmental Chemistry; CH400: Research Methods in Chemistry; CH414: Instrumental Analysis; CH420: Research Projects in Chemistry; CH421: Quantitative Analysis; CH423: Advanced Inorganic Chemistry; CH451: Advanced Environmental Chemistry and SC400: Research Methods.

Experience in DFL/Extension Education:

- After joining USP, I have been involved in DFL teaching of CH100, CH101 and CH102. I have conducted tutorials, laboratory classes at Suva and other USP campuses.
- While I was Division Coordinator and Acting Head of School, two chemistry courses CH101 and CH102 were converted from 30-week courses to 15 week courses. It was a part of Synchronization of the courses to be offered at the same time in a semester.
- I have taught CH204: Inorganic Chemistry offered through Distance and Flexible Learning (DFL)/Print mode since Semester 2, 2007.
- I, with the help of other colleagues in the department, I have developed and contributed to Print/DFL course material for CH204.
- While in Delhi Institute of Technology, University of Delhi, Delhi, I was involved in in Extension Education work of Indira Gandhi National Open University, New Delhi, India.

Since my joining the University of the South Pacific on 1st March 2000, I have taught courses of all sections of Chemistry, i.e. Inorganic, Physical, Organic, Organometallic, Analytical and Environmental Chemistry. Except two courses, I have taught all the postgraduate courses available in Chemistry at USP. Based on my performance in teaching and research, I have been rated as ‘*Star*’ performer by USP Staff Review Committee. Besides teaching face to face on campus courses, I am regularly conducting satellite/USPNet tutorials for CH101 and CH204 students in USP campuses.

Presently, I am teaching and coordinating CH451: Advanced Environmental Chemistry which includes topics in areas of inorganic and organic chemistry. I am also teaching environmental organic chemistry.

F. International Recognitions:

(i) Member of Editorial Boards of International Journals:

1. Chair (Editor-in-Chief), Editorial Board, South Pacific Journal of Natural and Applied Sciences (SPJNAS) published, on behalf of FSTE, USP, by CSIRO Australia since 2012.
<http://www.publish.csiro.au/nid/248/aid/9690.htm>
2. Editor, International Letters of Chemistry, Physics and Astronomy (ILCPA) since 2013.
<http://www.ilcpa.pl/editors/>
3. Guest Editor, Microchemical Journal (Elsevier) Special Issue: *Analytical Chemistry in Australasia*; 2012-13.
4. Member Advisory Board, Journal of Applicable Chemistry since 2012.
<http://www.joac.info/AdvisoryBoard.aspx>
5. Member, International Editorial Advisory Board, International Journal of Chemistry since 2011.
6. Member, Editorial Board, American Journal of Analytical Chemistry, USA since 2010.
<http://www.scirp.org/journal/ajac/>
7. Chief Editor, Volume 28 (2010) of SPJNAS published by CSIRO Australia.
<http://www.publish.csiro.au/nid/248/aid/9690.htm>
8. Member, Editorial Board, Journal of Applied Chemical Research since 2010.
<http://www.jacr.kiau.ac.ir/>
9. Member, Editorial Board, Microchemical Journal (Elsevier) since 2009.
<http://www.journals.elsevier.com/microchemical-journal/editorial-board/>
10. Member, Editorial Board, Asian Journal of Chemical & Envital. Research; since 2008.
<http://www.ajcer.org/>
11. Member, Editorial Board, Rasayan Journal of Chemistry since 2008.
<http://rasayanjournal.com/Editorial-Board/Editorial-Board.html>
12. Associate Editor (Chemistry), SPJNAS since 2008.
<http://www.publish.csiro.au/nid/248/aid/9690.htm>
13. Member, Editorial Advisory Board, Asian Journal of Chemistry since 2003
<http://www.asianjournalofchemistry.co.in/User/Journal/editorial-board.aspx>
14. Member, Editorial Advisory Board, International Journal of Chemical Sciences since 2003.
<http://www.sadgurupublications.com/Journal.aspx?PageID=13>

(ii) Member of International Conference Committees:

1. Member and Chair, Environmental Chemistry section, International Conference on Applied Chemistry (ICONAC), 5-7 March 2014, Fiji National University, Suva, Fiji.
2. Member, International Committee, 4th Asian Conference on Coordination Chemistry (4th ACCC), 4-7 November 2013, International Convention Centre, Jeju, Korea.
3. Member, International Conference on Chemical Sciences, 20-22 June 2012, Colombo, Sri Lanka.
4. Member, International Committee, 3rd ACCC, 17-20 October 2011, New Delhi, India.
5. Chair, Organizing committee, International Conference on Chemistry, Environment and Climate Change (ICCECC), 14-16 September 2011, USP, Suva, Fiji.
6. **Member, Indian Council of Chemists (ICC), Young Scientists Award Committee 2009.**
7. Member, International Committee, 2nd ACCC, 1-4 November 2009 held at Nanjing, China.
8. Member International Committee, 1st ACCC, 29 July - 2 August 2007 held at Okazaki, Japan.
9. Member, Planning Committee, International Conference on Coordination Chemistry, 21-26 July 2002, University of Heidelberg, Germany.

(iii) Reviewer of Articles for Scientific International Journals:

I have been editorial referee/reviewer of scientific articles the following International Journals (62):

- Journal of Environmental Chemical Engineering since 2013
- Materials Science in Semiconductor Processing since 2013
- African Journal of Environmental Science and Technology since 2012
- Waste and Biomass Valorization since 2012
- Journal of Separation Science since 2012
- National Academy Science Letters since 2012
- E-Journal of Chemistry since 2012
- Natural Product Communications since 2012
- Natural Product Research since 2012
- Desalination and Water Treatment since 2012
- Agricultural Science Research Journal, since 2012
- African Journal of Biotechnology since 2012
- AOAC International since 2012
- Microchemical Journal since 2011
- Biochimie since 2011
- The Journal of Chemical Education since 2011
- Microchimica Acta since 2011
- Synthesis & Reactivity in Inorganic, Metal-Organic and Nano-Metal Chemistry since 2011
- Atmospheric Environment since 2011
- Transactions of the Royal Society of South Africa since 2011
- Research on Chemical Intermediates since 2011
- American Journal of Analytical Chemistry since 2010
- Analytical Letters since 2010
- European Journal of Chemistry since 2010
- Arabian Journal of Chemistry since 2010
- International Food Research Journal (formerly ASEAN Food Journal) since 2010
- Bulletin of the Chemical Society of Ethiopia since 2010
- International Journal of Phytoremediation since 2010
- Journal of Agricultural and Food Chemistry since 2010
- Collection of Czechoslovak Chemical Communications since 2010
- Water Science and Technology since 2010
- Water Science and Technology: Water Supply since 2010
- Analytical Methods (Royal Society of Chemistry, London) since 2009.
- Research Letters in Inorganic Chemistry since 2009.
- Phosphorus, Sulfur, and Silicon and the Related Elements since 2009.
- Sensor Letters since 2009.
- European Journal of Medicinal Chemistry since 2008.
- Journal of Food Composition and Analysis since 2008.
- Food Chemistry since 2008.
- Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy since 2008.
- Desalination since 2008.
- Environmental Monitoring and Assessment since 2008.
- Journal of Molecular Catalysis A: Chemicals since 2008.
- Journal of Indian Chemical Society since 2008.
- Journal of the Iranian Chemical Research since 2008.
- Rasayan Journal of Chemistry since 2008.

- International Journal of Environmental Analytical Chemistry since 2007.
- Applied Biochemistry and Biotechnology since 2007.
- Pesticide Biochemistry and Physiology since 2007.
- Chemical Engineering Journal since 2007.
- Chemical Papers (International Journal) since 2007.
- Journal of Hazardous Materials since 2007.
- The Egyptian Journal of Chemistry since 2006.
- Analytica Chimica Acta since 2004.
- Chemosphere since 2004.
- International Journal of Chemical Kinetics since 2004.
- Analytical and Bioanalytical Chemistry since 2004.
- Current Analytical Chemistry since 2004.
- International Journal of Chemical Sciences since 2003.
- Asian Journal of Chemistry since 2002.
- South Pacific Journal of Natural Sciences (SPJNS) since 2000.
- Talanta since 1994.

G. Affiliation with Professional Societies:

1. Member, Royal Australian Chemical Institute, Australia since 2009.
2. Life Member of the Indian Science Congress, Calcutta, India [L-9242/2001].
3. Member, Research Board of Advisors, American Biographical Institute, USA since 2000.
4. Member, Chemical Society of the South Pacific (CSSP), USP, Suva, Fiji, since 2000.
5. Life Member, Indian Society of Chemists & Biologists, CDRI, Lucknow, India [L/167/1996].
6. **Fellow** of the Indian Chemical Society (FICS), Calcutta, India [F/4275(L.M.)/1994].
7. Life Member, Indian Society for Technical Education, New Delhi, India [LM-19737/1994].
8. **Fellow** of the Indian Council of Chemists (FICC), Agra, India [LF-277/1993].

H. Administrative Experience: Twenty two years in various capacities along with teaching.

Despite my busy teaching and research schedule, I always find time to contribute to academic administration at School, Faculty and the University levels. I have long administrative experience starting from 1991 at the Delhi Institute of Technology (DIT), University of Delhi, Delhi, India as Deputy Registrar and Administrative Officer. Then I was Chairman, Admission Committee Engineering Entrance Exam-1998 and Chairman, Counseling Board of Engineering Admission-1998 at the Institute of Engineering and Technology, CSJM University, Kanpur, India.

At USP, I was (i) Acting Head, Department of Chemistry (2001-2002) (ii) Member (2000-2005) and Secretary (2005) of School of Pure and Applied Sciences (SPAS) Research Committee (iii) Member, University Research Committee (2005) (iv) Member, Media Advisory Committee (2001-2004) (v) Member, University Student Exchange Scheme Committee (2002-2005) (vi) Division Coordinator (2010), Division of Chemical Sciences (vii) on many occasions Acting Head of School (2010-2011), School of Biological and Chemical Sciences (SBCS) (viii) Member, Faculty Academic Standard & Quality Committee (2010) (ix) Associate Editor (2008-continue) & Chair (2012-continue), Editorial Board of South Pacific Journal of Natural and Applied Sciences (x) Member of Senate (2009-2012) (xi) Member, Joint Committee of the Council and Senate for the appointment of the Deputy Vice Chancellor of the University of the South Pacific (2010).

I have made significant administrative contributions to the SBCS, FSTE, USP in respect of curriculum development, course review, course coordination, laboratory management, training manpower, etc. Thus my administrative leadership/management role and effectiveness on that role

may be judged by having a glimpse of my involvement in discharging administrative duties as shown in the following table:

From	To	Position held
07.04.2011	Continue	USP Representative on Board of Exam, College of Medicine, Nursing & Health Sciences, Fiji National University, Suva, Fiji.
10.05.2011	16.05.2011	Acting Head of School, School of Biological & Chemical Sciences (SBCS), Faculty of Science Technology and Environment (FSTE), The University of the South Pacific, Suva, Fiji.
15.11.2010	13.02.2011	Acting Head of School, SBCS, FSTE, USP, Suva, Fiji.
10.05.2010	30.05.2010	Acting Head of School, SBCS, FSTE, USP, Suva, Fiji.
07.05.2010	31.12.2011	SBCS Representative on the Advertisement Committee of FSTE, USP, Suva, Fiji.
15.02.2010	31.12.2010	Member, Faculty Academic Standard & Quality Committee (FASQC), USP, Suva, Fiji.
15.02.2010	31.12.2010	Division Coordinator (Head of the Division), Division of Chemical Sciences, FSTE, USP, Suva, Fiji.
01.08.2009	31.07.2012	Member of the Senate, The University of the South Pacific, Suva, Fiji.
15.07.2009	Continue	Group Leader, Natural Resources & Food Science Research group, FSTE, USP, Suva, Fiji.
11.05.2007	31.12.2007	Faculty of Science and Technology (FST) Representative on USP Open Day Committee 2007, USP, Suva, Fiji.
05.04.2007	31.12.2008	Chemistry Division's Representative on Workloads Working Group, FST, USP, Suva, Fiji.
31.01.2007	Continue	Member, FSTE Renewable Energy Research group, USP, Suva, Fiji.
15.03.2006	Continue	Member, FSTE Environment and Climate Change Science Research group, USP, Suva, Fiji.
15.03.2006	Continue	Member, FSTE Natural Resources & Food Science Research group, USP, Suva, Fiji.
15.03.2006	Continue	Member, FSTE Open Research group, USP, Suva, Fiji.
01.04.2006	31.12.2011	Chemistry Division's Representative on Students Staff Liaison Committee (SSLC), FSTE, USP, Suva, Fiji.
01.01.2005	31.12.2005	Chemistry Department Representative on School of Pure and Applied Sciences (SPAS) Safety Committee, USP, Suva, Fiji.
01.01.2005	31.12.2005	Member, University Research Committee (URC), USP, Suva, Fiji.
01.01.2005	31.12.2005	Secretary, SPAS Research Committee, USP, Suva, Fiji.
01.11.2000	31.12.2005	HOD, Chemistry Department's Representative on SPAS Research Committee, USP, Suva, Fiji.
01.07.2001	31.12.2004	Head of School (HOS), SPAS Representative on Media Advisory Committee, USP, Suva, Fiji.
17.12.2001	11.01.2002	Acting Head, Department of Chemistry, SPAS, USP, Suva, Fiji.
01.01.2002	31.12.2005	HOS, SPAS Representative on University Exchange Scheme Committee, USP, Suva, Fiji.
01.05.1998	30.04.1999	Chairman , Admission Committee Engineering Entrance Exam-1998, C.S.J.M. University, Kanpur, India.
01.05.1998	30.04.1999	Chairman , Counseling Board, Engineering Admission-1998, CSJM University, Kanpur, India.
22.07.1997	26.02.2000	Head, Department of Chemistry, Institute of Engineering and Technology (IET), CSJM University, Kanpur, India.

22.07.1997	26.02.2000	Member of various committees in IET Kanpur, India.
20.08.1991	21.07.1997	Head, Department of Chemistry, DIT, University of Delhi, Delhi, India.
15.11.1996	17.02.1997	Administrative Officer (Registrar) (Joint Charge), DIT, University of Delhi, Delhi, India.
12.03.1992	27.06.1994	Deputy Registrar (Joint Charge), DIT, University of Delhi, Delhi, India.
20.08.1991	21.07.1997	Member of various committees in DIT, University of Delhi, Delhi, India.

I. Areas of Research Interest:

- Development of Analytical Methods (Analytical Chemistry).
- Analytical Methods Applications to Environmental Analysis (Environmental Chemistry).
- Microbial Degradation of Organic Environmental Pollutants (Biotechnology).
- Food Chemistry: Analytical, Nutritional and Clinical Methods for Determination of Toxicants.
- Kinetics and Mechanism of Ligand Substitution & Oxidation Reactions.
- Synthesis, Characterization, Biological & Analytical Studies of Inorganic Complexes.
- Pyrolysis of Hydrocarbons.

The analytical and environmental application of kinetics of catalysed and uncatalysed reactions of various transition metal complexes is my major field of research interest. Food Chemistry and synthesis, characterization, biological & analytical studies of novel coordination compounds form an equally important aspect of my research work. I am currently working in following research areas.

(i) Analytical and Environmental Chemistry

I have done extensive and pioneering work for initiating a research programme in emerging area of research in Analytical Chemistry, 'kinetic methods of analysis' besides the detailed understanding of reaction dynamics of the system. It is also called 'reaction rate methods'. It has been demonstrated that it is possible to determine catalytic or inhibitor species (*environmental pollutants, toxicants as well as species of pharmaceutical and biological interest*) by measuring their effects on reaction rates, down to ppm/ppb levels. *Most recently, cost effective method for the adsorptive removal of fluoride from water samples using Zr-Mn composite material is developed, and ICP-OES assessment of heavy metal contamination in tropical marine sediments have been studied. In addition, cost effective methods for the determination of antitubercular drug isoniazid and D-Penicillamine in pure and pharmaceutical formulations have also been developed.*

I have done work on the development of cost effective methods for the determination of Hg^{2+} , Cu^{2+} , Se^{2+} , Se^{4+} , Ru^{3+} , cysteine, thiosulphate, maleonitrilodithiolate (MNDT: $\text{S}_2\text{C}_2(\text{CN})_2^{2-}$), thioglycolic acid, NO_3^- , NO_2^- , etc. in environmental, food and vegetables samples using different indicator reactions. The methods are simple, sensitive, selective and economical, for environmental applications, compared to atomic absorption spectrophotometric (AAS), radio-isotope techniques, mass spectrometry, activation analysis, etc. To the best of my knowledge no attempt has been made towards the development of catalytic kinetic methods by any Government or non-government agency of Fiji and in USP region. Still there is ample scope in this field without spending much funds. *The research programme, I have started is unique in the South Pacific region because kinetic methods of analysis is initiated for the first time in USP and is of great regional contributions being cost effective technique.*

(ii) Ligand Exchange Reactions: Analytical & Environmental Applications

I have made significant contributions towards enhancing understanding of the mechanism of ligand exchange reactions. I have succeeded in studying the reaction dynamics of relatively slow as well as fast ($t_{1/2} = \text{m sec.}$) reactions and in unraveling the mechanistic features of the reactions occurring in four, five and six steps. The kinetics and mechanism of ligand exchange reactions involving polydentate ligands viz. aminopolycarboxylates, polyamines, polychromics coordinated to Mn(III), Fe(III), Zn(II) and Ni(II) centres by cyanide ions and 4-(2-pyridylazo)resorcinol (PAR) have been investigated.

In addition to above, the kinetics of catalysed and uncatalysed monodentate ligand exchange reactions of hexacyanoferrate(II) complex with N-methylpyrazinium ion (Mpz^+), α -nitroso β -naphthol (α -N β -N), pyrazine and 2-methyl pyrazine have been investigated and the suitable mechanisms have been proposed. *Very recently, the kinetics and mechanistic studies of the formation of an anti-tubercular complex $[\text{Fe}(\text{CN})_5(\text{INH})]^{3-}$ through mercury(II)-catalyzed ligand substitution reaction have also been studied and published in international journal. Most of the reactions studied have been used to develop analytical methods for the determination of traces of environmental pollutants, toxicants, species of biological interest in pharmaceutical or food samples.*

(iii) Food Chemistry

My research interest also involves development of analytical methods and application to predict the safety and quality of food products. I am involved in fundamental and applied research with special attention to ethnic and cultural aspects of food. Thus I have worked on the projects and supervised/supervising M.Sc./Ph.D. students in the area of food chemistry. The flow injection analysis (FIA) and spectrophotometric techniques have been developed to determine NO_3^- and NO_2^- respectively in vegetables and water samples. These methods have been applied to determine of NO_3^- and NO_2^- in commonly consumed leafy, fruit and root vegetables of Fiji. Two research papers were presented at 41st New Zealand Institute of Food Science and Technology Inc Conference, 19-21 June 2007 at Wellington, NZ. Most recently a paper 'Food Security–Nitrate Interference' was presented at the International Conference in Food Science and Nutrition, 2-4 April 2012, at Sabah, Malaysia which is published as full paper in the conference proceeding. *The methods developed are simple, sensitive, selective and economical, and very much relevance to the Pacific region.*

The research in Food Chemistry has resulted in the publication of two papers in the most prestigious A* journal, Food Chemistry (Elsevier) 106, 772-780, 2008 and 116, 561-566, 2009 and other in 'A' ranked Journal of Food Science (Institute of Food Chemists, USA), 78, C1143-C1148, 2011. These research reports on toxic nitrate values found in most commonly consumed vegetables in Fiji. *All these papers and my research in the area of food chemistry are of great regional contributions. The data provided by the above studies are of great value in identifying vegetables that have toxic nitrate levels, a possible causative of cancer, and raising public awareness of this issue. Thus I was awarded "2009 Vice Chancellor's Best Research Publications Award".*

(iv) Synthesis, Characterization, Biological & Analytical Studies of Inorganic Complexes

I am working in the area of Open Research (FSTE thematic area). For synthesis, structural elucidation, analytical applications and also to study the antibacterial and antifungal properties of inorganic complexes, many inorganic complexes have been synthesised and studied with the excellent outcome in the form of publications in international journals (*vide infra*). *It has been confirmed that majority of the synthesized and characterized complexes have antibacterial and antifungal properties/activities and may further be investigated for their drug application.*

A series of mono- and binuclear ruthenium complexes of the type $[\text{Cp}(\text{EPh}_3)\text{RuL}]^{+/}$, $[(\text{bipy})_2\text{RuL}]^{0/2+}$, $[\text{Ru}_2\text{Cp}_2(\text{EPh}_3)_4\text{L}]$, $[\text{Ru}_2\text{Cp}_2(\text{EPh}_3)_3\text{L}]^{2+}$ and $[\text{Ru}_2\text{Cp}(\text{EPh}_3)_2(\text{bipy})_2]^{+/3+}$ [$\text{E} = \text{P}, \text{As}, \text{Sb}$; $\text{L} = \text{S}_2\text{C}_2(\text{CN})_2^{2-}$ or $(\text{C}_6\text{H}_5\text{CH}_2)\text{S}_2\text{C}_2(\text{CN})_2$] have been synthesized exploiting the nucleophilicity of S and N in L. The complexes have been characterized by microanalysis, conductance, IR, ^1H and ^{31}P NMR and UV-visible spectral data. Also synthesis magneto-spectral and thermal characteristics of some lanthanide(III) chloro complexes derived from 4[N-(4'-hydroxy-3'-methoxybenzalidene)amino]antipyrine semicarbazone; 4[N-(3',4',5'-trimethoxybenzalidene)-amino]antipyrine semicarbazone; 4[(furan-2-ylmethylene)amino]-1,5-dimethyl-2-phenylpyrazol-3-one; isonicotinic acid(3',4',5'-trimethoxybenzylidene)hydrazide and some mixed ligand complexes of thorium(IV) and dioxouranium(VI) with semicarbazones as primary ligand and sulfoxide as secondary ligand and penta-coordinated complexes of oxovanadium(IV) derived from thiosemicarbazones of 4-aminoantipyrine have been carried out. Besides these, synthesis and spectral investigations of some platinum metals ions coordination compounds of 4[N-(furan-2-carboxalidene)-amino]antipyrine thiosemicarbazone and 4[N-(3',4',5'-trimethoxybenzalidene)-amino]antipyrine thiosemicarbazone has been carried out. Also, synthesis, magneto-spectral, biological and thermal investigations of cobalt(II) and nickel(II) coordination compounds of thiosemicarbazones derived from 4-aminoantipyrine and hydrazones of isonicotinic acid hydrazide has been done. In addition, the synthesis, magneto-spectral, electrochemical, thermal and biological studies of a novel series of Ni(II) complexes of N-isonicotinamido-furfuralaldimine, N-isonicotinamido-3',4',5'-trimethoxybenzaldimine, and Nisonicotinamido-cinnamalidene have been carried out.

In continuation of the most recent work on synthesis, characterization and biological evaluation of a novel series of mixed ligand complexes of lanthanides(III) with 4[N-(furfural)amino]antipyrine semicarbazone as primary ligand and diphenyl sulfoxide as secondary ligand; and synthesis, antibacterial and antifungal activities of some cobalt(II) and nickel(II) complexes of thiosemicarbazones, further the effect of picolines on the stereochemistry of lanthanide(III) nitrates coordination compounds of 4[N-Furfural)amino]antipyrine semicarbazone and antibacterial activities have been studied. *It has been established that many of the complexes studied have potent antibacterial and antifungal properties/activities. For analytical and environmental applications, determination of aniline using metallo-tetraazaporphyrin dyes in CH_2Cl_2 solutions, and catalytic chemical and electrochemical wet oxidation of phenol using new copper(II) tetraazamacrocyclic complexes under homogeneous conditions have also been carried out and published in top most journals 'Analytica Chimica Acta' and Journal of Molecular Catalysis A: Chemical.*

Post-Doctoral Research Experience

- (v) **Analytical & Environmental Chemistry: *During Sabbatical Leave at Texas Tech University, Lubbock, USA.***

While on sabbatical leave from 31 July–30 November 2006, I worked at Texas Tech University, Lubbock, USA. I worked on the project entitled, “Development a Compact Microanalysis System for Detection and Determination of Arsenic in Water Samples”, sponsored by the National Science Foundation, USA. To diversify my research work in enzyme kinetics, I also visited and interacted with scientists of the Wyeth BioPharma, Andover, Massachusetts, USA from 22-29 July 2006.

- (vi) **Microbial Degradation of Organic Pollutants: *As Biotechnology National Associate at the Centre for Biochemical Technology, Council of Scientific and Industrial Research, Delhi, India.***

I was awarded Biotechnology National Associateship by the Department of Biotechnology, Government of India to have specialized training/research on the project entitled, "Application of Immobilized Microbial Consortia for the Biodegradation of Organic Pollutants in Waste Waters".

In this, I specifically studied the biodegradation of phenol in effluent from the Mathura Oil Refinery of India. The Chemical Oxygen Demand (COD) and Biochemical Oxygen Demand (BOD) test were used to measure the biodegradable organic matter present i.e. strength of pollution, in waste waters. Besides, the standardization of optimum growth of isolated bacteria in suitable media have been carried out.

(vii) Photophysics of TICT Molecules in Micelles and Host-guest Systems: As Science and Engineering Research Council (SERC) Visiting Fellow at the Dept. of Chemistry, IIT, Kanpur, India.

During SERC Visiting Fellowship, I worked on project entitled, "Photophysics of Twisted Intramolecular Charge Transfer (TICT) Molecules in Micelles and Host-guest Systems" with Professor S.K. Dogra. Under this project, I designed experiments to study the TICT behaviour of 2-(2'-N,N-dimethylaminophenyl)benzothiazole (DMAPBT) molecule. To get expertise and acquaintances in this area I studied the effects of solvents on absorption and fluorescence spectra of DMAPBT fluorophore. The fluorescence spectra in each solvent were corrected and fluorescence quantum yield was calculated. Life time of DMAPBT was found to be very short to measure with nanosecond spectrofluorimeter hence it was calculated theoretically using Strickler-Berg's equation employing the absorption and fluorescence data. After the preliminary studies in homogeneous single solvent, I tried to explore the properties of β -cyclodextrin using DMAPBT as fluorophore.

(viii) Reduction of Coke Formation During Naphtha Pyrolysis: As Project Scientist & Senior Project Scientist at the Department of Chemical Engineering, IIT Kanpur, India.

As a senior team member, I was involved in the project entitled, "Reduction of Coke Formation During Naphtha Pyrolysis". In this project I was involved in the analysis of organic products obtained in the pyrolysis of naphtha using Gas Chromatographic Techniques-TCD/FID. I was also involved at trace level spectrophotometric analysis of toxic organic (organophosphorus) compounds which were used as inhibitor to reduce the coke formation. Besides, we studied morphology and trace metal content of the coke deposited using a Scanning Electron Microscope (SEM) equipped with an Energy Dispersive X-ray Analyser (EDAX). The pyrolysis experiments were conducted with or without additives i.e. benzyl diethylphosphite or triphenylphosphine sulfide at atmospheric pressure in the temperature range 1073-1103 K.

J. Research Collaborations:

Collaboration is a key part of my research along with mentoring junior colleagues and students. I work in collaboration with colleagues, scientists, chemists in other faculty in USP as well as from different countries such as India, USA, Japan, Australia, New Caledonia, Fiji, etc.

International Collaborations: International collaborative researches were done with the following scientists:

- Prof. P.K. Dasgupta, Department of Chemistry and Biochemistry, University of Texas, Arlington, TX, USA (He is co-supervisor of one Ph.D. and one M.Sc. student).
- Dr. Graham Lyons, Project Leader, SPC ACIAR Project: PC/2010/063, Discipline of Plant & Food Science, School of Agriculture, Food & Wine, University of Adelaide, Waite Campus, Glen Osmond, South Australia (He is co-supervisor of M.Sc. student).
- Dr. Abhinav Agarwal, Division of Cardiovascular Medicine (Chemistry), Department of Medicine, University of Louisville, KY 40202, USA (Joint research).
- Ms. Leocadie Jamet and Mr. Laurent Veyseyre, The Institute of Research and Development, Noumea, New Caledonia (for ICP-AES training).
- Prof. R.M. Naik, Department of Chemistry, Lucknow University, Lucknow, India (Joint research).

- Associate Professor Dr. Dinesh Kumar, Department of Chemistry, Banasthali University, Banasthali, India (Joint research).
- Associate Professor Ajaya Kumar Singh, Department of Chemistry, Government V.Y.T. P.G. Autonomous College, Durg, Chhattisgarh, India (Joint research).
- Associate Professor R.K. Agarwal, Department of Chemistry, Lajpat Rai P.G. College, Chaudhary Charan Singh University (formerly Meerut University), Sahibabad, Gaziabad, India (Joint research).
- Prof. Musafumi Yoshida, Department of Natural Sciences, Faculty of Knowledge Engineering, Tokyo City University, Tokyo, Japan (Joint research)
- Dr. Shio Murakami, Totolab School of Herbal Medicine, 204,2-14-4 Saginuma, Miyamae-ku, Kawasaki, Kanagawa 216-0004, Japan (Joint research).
- Dr. Tadaaki Sotou, Department of Pharmacognosy, Faculty of Pharmaceutical Sciences, Toho University, Funabashi, Chiba 274-8510, Japan (Joint research).
- Dr. Akiko Yamada Taniguchi, Department of Nutrition and Dietetics, Kamakura Women's University, Kanagawa 247-8512, Japan (Joint research).

Internal/Regional Collaborations: Internal/Regional collaborative researches with the following scientists:

- Prof. William Albersberg, Director, Institute of Applied Sciences, USP (Joint supervision of Ph.D. student).
- Dr. Jagdish Bhati, Senior Lecturer in Agriculture Economics, School of Economics, FBE (He is co-supervisor of my two M.Sc. students).
- Dr. Tevita Voro, Lecture in Chemistry, School of Biological and Chemical Sciences (SBCS) (Worked on a joint FRC funded project).
- Dr. Romila Devi, Lecture in Chemistry, SBCS (Joint supervision of M.Sc. student).
- Dr. Matakite Maata, Senior Lecture in Chemistry, SBCS (Worked on a joint FRC funded project).
- Dr. Anirudh Singh, Associate Professor in Physics, SEP (Joint M.Sc. student supervision in renewable energy).
- Prof. Rajendra Prasad, Fiji National University (FNU) (Co-supervisor of Ph.D. student; we also worked on joint FRC funded project).
- Prof. T.K. Raja, Former Professor of Chemistry in FNU (Worked on a joint research paper).
- Mr. Adrian A. Chetty, FNU (Associate researcher on a joint project).
- Dr. Siosuia Halavatau, Australian Centre for International Agricultural Research (ACIAR), C/o Secretariat of the Pacific Community, Suva, Fiji (Co-supervisor of M.Sc. student).

K. Postgraduate Students' Supervision:

Ph.D. Theses:

1. Chemical and biological monitoring of selective heavy metal species in inland, coastal waters soils and sediment samples in Viti Levu (Fiji). Student: Mr. Vimlesh Chand (In progress).
2. Intake and risk assessment of nitrate, nitrite in Fiji's foods, beverages and vegetables. Student: Mr. Adrian A. Chetty (In progress)
3. Bioavailability of iron, zinc and calcium in commonly consumed foods in Fiji. Student: Ms. Poonam Singh (In progress).

M.Sc. Theses:

1. Analysing the promising underutilised leafy food crops of Fiji for carotenoids, minerals and protein contents. Student: Ms. Rita Roshni (In progress).
2. Examining chemical fertility of soils in Taveuni, Fiji: The Problem of Soil Health and Food Security. Student: Ms. Sofina Nisha (In progress).

3. A full-scale energy balance analysis of MSW for Energy Production in Fiji. Student: Ms. Shirleen Swapna (In progress).
 4. Determination of iodine content in Fiji food and dairy products using spectrophotometric kinetic method. Student: Ms. Veena Bilimoria (In progress).
 5. Folate levels in selected cooked foods. Student: Ms. Prayana P Maharaj (In progress).
 6. Application of kinetic catalytic spectrophotometric method for the speciation of selenium in water samples. *Awarded M.Sc., September 2007*; Student: Mr. Vimlesh Chand.
 7. Spectrophotometric study of the effects of freezing and cooking on the nitrate-nitrogen concentration in Fiji's vegetables, *Awarded M.Sc., September 2008*. Student: Mr. Adrian A. Chetty.
 8. Catalytic kinetic method for the determination of nitrite and its application in water and vegetable samples in Fiji, *Awarded M.Sc., December 2008*. Student: Mr. Tuikolongahau Halafihi.
 9. Bagasse to ethanol: studies on alternative pre-treatment methods for efficient saccharification and fermentation. *Awarded M.Sc., September 2010*. Student: Ms. Roselyn Lata.
 10. Biodegradation of phenol using free and immobilized microorganisms, at Centre for Biochemical Technology (CSIR), Delhi, India. Student: Mr. Neeraj Pahuja. *Awarded M.Sc. 1997*.
 11. Design of a digital pH meter as low cost instrument, at Delhi Institute of Technology, University of Delhi, Delhi, India. Bachelor of Engineering (equivalent to M.Sc.) *Awarded 1992*.
 12. Indigenous Blood Cell Counter, at Delhi Institute of Technology, University of Delhi, Delhi, India. Bachelor of Engineering (equivalent to M.Sc.) *Awarded 1992*.
- SC400: Research Methods; major project proposals writing for 2 students in 2012, 3 students in 2011, 5 students in 2010, 2 students in 2009 and 2 students in 2008.
 - CH421: Quantitative Analysis; major projects for 2 students in 2012, 3 students in 2011, 2 students in 2009, 3 students in 2007.
 - CH423: Advanced Inorganic Chemistry; major projects for 2 students in 2008.
 - CH421: Quantitative Analysis; major projects for 6 students in 2001, 2002, 2003, 2004 and 2005.
 - CH400: Research Methods in Chemistry; major projects for 8 students in 2001, 2002, 2003, 2004 and 2005.

The supervision at 400 level research projects form the basis for the development of M.Sc./Ph.D. project proposals. Thus all my M.Sc. supervised students are doing Ph.D.

L. Sponsored Research Projects:

*All the sponsored research projects undertaken are quite relevance to the region. Majority of the projects provide sensitive, selective and easily adaptable (cost-effective) method for the determination of various **environmental pollutants, toxicants, species of biological interest in pharmaceutical or food samples at trace levels** and will be extremely important in improving the health condition and food security in the South Pacific region. Titles of 28 projects undertaken/supervised are given below:*

1. Chemical and biological monitoring of selective heavy metal species in inland, coastal waters soils and sediment samples in Viti Levu (Fiji). Ph.D. student: Mr. Vimlesh Chand, Funded by USP from FRC grant, F\$40000 in 2008 (on going).
2. Intake and risk assessment of nitrate, nitrite in Fiji's foods, beverages and vegetables. Ph.D. student: Mr. Adrian A. Chetty, Funded by USP from FRC grant, F\$13794 in 2011 (on going).

3. Bioavailability of iron, zinc and calcium in commonly consumed foods in Fiji". Ph.D. Student: Ms. Poonam Singh. Funded by USP from URC grant, F\$20000 in 2013 (on going).
4. Analysing the promising underutilised leafy food crops of Fiji for carotenoids, minerals and protein contents. Student: Ms. Rita Roshni, Funded by ACIAR, F\$16058 in 2012 (on going).
5. Examining chemical fertility of soils in Taveuni, Fiji: The Problem of Soil Health and Food Security. Student: Ms. Sofina Nisha, Funded by ACIAR, F\$16053 in 2012 (on going).
6. A full-scale energy balance analysis of MSW for energy production in Fiji. Student: Ms. Shirleen Swapna, Funded by USP from FRC grant, F\$4680 in 2012 (on going).
7. Determination of iodine content in Fiji food and dairy products using spectrophotometric kinetic method. Student: Ms. Veena Bilimoria, Funded by USP from FRC grant, F\$9595 in 2011 (Part time).
8. Folate levels in selected cooked foods. Student: Ms. Prayana P Maharaj, Funded by USP from FRC grant, F\$10988 in 2012 (on going).
9. Determination of the levels of nitrate/nitrite in baby foods and infant formulas available in Fiji. Funded by USP from FRC grant, F\$14186 in 2011 (Closed 2012).
10. Determination of cadmium, mercury and tin in canned tomatoes, pears and soups in Fiji. Funded by USP from FST grant, F\$9600 in 2010 (Completed 2012).
11. Analysis of trans-resveratrol in peanuts and peanut products. Funded by USP from FST grant, F\$10350 in 2009 (Completed 2012).
12. Studies on adsorptive removal of nephrotoxic heavy metals from aqueous solutions and contaminated natural waters. Funded by USP from FST grant, F\$6300 (2007 Completed).
13. Synthesis of new molecular receptors based on polypyridyl-ruthenium(II) linked metallo-macrocycles. Funded by USP from FST grant, F\$6927 (2007 Completed).
14. Exposure to cadmium and arsenic via leafy vegetables in Fiji. Funded by USP from FST grant, F\$6487 as Associate Researcher with Dr. Rajendra Prasad (2007; completed).
15. Development a compact microanalysis system for detection and determination of arsenic in water samples, sponsored by National Science Foundation, USA, US\$10000 through Prof. P.K. Dasgupta at Texas Tech University, Lubbock, TX, USA (Completed; 2006).
16. Mechanistic studies of ligand substitution reactions on hexacyanoferrate(II) and their applications as analytical tool. Funded from FST grant, F\$9307 (closed 2008).
17. Study of the Kinetics of the Reaction of Carbon Dioxide and Diethanloamine by Stopped Flow Technique, funded by USP from URC grant, F\$3300 (Completed; 2005).
18. Development of catalytic kinetic method for trace determination of mercury(II), funded by USP from URC grant, F\$23386 (Completed; 2007).
19. An investigation on chelating behavior of heterocyclic semicarbazones toward bioactive metal ions, funded by USP from URC grant, F\$13566 (Completed; 2009).
20. An investigation on structure and bonding in some high coordinated complexes of thorium(IV) and dioxouranium(VI) derived from heterocyclic semicarbazones as primary ligand and diphenyl sulfoxide as secondary ligand, funded by USP from URC grant, F\$10536 (Completed; 2009).
21. Study of the effects of freezing and cooking on the nitrate-nitrogen concentration in fiji's vegetables using flow injection analysis, funded by USP from URC grant. F\$5885. Student: Mr. Adrian A. Chetty (Completed; 2007).
22. Application of catalytic kinetic method to ascertain the contents of nitrite in water and vegetables samples in Fiji, funded by USP from URC grant, F\$4952. Student: Mr. Tuikolongahau Halafihi (Completed; 2007).
23. Application of kinetic catalytic spectrophotometric method for the speciation of selenium in water samples, funded by USP from URC grant, F\$7355 (Completed; 2007).
24. Development of kinetic methods for trace determination of toxicants & environmental pollutants: a case study of copper(II), funded by USP from URC Research grant, F\$13206 (Completed; 2003).

25. Application of immobilized microbial consortia for biodegradation of organic pollutants in waste waters, sponsored by Department of Biotechnology, Govt. of India (Completed; 1997)
26. Photophysics of twisted intramolecular charge transfer (TICT) molecules in micelles and host-guest systems, sponsored by Department of Science and Technology, Govt. of India (Completed; 1994).
27. Reduction of coke formation during naphtha pyrolysis, sponsored by Department of Science and Technology, Govt. of India (Completed; 1991).
28. Trace determination of environmental pollutants by fast kinetic methods, sponsored by Dept. of Environment and Forests, Govt. of India (Completed; 1990).

M. Involvement in Community Services:

I always provide my full cooperation and support towards positive community involvement, which can enhance the best reputation of the USP and bring the University even closer to the people it serves.

- I am the Chair (Editor-in-Chief) of the Editorial Board and Associate Editor (Chemistry) of the South Pacific Journal of Natural and Applied Sciences (SPJNAS). I was also the Chief Editor of SPJNAS (Vol. 28).
- I have organised yearly Science Competition for Form 4 and Chemistry Competition for Form 5 to 7 students at Fiji Sevashram Sangha, Suva, Fiji since 2005.
- Being President (2009-11), Vice President (2008-09), and an active member of the Chemical Society of the South Pacific (CSSP), I am professionally involved in promoting chemical education/chemistry awareness in the South Pacific region through CSSP National Titration Competition and National Chem Quiz for high school students.
- Being President (2009-11), I
 - extended and coordinated Chem Quiz and Titration Competitions for Form 4 to 7 high school students in Tonga and Vanuatu in 2009 & 2010.
 - introduced 'National Chemistry Poster Competition' since 2010.
 - introduced 'National Chem Knowledge Battle' since 2009.
 - organized 'UNESCO Global Chemistry Experiments' in 40 High Schools in Fiji, 4-7 July 2011 to celebrate International Year of Chemistry 2011 (IYC 2011).
 - led organizing International Conference on Chemistry, Environment and Climate Change (ICCECC 2011), 14-16 September 2011 at USP.
- Being Vice President and member of the CSSP, I coordinated CSSP National Chem Quiz 2009, 2007 and 2005 for 6000, 5000 and 7000 Form 4 to 7 High School students respectively in Fiji.
- I have been
 - promoting science education in general and chemical education in particular in the South Pacific community through my participation in various Science outreach, Sci-Tech Expo, Career Expos, Chemistry Outreach to Schools (COTS), etc.
 - internal and external examiner of M.Sc. and Ph.D. theses from different Universities.
 - Reviewer of Scholarships & Fellowships Programme of the National Research Foundation, South Africa, 2012.
 - USP Vice Chancellor's Best Research Paper Award Committee, 2011.
 - Member, Industrial Advisory Committee, School of Applied Sciences, College of Engineering, Science & Technology, Fiji National University, Suva, Fiji since 2011.
 - Reviewer of papers for the 2nd International Symposium on Peer Reviewing: ISPR 2010, held at Florida, USA.
 - Member, Indian Council of Chemists (ICC) Young Scientists Award Committee 2009.
 - Member, Research Board of Advisors since 2000, the American Biographical Institute (ABI), USA.

- Reviewer of the scientific articles of many international journals [*Please see F(iii)*].

N. Expertise in Modern Techniques & Lab Development Experience:

- I am well acquainted with UV-Visible and Stopped-Flow Spectrophotometer, Atomic Absorption Spectrophotometer, ICP-OES, Gas Chromatograph-TCD/FID, HPLC, CG-MS, TGA, TEM-EDAX, SEM-EDAX, Steady State Spectrofluorimeter & Nanosecond Fluorimeter and Flow Injection Analysis (FIA).
- Developed Chemistry Laboratory at Delhi Institute of Technology, University of Delhi, Delhi, India.
- Developed Chemistry Laboratory at the Institute of Engineering and Technology, CSJM University, Kanpur, India.

O. Conferences/Workshops Organised:

1. As Chairman, Organizing Committee, International Conference on Chemistry, Environment and Climate Change (ICCECC 2011), 14 -16 September 2011 at the University of the South Pacific, Suva, Fiji. This conference was the most successful and first International Conference in Chemistry organized in 43 years history of the Chemistry at USP.
2. As Organising Secretary, 1st Regional International Chemistry Symposium (RCS-1), 8-9 July 2002 at the University of the South Pacific, Suva, Fiji. This Symposium was well organized under my active role as Organising Secretary and was of great regional importance in professional development.
3. Organised, 35th National Workshop on Radiochemistry and Application of Radioisotopes, 8-17 April 1999, facilitated by the Board of Research in Nuclear Sciences, Govt. of India and IET, CSJM University Kanpur at IET, Kanpur, India.
4. Organised one day CSSP Chemistry Awareness Workshop for Western Division for High School Students at Tilak High School, Lautoka, 16 October 2010.
5. Organised one day CSSP Workshop on Chemistry Teaching for High School Teachers at USP, Suva, 2009.

P. Conferences/Symposia Attended:

1. PACE-Net Pacific-European Key Stakeholder Conference: Dissemination of Project Results and Networking Towards Implementation and Future Actions (funded by European Commission), 12-13 March 2013, organised at the University of the South Pacific (USP), Suva, Fiji.
2. 56th Symposium on the Chemistry of Terpenes, Essential Oils, and Aromatics, October 27-29, 2012 at the University of Kagoshima, Kagoshima, Japan. *Funded by Tokyo City University, Tokyo, Japan.*
3. Vice-Chancellor's Forum on Learning & Teaching, 22-23 September 2011 organized by The University of the South Pacific, Suva, Fiji.
4. International Launch Ceremony of the International Year of Chemistry (IYC 2011) held on 27-28 January 2011 at UNESCO World Headquarters in Paris, France. *I was invited as the representative from the South Pacific region. Funded by the UNESCO & International Union of Pure and Applied Chemistry (IUPAC).*
5. Vice-Chancellor's Learning and Teaching Forum: The Vision for the Future, 8-9 November 2010 at USP, Suva, Fiji.
6. Vice-Chancellor's Learning and Teaching Forum: The Vision for the Future, 17-18 September 2009 at USP, Suva, Fiji.
7. Analytical Chemistry Symposium, 17 October 2006 at the Department of Chemistry and Biochemistry, Texas Tech University, Lubbock, TX, USA.

8. School of Pure and Applied Sciences (SPAS) Postgraduate Workshop-2002, March 16, 2002 at SPAS, USP, Suva, Fiji.
9. SPAS Postgraduate Workshop-2001, 10 March 2001 at SPAS, USP, Suva, Fiji.
10. Conference: Challenges for Peace in the Pacific, 09 October 2000, organized by Center for Developmental Studies, USP, Suva, Fiji.
11. University Grants Commission (UGC) Sponsored National Seminar on Management and Environment, 22 May 1998, CSJM University, Kanpur-208024, India.
12. One Day Conference on Atomic Absorption Spectroscopy, 11 April 1997 at Hotel Hilton, New Delhi, India.
13. National. Student Seminar and Paper Contest: DITECH-97, 2-4 April, 1997 at Delhi Institute of Technology (DIT), University of Delhi, Delhi-110006, India.
14. National Programme on Ion Exchange Polymers & Membrane Technology, 6-7 February 1997 at Delhi College of Engineering (DCE), Delhi-110006, India.
15. First National Workshop on Development and Use of Environmental Reference Materials: DUREM-1, 14-16 February 1996 at Hotel Hyatt Regency, New Delhi, India.
16. Indo-British Seminar on Industry-Institute Interaction, 6-7 March 1995 at British High Commission, New Delhi, India.
17. National Seminar on Excellence in Higher Technical Education, 7-8 November 1994 at Park Hotel, New Delhi, India.
18. National Seminar on Quality, Productivity, Entrepreneurship in Higher Technical and Management Education and Innovations in Energy Conservation: EME-93, 21 July 1993 at India International Centre, New Delhi, India.
19. National Conference on Entrepreneurship Development: DISTEP-93, 23-24 February 1993 at India International Centre, New Delhi, India.
20. All India Seminar on Role of Engineers in Restructuring India's Economy and Computers in Modern Age, 11-12 February 1993 at DEC, Delhi, India.
21. 7th International Congress & Exhibition: ENVIRO-2000, 20-12 November 1992 at Hotel Maurya Sheraton, New Delhi, India.
22. National Symposium on Newer Perspective in Structure and Reactivity of Inorganic Compounds, 26-28 December 1990 at IIT Kanpur, India.
23. National. Student Seminar and Paper Contest: DITECH-92, 20-21 February 1992 at DIT, University of Delhi, Delhi, India.
24. National Conf. on Entrepreneurship Development: DISTEP-92, 24-25 February 1992 at India International Centre, New Delhi, India.
25. 5th Annual Conf. of the Indian Council of Chemists (ICC), 26-28 December 1985 at Bihar Institute of Technology, Sindri, Dhanbad, India.
26. Symposium on Recent Development in Chemical Education and Research, 10-12 December 1981 at the University of Bihar, Muzaffarpur, India.

Q. Specialized Training/Workshops Attended:

1. Workshop on Supervising Research conducted by Professor Tony Baker, Head, School of Chemistry and Forensic Science, University of Technology, Sydney, Australia, 26 April 2013, organized by USP, Suva, Fiji.
2. iPerform and Staff Development and Appraisal (SDA) training as FSTE Academic Trainer and Advisor, 26-27 February 2013, organized by USP, Suva, Fiji.
3. Research Skill Development Training Programme for Faculty–FSTE facilitated by Dr. John Willison, School of Education, University of Adelaide, Australia, 11 March 2013, organized by the Office of the Pro-Vice Chancellor, Research and International, USP, at Hotel Holiday Inn, Suva.

4. Employer Focus Group Training, Meeting with Employers and the Analysis/Reporting, 4-6 February 2013, organized by the Planning & Quality Office, USP, Suva, Fiji.
5. Strategic Total Academic Review (STAR) Workshop conducted by Higher Learning Commission Consultants, 25 April 2012, organized by USP, Suva, Fiji.
6. Research Development Skills Framework Implementation/Integrating Research Skill Development into Curriculum: Department Session, 12 April 2012, organized by The Research Office, USP, Suva, Fiji.
7. Panel Discussion and Public Presentation on the Research Skill Development Framework Implementation, 10 April 2012, organised by the Research Office, USP, Suva, Fiji.
8. Moodle Grade Book Workshop, 5 July 2011, organized by the Centre for Flexible and Distance Learning (CFDL), USP, Suva, Fiji.
9. Ethics Workshop Exercise for High Management Group: Ethics For Diligent Executives, 9 February 2011 at Southern Cross Hotel, Suva, conducted by Prof. Keith Walker & Assoc. Prof. Kabini Sanga, organized by USP, Suva, Fiji.
10. One Day Workshop on Performance Management Training, 13 December 2010, conducted by the Australian Human Resource Institute, organised at USP, Suva, Fiji.
11. One Day Workshop on Performance Management Training, 29 October 2010, conducted by the Australian Human Resource Institute, organized at USP, Suva, Fiji.
12. Moodle M2: Increasing Student Engagement through Online Learning 16 September 2010, organised by USP, Suva, Fiji.
13. Moodle M1: Introduction to Moodle, 14 September 2010, organised by USP, Suva, Fiji.
14. Workshop on Deeper Use and Embedding of Moodle in Blended Learning Approaches, conducted by Dr. Martin Dougiamas, Founder and Lead Developer of Moodle, 18 August 2010, organised by USP, Suva, Fiji.
15. High Level Moodle Workshop conducted by Dr. Martin Dougiamas, Founder and Lead Developer of Moodle, 17 August 2010, organised by USP, Suva, Fiji.
16. Workshop on Preparing the Introduction & Assignments Book, 23 July 2009, organised by Centre for Flexible and Distance Learning (CFDL), USP, Suva, Fiji.
17. Workshop on Assessment Strategies, 9 June 2009, organized by FSTE, USP, Suva, Fiji.
18. Workshop on Writing and Reading for DFL, 16 April 2009, organised by Centre for Educational Development & Technology (CEDT), USP, Suva, Fiji.
19. Workshop on Writing Effective Learning Outcomes, 15 April 2009, organised by CEDT, USP, Suva, Fiji.
20. DFL Print Workshop, 12 February 2009, organised by Distance & Flexible Learning Support Centre, USP, Suva, Fiji.
21. Analytical skills development training on heavy metals analysis in sediments and soils using microwave and alkaline fusion techniques and inductively coupled plasma optical

- emission spectrometry (ICP-OES), 20-31 October 2008 at the Laboratory for Analytical Means, Institute of Research and Development, Noumea, New Caledonia. **Funded by French Embassy, Suva, Fiji.**
22. Workshop on Graduate Supervision, Thesis Completion Times and Other Related Issues in the Context of USP; 10-11 November 2008 at USP, Suva, Fiji.
 23. Workshop on Designing Effective Assessment Strategies: Effective Assessment of Students; 12 November 2008, organised by CEDT, USP, Suva, Fiji.
 24. Moodle Workshop: Online Quizzes; 01 October 2008, organised by DFL, CEDT, USP, Suva, Fiji.
 25. Distance and Flexible Learning Print Workshop, 20 August 2008, organised by CEDT, USP, Suva, Fiji.
 26. DFL Print Workshop, 18 July 2007, organised by Distance & Flexible Learning Support Centre (DFLSC), USP, Suva, Fiji.
 27. Awareness Sessions on the Quality Audit, 20 February 2007 at FST, USP, Suva, Fiji.
 28. I interacted with Dr. Ajay Kumar and got training in enzyme reaction kinetics, 22-29 July 2006 at Wyeth BioPharma, Andover Biotech Campus, MA, USA. This training helped me in strengthening my research area.
 29. Analytical Skills Development Course at Delft Tech University, Delft, The Netherlands, 23 June to 7 July 2006. **Funded by the Organization for the Prohibition of Chemical Weapons (OPCW), The Netherlands.**
 30. Peer Observation of Teaching Workshop, 31 May 2006, organized by Centre for Educational Learning and Teaching (CELTE), USP, Suva, Fiji.
 31. Training on Stopped Flow Technique; worked on project entitled, “Study of the Kinetics of the Reaction of Carbon Dioxide and Diethanolamine by Stopped Flow Technique”, Dec 2005–Jan 2006 at the Department of Chemical Engineering IIT, Kanpur, India. **Funded by USP, Suva, Fiji.**
 32. Workshop: A Training Course on Speciation Analysis, conducted by European Virtual Institute for Speciation Analysis (EVISA) in conjunction with the Analytical Forum, 6 July 2004 at Warsaw Univ. of Technology, Poland. **Funded by the OPCW, The Netherlands.**
 33. USP-Professional Development Programme: Interpersonal Communication Skills, facilitated by New Zealand trainer Ms. Penelope Webster, 27-28 May 2004, USP, Suva, Fiji.
 34. USP-Professional Development Programme: Conflict Resolution, facilitated by New Zealand trainer Ms. Penelope Webster, 26-28 April 2004, USP, Suva, Fiji.
 35. Workshop on Building a Productive Departmental Climate for Postgraduate Supervision, October 31, 2003, organised by CELT, USP, Suva, Fiji.
 36. Workshop on Evaluating Postgraduate Performance: Objective and Subjective Measures, October 31, 2003, organised by CELT, USP, Suva, Fiji.

37. Workshop for lecturers on utilizing the web for education. Workshop 3: Creating collaborative online learning experiences, April 30, 2003, jointly organised by the CELT, and the Media Centre, USP, Suva, Fiji.
38. Series of Workshops on Effective Teaching organized by CELT, USP, Suva, Fiji.
Workshop 1: Effective classroom communication: the person behind the presentation, 22 April 2003.
Workshop 2: The role of body language in effective communication, 24 April 2003.
Workshop 3: Effective speaking, 25 April 2003.
39. Workshop for lecturers on utilizing the web for education. Workshop 2: Getting class notes online, 16 and 23 April 2003, organised by the CELT and Media Centre, USP, Suva, Fiji.
40. Workshop for lecturers on utilizing the web for education. Workshop 1: Introduction to the Internet, 9 April 2003, organised by the CELT and Media Centre, USP, Suva, Fiji.
41. Orientation for Staffs Teaching and Coordinating Extension Courses, 23 January 2002, jointly organised by the Fiji Centre and Media Centre, USP, Suva.
42. Mini Round Table on Distance and Flexible Learning, 2 November 2001, organised by SPAS, USP, Suva, Fiji.
43. ITS in-house Training, 2-5 July 2001, organised by ITS, USP, Suva, Fiji.
44. Assessment Symposium: Development and Assessment of Writing skills, Oral Skills and an Oral Culture, 31 October 2001, organised by CELT, USP, Suva, Fiji.
45. USP Flexible Learning and Distance Education Round Table Meeting, 12-15 March 2001, USP, Suva, Fiji.
46. HPLC Mini School, 15-16 November 2000, organized by the Department of Chemistry, USP, Suva, Fiji.
47. Hands-on Training on Electronic Information Service for Academic Staff, 13-14 June 2000, organized by USP Library, Suva, Fiji.
48. A Refresher Course on Recent Advances in Electrochemical Science and Technology, 15-20 January 1996 organised by the Department of Applied Chemistry, Delhi College of Engineering (DCE), Delhi, India.
49. Flexible System Management Workshop Series 95 on Strategic Flexibility for Cutting Edge, 15-16 December 1995, organised by Dept. of Management Studies, IIT, New Delhi, India.
50. A Short-Term Training Programme on Wind, Solar and Nuclear Energies, 10-21 July 1995, organised by the Department of Mechanical Engineering, IIT, Kanpur, India.
51. 35th National Workshop on Radiochemistry and Application of Radioisotopes, 8-17 April 1999, facilitated by the Board of Research in Nuclear Sciences, Govt. of India at CSJM University Kanpur at IET, Kanpur, India.
52. UNESCO Regional Workshop on Renewable Energy Engineering Education, 9-11 January 1995, organised by Centre for Environmental Studies, IIT, New Delhi, India.

53. Induction Course for the Teachers of Engineering Colleges sponsored by All India Council for Technical Education (AICTE), 18 March to 18 April 1995 at DCE, Delhi & Centre for Professional Development in Higher Education (CPDHE), University of Delhi, Delhi, India.
54. National Refresher Course on Polymer Engineering 5-23 December 1994 organised by Centre for Advance Studies and Research in Polymer Science & Technology, DCE, Delhi, India.
55. ISTE Summer School on Instructional Methodology, 6-11 June 1994, organised by Centre for Educational Technology, IIT, New Delhi, India.
56. Orientation Course on Energy and Environment: OR-22, 25 April to 20 May 1994 organised by CPDHE, University of Delhi, Delhi, India.
57. University Level Workshop on Technical Terminology for Hindi Medium, 21-24 March 1994 organised by the Commission for Scientific & Technical Terminology, Ministry of Human Resource Development, Govt. of India at DCE, Delhi, India.
58. QIP (Quality Improvements Programme) Course on Processing and Characterization of Advanced Ceramics, 8-16 December 1993 organised by Advance Centre for Material Studies, IIT, Kanpur, India.

References

Names and contact details of my nominated referees are as follow:

- | | |
|---|--|
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LIST OF PUBLICATIONS (DR. SURENDRA PRASAD)

I have published 63 research papers in refereed international journals, 02 full papers in peer reviewed international conference proceedings, 03 review articles/book chapters, 05 general publications of public interest, 04 journals, books edited, 06 course books written/ revised, 12 invited/keynote lectures and 53 abstracts published/conference presentations.

Publications in Refereed International Journals:

(ARC: Australian Research Council; ERA: Excellence in Research for Australia)

1. Vaishali Tomar, *Surendra Prasad* and Dinesh Kumar; Adsorptive Removal of Fluoride from Water Samples Using Zr-Mn Composite Material. Microchemical Journal (Elsevier), 111, 116-124, 2013. **Impact Factor 3.048. ARC ERA Rank A. 17th on world's ranking in this journal category.**
2. Radhey M. Naik, *Surendra Prasad*, Basant Kumar, Shiv B.S. Yadav, Abhas Asthana and Masafumi Yoshida; Ligand Substitution Kinetic Assay of Antitubercular Drug Isoniazid in Pure and Pharmaceutical Formulations. Microchemical Journal (Elsevier), 111, 108-115, 2013. **Impact Factor 3.048. ARC ERA Rank A. 17th on world's ranking in this journal category.**
3. Vimlesh Chand and *Surendra Prasad*; ICP-OES Assessment of Heavy Metal Contamination in Tropical Marine Sediments: A Comparative Study of Two Digestion Techniques. Microchemical Journal (Elsevier), 111, 53-61, 2013. **ARC ERA Rank A, Impact Factor 3.048. ARC ERA Rank A. 17th on world's ranking in this journal category.**
4. Radhey M. Naik, *Surendra Prasad*, Basant Kumar and Vimlesh Chand; Kinetic Assay of D-Penicillamine in Pure and Pharmaceutical Formulations Based on Ligand Substitution Reaction. Microchemical Journal (Elsevier), 111, 97-102, 2013. **ARC ERA Rank A, Impact Factor 3.048. ARC ERA Rank A. 17th on world's ranking in this journal category.**
5. Ram K. Agarwal, *Surendra Prasad* and Vimlesh Chand; A Review on High Coordination Compounds of Dioxouranium(VI) Derived from Schiff Bases of 4-Aminoantipyrine. International Journal of Chemistry (Intl. Book House, India) (ISSN 2249-2119), 1(4), 576-597, 2012.
6. Radhey M. Naik, *Surendra Prasad*, Shiv B. S. Yadav, R. Rastogi and R. K. Tiwari; The Formation of an Anti-Tubercular Complex $[\text{Fe}(\text{CN})_5(\text{INH})]^{3-}$ Through Mercury(II)-Catalyzed Ligand Substitution Reaction: A Kinetics and Mechanistic Studies. International Journal of Chemical Kinetics (Wiley), 44(6), 398-406, 2012. **Impact Factor 1.62. ARC ERA Rank B.**
7. Ram K. Agarwal, *Surendra Prasad* and Upma Singh; A Review of Lanthanide Coordination Compounds: Synthesis, Characterization and Biochemical Aspects. International Journal of Chemistry (Intl. Book House, India) (ISSN 2249-2119), 1(2), 264-280, 2012.
8. *Surendra Prasad* and Adrian A. Chetty; Flow Injection Assessment of Nitrate Contents in Fresh and Cooked Fruits and Vegetables Grown in Fiji. Journal of Food Science (C: Food Chemistry) (Institute of Food Chemists, USA) 78(8), C1143-C1148, 2011. **Impact Factor 1.733. ARC ERA Rank A.**
9. Ram K. Agarwal, Himanshu Agarwal, *Surendra Prasad* and Anil Kumar; Studies on the Effect of Picolines on the Stereochemistry of Lanthanide(III) Nitrates Coordination

Compounds of 4[N-Furfural)amino]antipyrine semicarbazone and antibacterial activities. Journal of the Korean Chemical Society, 55(4), 594-602, 2011, **Impact Factor 0.327**.

10. Vimlesh Chand, *Surendra Prasad*, Rajendra Prasad; A Study of Arsenic Contamination by Graphite Furnace Atomic Absorption Spectrometry in the Lami Estuary in Fiji. Microchemical Journal (Elsevier), 97(2) , 160–164, 2011. **Impact Factor is 2.59. ARC ERA Rank A. 17th on world's ranking in this journal category.**
11. *S. Prasad*, R.K. Agarwal and A. Kumar; Synthesis, Characterization and Biological Evaluation of a Novel Series of Mixed Ligand Complexes of Lanthanides(III) with 4[N-(Furfural)amino] antipyrine Semicarbazone as Primary Ligand and Diphenyl Sulfoxide as Secondary Ligand. Journal of the Iranian Chemical Society 8(3), 825-839, 2011. **Impact Factor is 1.689, ARC ERA Rank B.**
12. *Surendra Prasad* and Ram K. Agarwal; Synthesis, Antibacterial and Antifungal Activities of Some Cobalt(II) and Nickel(II) Complexes of Thiosemicarbazones. Journal of the Korean Chemical Society, 55(2), 189-198, 2011, **Impact Factor 0.327**.
13. Vimlesh Chand, *Surendra Prasad* and Rajendra Prasad; Distribution and chemical fractionation of arsenic in surficial sediments of the Lami coastal environment in Fiji. South Pacific Journal of Natural and Applied Sciences, 28, 78-81, 2010. **ARC ERA Rank C.**
14. Rajendra Prasad, Rajeev Kumar and *Surendra Prasad*; A Fluorescence Quenching-based Sensor Using New Metallo-tetraazaporphyrin Dye as a Recognition Element for Aniline Assay in Aqueous Solutions. Analytica Chimica Acta (Elsevier), 646 (1-2), 97-103, 2009. **Impact Factor 3.757. ARC ERA Rank A.**
15. Radhey M. Naik, Abhinav Agarwal and *Surendra Prasad*; Ligand Substitution Reaction of Hexacyanoruthenate(II) as a Tool for Mercury(II) Estimation at Micro Level. Spectrochimica Acta Pt. A (Elsevier), 74 (4) 887-891, 2009. **ARC ERA Rank C. Impact Factor 1.566.**
16. *Surendra Prasad* and Ram K. Agarwal; Synthesis, Magneto-Spectral, Electrochemical, Thermal Characterization and Antimicrobial Investigations of Some Nickel(II) Complexes of Hydrazones of Isoniazid. Journal of the Korean Chemical Society, 53(6), 683-692, 2009, **Impact Factor 0.327**.
17. Ram K. Agarwal, Hans Raj Modi and *Surendra Prasad*; Synthesis, Spectral and Thermal Properties of Some Novel Coordination Compounds of VO(IV) Derived from 4[N-(4'-Ethylbenzalidene)Amino]Antipyrine Thiosemicarbazone and 4[N-(2',4'-Dimethyl Benzalidene)Amino]Antipyrine Thiosemicarbazone, Journal of the Iranian Chemical Research, 2, 173-182, 2009. **Impact Factor 2.215, ARC ERA Rank B.**
18. Radhey M. Naik, Abhinav Agarwal, *Surendra Prasad* and Amit K. Verma; Trace Determination of Thiosulphate and Thioglycolic Acid Using Novel Inhibitory Kinetic Spectrophotometric Method. Microchemical Journal (Elsevier), 93(1), 43-48, 2009. **Impact Factor 2.46. ARC ERA Rank A. 21st on world's ranking in this journal category.**
19. Adrian Avinesh Chetty and *Surendra Prasad*; Flow Injection Analysis of Nitrate-N Determination in Root Vegetables: Study of the Effects of Cooking. Food Chemistry (Elsevier), 116(2), 561-566, 2009, **ERA Rank A*, Impact Factor 3.146. 1st on world's ranking in this journal category.**
20. Vimlesh Chand and *Surendra Prasad*; Trace Determination and Chemical Speciation of Selenium in Environmental Water Samples Using Catalytic Kinetic Spectrophotometric

- Method. Journal of Hazardous Materials (**Elsevier**), 165(1-3), 780-788, 2009. **ARC ERA Rank A, Impact Factor 4.144. 1st on world's ranking in this journal category.**
21. Rajendra Prasad and *Surendra Prasad*; Spectrophotometric Method for the Determination of Fe³⁺-Gly Formation Constant Through Competitive Ligand Binding. Journal of Chemical Education (**Am Chem. Soc., USA**), 86(4), 994-997, 2009. **ARC ERA Rank C. Impact Factor 0.571. 1st on world's ranking in this journal category.**
 22. *Surendra Prasad* and Ram K. Agarwal; Synthesis, Physico-chemical and Biological Properties of Complexes of Cobalt(II) Derived from Hydrazones of Isonicotinic Acid Hydrazide. Journal of the Korean Chemical Society, 53(1), 17-26, 2009, **Impact Factor 0.327.**
 23. *Surendra Prasad*, Radhey M. Naik and Vimlesh Chand; Kinetics and Mechanism of Uncatalysed Exchange of Cyanide in Hexacyanoferrate(II) by *N*-Methylpyrazinium Ion. Inorganic Reaction Mechanism (**OCP Science, USA**) 6(4), 337-344, 2008. **Impact Factor 0.412. ARC ERA Rank C.**
 24. *Surendra Prasad* and Ram K. Agarwal; Nickel(II) Complexes of Hydrazone of Isoniazid and Their Magneto-Spectral, Electrochemical, Thermal and Antimicrobial Investigations. Research Letters in Inorganic Chemistry (International Journal of Inorganic Chemistry since 2010) (**Hindawi Publishing Corpn.**) Vol. 2008 (Article ID 350921), 1-4, 2008.
 25. Vipin Kumar Bansal, Rajeev Kumar, Rajendra Prasad and *Surendra Prasad*, Niraj; Synthesis and Spectral Characterization of New Copper(II) Macrocyclic Complexes and Investigation of Their Catalytic Role in Wet Oxidation of Phenol. Journal of Molecular Catalysis A (**Elsevier**), 284 (1-2), 69-76, 2008. **Impact Factor 3.135. ARC ERA Rank A.**
 26. *Surendra Prasad* and Adrian Avinesh Chetty; Nitrate-N Determination in Leafy Vegetables: Study of the Effects of Cooking and Freezing. Food Chemistry (**Elsevier**), 106(2), 772-780, 2008, **ARC ERA Rank A*, Impact Factor 3.146.**
 27. Radhey Mohan Naik, Joy Sarkar and *Surendra Prasad*; Kinetic determination of cysteine and thiosulphate by inhibition of Hg(II) catalysed ligand substitution reaction. Microchemical Journal (**Elsevier**), 88(1), 45-51, 2008. **Impact Factor 2.46, ARC ERA Rank A.**
 28. *Surendra Prasad*; Radhey M. Naik and A. Srivastava; Application of Ruthenium Catalyzed Oxidation of [Tris(2-aminoethyl)amine] in Trace Determination of Ruthenium in Environmental Samples. Spectrochimica Acta Pt. A (**Elsevier**), 70, 958-965, 2008. **ARC ERA Rank C. Impact Factor 1.566.**
 29. Radhey M. Naik; A. Srivastava and *Surendra Prasad*; Highly Sensitive Catalytic Spectrophotometric Determination of Ruthenium. Spectrochimica Acta Pt. A (**Elsevier**), 69(1), 193-197, 2008. **ARC ERA Rank C, Impact Factor 1.566.**
 30. *Surendra Prasad*; Kinetic Determination of Organosulphur Ligands by Inhibition: Trace Determination of Cysteine and Maleonitridodithiolate [MNDT]. Microchemical Journal (**Elsevier**), 85, 214-221, 2007. **Impact Factor 2.46. ARC ERA Rank A. 21st on world's ranking in this journal category.**
 31. R.M. Naik, A. Srivastava, A.K. Verma, S.B.S. Yadav and *S. Prasad*; The Kinetics and Mechanism of Oxidation of Triethylenetetraaminehexaacetatecobaltate(II) Complex by Periodate Ion in Aqueous Medium. Inorganic Reaction Mechanism (**OCP Science, USA**) 6, 185-192, 2007. **ARC ERA Rank C, Impact Factor 0.412.**

32. *Surendra Prasad* and Ram K. Agarwal; Cobalt(II) Complexes of Various Thiosemicarbazones of 4-aminoantipyrine: Syntheses, Spectral, Thermal and Biological Studies. Transition Metal Chemistry (**Springer Science, UK**), 32(2), 143-149, 2007. **ARC ERA Rank C, Impact Factor 1.17.**
33. Ram K. Agarwal and *Surendra Prasad*; Synthesis, Biological, Spectral and Thermal Properties of Oxovanadium(IV) Complexes of N,N,S-containing Ligands. Reviews in Inorganic Chemistry, (**Freund Publishing, London**) 26(5), 471-492, 2006. **Impact Factor 0.706.**
34. Ram K. Agarwal and *Surendra Prasad*; Synthesis, Spectral and Thermal Characteristics of Some Ten Coordinated Complexes of Dioxouranium(VI) Derived from Semicarbazones as Primary Ligand and Diphenyl Sulfoxide as Secondary Ligand. Ram. Turkish Journal Chemistry [**Sci. & Technol. Res. Council (STRC), Turkey**] 30(5), 553-562, 2006. **Impact Factor 0.698.**
35. Ram K. Agarwal, *Surendra Prasad*, Rajiv Garg and Sushil K. Sidhu; Synthesis and Magneto-Spectral Characteristics of Some Six and Nine Coordinated Complexes of Lanthanides(III) Derived from 4[N-(2'-Hydroxy-1'-Naphthalidene)Amino]Antipyrine-Semicarbazone. Bulletin of the Chemical Society of Ethiopia, 2006, 20(1), 167-172. **Impact Factor 0.39.**
36. *Surendra Prasad*; Kinetic Determination of Mercury(II) at Trace Level from Its Catalytic Effect on a Ligand Substitution Process. Journal of Analytical Chemistry (**Springer Link, USA**), 60(6), 581-588, 2005. **ARC ERA Rank C, Impact Factor 0.747.**
37. *Surendra Prasad*; Kinetic Method for Determination of Nanogram Amounts of Copper(II) by Its Catalytic Effect on Hexacyanoferrate(III)-Citric Acid Indicator Reaction. Analytica Chimica Acta (**Elsevier**), 540(1), 173-180, 2005. **Impact factor 2.760. ARC ERA Rank A.**
38. *Surendra Prasad*, Radhey M. Naik, Raj K. Tewari, Pradeep K. Singh and Anjani Tewari; The Mercury(II) Catalyzed Ligand Exchange Reaction between Hexacyanoferrate(II) and Pyrazine in Aqueous Medium. Transition Metal Chemistry (**Springer Science, UK**), 30, 968-977, 2005. **ARC ERA Rank C, Impact Factor 1.022.**
39. Ram K. Agarwal and *Surendra Prasad*; Synthesis, Magneto-Spectral, Biological and Thermal Investigations of Cobalt(II) and Nickel(II) Coordination Compounds of Thiosemicarbazones Derived from 4-Aminoantipyrine. Bioinorganic Chemistry and Applications (**Freund Publishing, London**), 3(3-4), 271-288, 2005. **ARC ERA Rank C, Impact Factor 0.716.**
40. Ram K. Agarwal and *Surendra Prasad*; Synthesis and Spectral Investigations of Some Platinum Metals Ions Coordination Compounds of 4[N-(Furan-2-carboxalidene)Amino]Antipyrine Thiosemicarbazone and 4[N-(3',4',5'-Trimethoxy benzalidene)Amino]Antipyrine Thiosemicarbazone. Turkish Journal of Chemistry (**STRC Turkey**), 29, 289-297, 2005. **Impact Factor 0.698.**
41. Ram K. Agarwal and *Surendra Prasad*; Synthesis, Spectral and Thermal Investigation of Some Mixed Ligand Complexes of Thorium(IV) Derived from Semicarbazones and Diphenyl Sulfide. Journal of Iranian Chemical Society, 2(2), 168 –175, 2005. **ARC ERA Rank B, Impact Factor is 1.689.**
42. Ram K. Agarwal, *Surendra Prasad* and Neetu Goel; Synthesis Magneto-Spectral and Thermal Characteristics of Some 7-Coordinated Compounds of Lanthanides(III) Chlorides with 4[(Furan-2-ylmethylene)amino]-1,5-dimethyl-2-phenylpyrazol-3-one and Isonicotinic acid (3',4',5'-trimethoxy-benzylidene)hydrazide. Turkish Journal of Chemistry (**STRC Turkey**), 28, 405-413, 2004. **Impact Factor 0.698.**

43. Ram K. Agarwal, *Surendra Prasad* and Neetu Gahlot; Synthesis, Spectral and Thermal Properties of Some Penta-Coordinated Complexes of Oxovanadium(IV) Derived from Thiosemicarbazones of 4-Aminoantipyrine. Turkish Journal of Chemistry (STRC Turkey), 28, 691-701, 2004. **ARC ERA Rank C, Impact Factor 0.698.**
44. Ram K. Agarwal, *Surendra Prasad* and N.K. Sharma; Synthesis, Spectral and Thermal Properties of Some Mixed Ligand Complexes of Thorium(IV) and Dioxouranium(VI) with Semicarbazones as Primary Ligand and Sulfoxide as Secondary Ligand. Iranian Journal of Chemistry and Chemical Engineering (IRDC, Iran), 23(2), 121-133, 2004. **ARC ERA Rank C, Impact Factor 0.327.**
45. Ram K. Agarwal, *Surendra Prasad* and Indranil Chakraborti; Synthesis and Characterization of Some Lanthanide(III) Chloro Complexes Derived from 4[N-(4'-Hydroxy-3'-Methoxybenzalidene)Amino]Antipyrine Semicarbazone and 4[N-(3',4',5'-Trimethoxybenzalidene)-Amino]Antipyrine Semicarbazone. Iranian Journal of Chemistry and Chemical Engineering (IRDC, Iran), 23(2), 113-119, 2004. **ARC ERA Rank C, Impact Factor 0.327.**
46. *Surendra Prasad*; Catalytic Abstraction of Cyanide in Hexacyanoferrate(II) by Hg^{2+} in the presence of α -Nitroso β -Naphthol and Trace Determination of Hg(II) by Kinetic Method. Analytical Letters (Marcel Dekker, USA), 37(13), 2851 – 2867, 2004. **ARC ERA Rank C, Impact Factor 1.036.**
47. *Surendra Prasad* and Tu'ikolongahau Halafihi; Development and Validation of Catalytic Kinetic Spectrophotometric Method for Determination of Copper(II). Mikrochimica Acta (Springer Link, USA), 142(4), 237-244, 2003. **ARC ERA Rank B, Impact Factor 1.159.**
48. *Surendra Prasad*; Kinetics and Mechanism of Exchange of Cyanide in Hexacyanoferrate(II) by *N*-Methylpyrazinium ion in the Presence of Mercury(II) as a Catalyst. Transition Metal Chemistry (Kluwer Academic Publishers, UK), 28(1), 1-8, 2003. **ARC ERA Rank C, Impact Factor 0.818.**
49. *Surendra Prasad*; Recent Developments in Kinetic Methods for Trace Constituents. Asian Journal of Chemistry (UBS Publishers, India), 15(1), 1-4, 2003. **ARC ERA Rank B.**
50. *Surendra Prasad* and Deepak Kunzru; Spectrophotometric Determination of Phosphorus in Aqueous, Organic Phases Obtained on Pyrolysis of Naphtha. Asian Journal of Chemistry (UBS Publishers, India), 15(2), 930-936, 2003. **ARC ERA Rank B.**
51. *Surendra Prasad* and Tu'ikolongahau Halafihi; Standardization of Kinetic Determination of Nitrite Based on its Catalytic Effect on an Indicator Reaction. Asian Journal of Chemistry (UBS Publishers, India), 14(3-4), 1683-1692, 2002. **ARC ERA Rank B.**
52. *Surendra Prasad*; Development and Validation of a Catalytic Spectrophotometric Method for Trace Determination of Ruthenium(III). Asian Journal of Chemistry (UBS Publishers, India), 14(2), 799- 806, 2002. **ARC ERA Rank B.**
53. Rita Kumar, *Surendra Prasad*, Alka Sharma, Anil Kumar and Archana Kapoor; Application of Immobilized Mixed Bacterial Culture for the Degradation of Phenol Present in an Oil Refinery Effluent. Journal of Environmental Science and Health (Marcel Dekker, USA), A33(6), 1009-1021, 1998. **ARC ERA Rank C, Impact Factor 0.786.**
54. Rajendra Prasad, *Surendra Prasad* and U.C. Agrwala; Synthesis of Maleonitriledithiolate and Dibenzylidithiomaleonitrile Bridged Ruthenium Complexes Possesing (bipy)₂Ru(II) and Cp(EPh₃)₂Ru(II) Moieties (E = P, As and Sb). Synthesis and Reactivity in Inorganic and

Metal-Organic Chemistry (Marcel Dekker, USA), 25, 1493-1506, 1995. **ARC ERA Rank C, Impact Factor 0.576.**

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58. *Surendra Prasad* and Prem. C. Nigam; Catalytic Kinetic Determination of Ultratrace Amount of Ruthenium(III) based on the Oxidation of Benzylamine by Alkaline Hexacyanoferrate(III). Talanta (Pergaman Press, USA), 38, 627-630, 1991. **Impact Factor 2.391, ARC ERA Rank A.**
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61. Pratima K. Mishra, *Surendra Prasad* and P.C. Nigam; Kinetics and Mechanism of Reaction between Aminopolycarboxylato-manganate(III) Complexes and Cyanide ions: A Reinvestigation of the MnCyDTA-CN Reaction. Transition Metal Chemistry (Chapman & Hall, UK), 15, 429-433, 1990. **ARC ERA Rank C, Impact Factor 0.818.**
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63. P. C. Nigam and *S. Prasad*; Recent Advances in Trace Determination of Phosgene: A Review. Indian Journal of Environmental Health (NEERI/CSIR, India), 28, 218-234, 1986.

Publications in International Conference Proceedings:

1. A. A. Chetty, *S. Prasad* and J. Lal; Food Security – Nitrate Interference. Proceedings of the International Conference in Food Science and Nutrition (ICFSN 2012), Page 1071-1083, April 2-4, 2012, Kota Kinabalu, Sabah, Malaysia.
2. *Surendra Prasad*; Environmental Pollution Control Using Catalytic Kinetic Methods of Analysis as an Analytical Tool. Proceeding of the International Conference on Recent

Advances in Environmental Protection (RAEP 2009), page 47-56, organized by the Department of Chemistry, St. John's College, B.R.A. Agra University, Agra, December 17-19, 2009, held in hotel Clarks Shiraz, Agra, India.

Papers/Chapters in Edited Books

1. *Surendra Prasad*; Nitrate and Nitrite in Some Vegetable and Water Samples in the South Pacific. Chapter 21, page 171-182 in "Chemistry Serves the South Pacific" 2008, (*The Chemical Society of the South Pacific Publication*) Editors Prof. S. Sotheeswaran & J. Bonato.
2. *S. Prasad* and P. C. Nigam; Kinetic Methods for Trace Analysis Based on Uncatalysed Ligand Substitution Reactions. Chemical and Environmental Research (India Publishers Ltd), 1, 13-21, 1992.
3. *S. Prasad* and P. C. Nigam; Selectivity in Catalytic Trace Analysis. A chapter in "Topics in Chemistry Series 1: Chemical Kinetics and Reaction Mechanism", 1991 (**RBSA Publishers, India**) Editor Prof. K.S. Gupta.

General Publications of Public Interest:

1. *Surendra Prasad*; To Fiji, in India-Fiji: Experiences to Remember, Edited by Dr. Kamal Kishor Mishra & Professor Satendra Nandan, Published by Indian Council of Cultural Relations, Government of India, 2013.
2. *Surendra Prasad*; Use Green Chemistry and be Evergreen, Chemistry in the Pacific Islands, 18, 26-28, 2003.
3. *Surendra Prasad*; RDX: A Deadly Chemical, Chemistry in the Pacific Islands, 17, 20-21, 2002.
4. *Surendra Prasad*; Small streams as good remedy of water pollution, Chemistry in the Pacific Islands, 16, 10-12, 2001.
5. *Surendra Prasad*; Propylene oxide: cleaner, greener industrial chemical, Chemistry in the Pacific Islands, 16, 7, 2001.

Journals/Books Edited

1. Guest Editor, Microchemical Journal (Elsevier) Special Issue: Analytical Chemistry in Australasia, Vol. 111, June 2013.
2. Abstract Book of the International Conference on Chemistry, Environment and Climate Change, held on 14-16 September 2011 at USP, Suva, Fiji.
3. Editor-in-Chief, South Pacific Journal of Natural and Applied Sciences, Volume 28 (2010) published by CSIRO Australia.
4. Abstract Book of the 1st Regional Chemistry Symposium, held on 8-9 July 8 2002 at USP, Suva, Fiji.

Course Books Written/Revised:

1. Ikhtiar Ahmed, *Surendra Prasad*, Rajendra Prasad and Maatakite Maata; Inorganic Chemistry: for CH204 Students through DFL, 1st Edⁿ., 2007.
2. *Surendra Prasad* and Jagjit Khurma; CH105: Chemistry for Applied Sciences; 1st Edⁿ (revised) 2007.
3. *Surendra Prasad*; CH105: Chemistry for Applied Science Laboratory Manual; Revised and Enlarged Edⁿ. 2007.
4. Rajendra Prasad, *Surendra Prasad* and Ashwin Nand; CH101: Chemical Principles; Revised Edⁿ. 2007.

5. *Surendra Prasad*; Inorganic Chemistry: A Course Book for CH204, 1st Edⁿ (Revised) 2006.
6. *Surendra Prasad*; CH204: Inorganic Chemistry Laboratory Manual; Revised 2006.

Communicated in Refereed International Journals

1. Abhinav Agarwal *Surendra Prasad* and Vimlesh Chand; A Inhibitory Kinetic Spectrophotometric Method for the Quantitative Estimation of *D*-Penicillamine at Micro levels. *Microchemical Journal*.
2. Roselyn Lata, Rajendra Prasad and *Surendra Prasad*; A Comparison of Cadmium Removal Efficiencies of Different Derivatized Bagasse Forms from Natural Water. *Water Resources*.
3. Roselyn Lata, Rajendra Prasad and *Surendra Prasad*; A Comparison of Three Chemical Treatment Methods for Microwave Assisted Saccharification of Bagasse for Ethanol Production. *International Journal of Carbohydrate Chemistry*.

Manuscripts Under Preparation

1. *Surendra Prasad*, Vimlesh Chand and Ravi Rama; Determination of the Amount of Silicates Present in Tap Waters in the Nausori-Suva Corridor.
2. *Surendra Prasad*, Vimlesh Chand and Deepak Kunzru; Study of the Kinetics of the Reaction of Carbon Dioxide and Diethanloamine by Stopped Flow Technique.
3. Tevita Voro, *Surendra Prasad* and Mani Naiker; Analysis of Quercetin-3-D-galactoside and Resveratrol in New Zealand Red Wines and Fiji *Kura*.
4. Tevita Voro, *Surendra Prasad* and Mani Naiker; *Kura* Application Towards Contemporary Medicine: A Contemporay Analysis.
5. *Surendra Prasad*; Study of Growth and Tolerance Capacity of Free and Immobilized Microorganisms for Their Application for Degradation of Phenol.
6. *Surendra Prasad*, Vimlesh Chand, Radhey M. Naik; Development of a rapid ligand substitution-based kinetic assay of Isoniazid in Pure and Pharmaceutical Formulations.
7. Meena, T.K. Raja and *Surendra Prasad*; Covalent Immobilisation of *Saccharomyces Cereviceae* Cells on Cellulose and Its Derivatives and Their Ability to Invert Cane Sugar.
8. Ajaya Kumar Singh, *Surendra Prasad*; Kinetic Determination of Trace Amount of Mercury in Environmental Samples and Fungicides.
9. Ajaya Kumar Singh *Surendra Prasad*; Effect of Cationic and Anionic Micellar Aggregates on Oxidative Transformation of Ciprofloxacin: A Kinetic and Mechanistic Approach.
10. Sheenam Thatai, Parul Khurana, *Surendra Prasad* and Dinesh Kumar; A new way in nanosensors: Gold nanorods for sensing of Fe(III) ions in aqueous media.
11. Vaishali Tomar, *Surendra Prasad*, Dinesh Kumar and Vimlesh Chand; Adsorption study on removal of fluoride in aqueous media using *Citrus limonum*.
12. Sheenam Thatai, Parul Khurana, *Surendra Prasad*, Vimlesh Chand, Dinesh Kumar, S.K. Kulkarni; Facile, Colorimetric and Ultrasensitive Detection of Cd(II) ions using SiO₂@Au core-shell Particles.

Invited/Keynote/Guest Lectures in Conferences/Symposia

1. Delivered invited lecture entitled, "Recent Trends in the Kinetic Methods of Analysis: A Tool for Environmental and Pharmaceutical Applications" at the Department of Natural Sciences, Faculty of Knowledge Engineering, Tokyo City University, Tokyo, Japan, 24 October 2012. *Funded by Tokyo City University, Tokyo, Japan*.
2. Delivered invited lecture entitled, "Determination of Nitrate Contents in Fresh and Cooked Vegetables Using Flow Injection Analysis with UV Detection" at the Department of Natural

Sciences, Faculty of Knowledge Engineering, Tokyo City University, Tokyo, Japan, 23 October 2012. **Funded by Tokyo City University, Tokyo, Japan.**

3. **Delivered keynote address**, ‘The USP, FSTE, UG & PG Studies and Research’, during Sci-Teach Expo 2010 at High School in Vanuatu.
4. *Surendra Prasad*; Environmental Pollution Control Using Catalytic Kinetic Methods of Analysis as an Analytical Tool. Invited lecture and published in the Proceeding of the International Conference on Recent Advances in Environmental Protection (RAEP 2009), page 47-56, organized by the Department of Chemistry, St. John’s College, B.R.A. Agra University, Agra, 17-19 December 2009, Hotel Clarks Shiraz, Agra, India.
5. *Surendra Prasad*; Ligand Substitution Kinetics as an Analytical Tool for Trace Analysis. **Keynote address** at 27th Annual Conference of the Indian Council of Chemists (27th AC ICC), 26-28 December 2008, Gurukul Kangri University, Haridwar, India.
6. *Surendra Prasad*; Kinetics and Catalytic Reactions as Applied to Trace Analysis [IL-20]. Invited lecture in International Conference on Frontiers in Chemical Research (ICFCR-2008), 29-31 December 2008, Department of Chemistry, Manglore University, Manglore, India.
7. *Surendra Prasad*; A Glimpse of Kinetics in Analytical Chemistry. Presented at the Analytical Chemistry Symposium, 17 October 2006 at the Department of Chemistry and Biochemistry, Texas Tech University, TX, USA.
8. *Surendra Prasad*; The Mercury(II) Catalysed Ligand Exchange Between Hexacyanoferrate(II) and Pyrazine in Aqueous Medium [IL-2]. Presented Invited lecture at 93rd Indian Science Congress, 3-7 January 2006 at N.G.R. Agriculture University Hydrabad, India.
9. *Surendra Prasad*; Kinetic Determination of Mercury(II) at ppb Level from Its Catalytic Effect. [AIL-05]. Invited lecture at 24th AC ICC, 16-18, December 2005, Birla Institute of Technology, Mesra, Ranchi, India.
10. *Surendra Prasad*; Catalytic Abstraction of Cyanide in Hexacyanoferrate(II) by Mercury(II) in the Presence of α -Nitroso- β -Naphthol as Indicator Reaction for Determination of Mercury(II) by Kinetic Method [IL-15]. Presented Invited lecture at 92nd Indian Science Congress, 3-7 January 2005, Nirma University, Ahmedabad, India.
11. *Surendra Prasad*; Ligand Substitution Reactions in Kinetic Methods of Analysis [AEC(II)-2]. Invited Lecture at 41st Annual Convention of Chemists (Conf. of the Indian Chemical Society), 23–27 December 2004, University of Delhi, Delhi, India.
12. *Surendra Prasad*; Recent Development in Kinetic Methods of Analysis in the South Pacific Region. Invited lecture at the Regional Chemistry Symposium, 8-9 July 2002, the University of the South Pacific, Suva, Fiji.

Papers Accepted/Presented/Abstracts Published in Conferences Proceedings:

1. Vimlesh Chand and *Surendra Prasad*; Assessment of Anthropogenic Sources of Heavy Metal Pollution in the Suva Coastal Environment Using Multivariate Statistical Techniques. Accepted for presentation in 12th Pacific Science Inter-Congress, 8-12 July 2013 at the University of the South Pacific, Suva, Fiji.

2. Rita Roshni, *Surendra Prasad* and Jagdish Bhati; Enhancing Leafy Foods' Intake For Optimal Nutrition And Human Security in The South Pacific. Accepted for presentation in 12th Pacific Science Inter-Congress, 8-12 July 2013 at the University of the South Pacific, Suva, Fiji.
3. Masafumi Yoshida, Mai Amano, Hiroki Katou, Nobuyuki Takahashi, Kinuko Niihara, Shio Murakami, Tadaaki Satou, Kazuo Koike, Masanori T. Itoh, *Surendra Prasad*; Effects and Safety of Medical Plants in South Pacific Islands– Pharmacological Study on Kava *Piper methysticum*. Accepted for presentation in the Asia Pacific Congress on Clinical Nutrition (APCCN2013), 9-12 June 2013 to be held at Tokyo, Japan.
4. Radhey M. Naik, *Surendra Prasad*, Basant Kumar, Shiv B.S. Yasav, Abhas Asthana and Vimlesh Chand; Ligand Substitution Kinetic Assay of Antitubercular Drug Isoniazid in Pure and Pharmaceutical Formulations. Accepted for presentation in 12th Pacific Science Inter-Congress, 8-12 July 2013 at the University of the South Pacific, Suva, Fiji.
5. Vaishali Tomar, *Surendra Prasad* and Dinesh Kumar; Adsorptive Removal of Fluoride from Water Samples Using Zr-Mn Composite Material. Accepted for presentation in 12th Pacific Science Inter-Congress, 8-12 July 2013 at the University of the South Pacific, Suva, Fiji.
6. Shirleen Swapna, Anirudh Singh, *Surendra Prasad* and Sarah Hemstock; Municipal Solid Waste (MSW) as a Source for Energy and Biogas Production in the PICs. Accepted for presentation in 12th Pacific Science Inter-Congress, 8-12 July 2013 at the University of the South Pacific, Suva, Fiji.
7. H. Kato, N. Takahashi, M. Amano, K. Niihara, S. Murakami, T. Satou, K. Koike, *Surendra Prasad*, and M. Yoshida; Safety Evaluation of Kava (*Piper methysticum*) - Difference in Hepatotoxicity Among the Plant Body Parts. Oral presentation at the Annual Conference of the Kanto Chapter of the Japanese Society for Food Science and Technology (JSFST), 9 March 2013, Tokyo University of Agriculture, Tokyo 156-8502, Japan (***The presenter Mr. H. Kato was awarded Young Scientists Award of the JSFST.***)
8. A. A. Chetty, *S. Prasad* and J. Lal; Food Security – Nitrate Interference. Oral presentation and full paper published in the Proceedings of the International Conference in Food Science and Nutrition (ICFSN 2012), Page 1071-1083, 2-4 April 2012, Kota Kinabalu, Sabah, Malaysia.
9. *Surendra Prasad*; Recent Trends in Kinetics in Analytical Chemistry: Monitoring of Environmental Pollutants Using Kinetic Methods. Oral presentation at 99th Indian Science Congress, 3-7 January 2012, KIIT University, Bhubaneswar, India.
10. Roselyn Lata, Rajendra Prasad and *Surendra Prasad*; Effectiveness of Paddy Husk Biochar in Heavy Metal Removal from Drinking Water. Oral presentation at the International Conference on Chemistry, Environment and Climate Change, 14-16 September 2011, the University of the South Pacific, Suva, Fiji.
11. *Surendra Prasad* and Adrian Avinesh Chetty; Flow Injection Assessment of Nitrate Contents in Fresh and Cooked Fruits and Vegetables Grown in Fiji. Oral presentation at the International Conference on Chemistry, Environment and Climate Change, 14-16 September 2011, the University of the South Pacific, Suva, Fiji.
12. Shio Murakami, Tadaaki Satou, Kinuko Niihara, Masanori T. Itoh, Masafumi Yoshida, Tevita Voro and *Surendra Prasad*; Effects of Kava Suspension Prepared From Roots of

- piper methysticum* on Behavioral Alterations in Mice. Oral presentation at the International Conference on Chemistry, Environment and Climate Change, 14-16 September 2011, the University of the South Pacific, Suva, Fiji.
13. Vimlesh Chand, *Surendra Prasad* and Rajendra Prasad; Distribution and Geochemical Normalization of Arsenic and Heavy Metals in Surface Sediments of the Lami Coastal Environment in Fiji. Oral presentation at the International Conference on Chemistry, Environment and Climate Change, 14-16 September 2011, the University of the South Pacific, Suva, Fiji.
 14. Roselyn Lata, Rajendra Prasad and *Surendra Prasad*; Removal of Cadmium from Natural Water Using Different Derivatized Forms of Bagasse. Oral presentation at the International Conference on Chemistry, Environment and Climate Change, 14-16 September 2011, the University of the South Pacific, Suva, Fiji.
 15. *Surendra Prasad* and Tuikolongahau Halafihi; Catalytic Kinetic Method for the Determination of Nitrite and Its Application in Vegetable Samples. Oral presentation at the International Conference on Chemistry, Environment and Climate Change, 14-16 September 2011, the University of the South Pacific, Suva, Fiji.
 16. Kinuko Niihara, Shio Murakami, Tadaaki Satou, Masanori T. Itoh; Masafumi Yoshida, Tevita Voro and *Surendra Prasad*; Supercritical Fluid Extraction of Bioactive Ingredients From Piper Methysticum. Poster presentation at the International Conference on Chemistry, Environment and Climate Change, 14-16 September 2011, the University of the South Pacific, Suva, Fiji.
 17. Vimlesh Chand, *Surendra Prasad* and Rajendra Prasad; Evaluation and Comparison of Alkaline Fusion and Acid Digestion Procedures for Total Heavy Metals Determination in Soil and Sediment Samples by ICP-OES [ABS0384]. 14th Asian Chemical Congress 2011, 5-8 September 2011, Bangkok, Thailand. *The International Union of Pure and Applied Chemistry (IUPAC) awarded US\$400 to Mr. Vimlesh Chand.*
 18. Tevita Voro, Sujlesh Sharma, Priti Maharaj, *Surendra Prasad*; Vincent Bowry and Mani Naiker; Resveratrol– Crucial Biochemical Marker for Cardiometabolic Benefits from Foodstuffs. Division of Analytical Chemistry, 241st ACS National Meeting & Exposition, 27-31 March 2011, Anaheim, California. USA.
 19. Vimlesh Chand, *Surendra Prasad*, Rajendra Prasad; Ecotoxicological Risk Assessment of Arsenic and Trace Metals in Surficial Sediments of an Estuarine and Coastal Environment in Fiji. The 10th Annual East-West Center International Graduate Student Conference on the Asia Pacific Region, 17-19 February 2011, Honolulu, Hawaii, USA.
 20. *Surendra Prasad*, Ram K. Agarwal, Rashmi Kumari and Rabindra Singh; Synthesis, Magneto-Spectral, Electrochemical, Thermal Characterization and Antimicrobial Investigations of Some Nickel(II) Complexes of Hydrazones of Isoniazid. National Conference on Recent Aspects of Biological and Medicinal Chemistry (RABMC 2010), 20-21 February 2010, Lajpat Rai P.G. College, Chaudhary Charan Singh (CCS) University (formerly Meerut University), Sahibabad, Gaziabad, India.
 21. *Surendra Prasad*, Ram K. Agarwal, and Mahanth Prasad; Nickel(II) Complexes of Hydrazone of Isoniazid and Their Magneto-Spectral, Electrochemical, Thermal and Antimicrobial Investigations. National Conference on RABMC, 20-21 February 2010, Lajpat Rai P.G. College, CCS University (formerly Meerut University), Sahibabad, Gaziabad, India.

22. *Surendra Prasad*; Trace Determination of Thioglycolic Acid and Thiosulphate Using Novel Inhibitory Kinetic Spectrophotometric Method. Published in journal "Amino Acids, 37 (2009) 93" as the proceedings of 11th International Congress on Amino Acids, Peptides and Proteins, 3-7 August 2009, Vienna, Austria.
23. Vimlesh Chand, *Surendra Prasad* and Rajendra Prasad; A Comparative Study of Two Digestion Techniques for the Analysis of Heavy Metals in Tropical Estuarine and Coastal Sediments by ICP-OES. Presented at 17th RACI Research & Development Topics Conference, 6-9 December 2009, Griffith University, Brisbane, Australia.
24. Rajendra Prasad, *Surendra Prasad* and Roselyn Lata; Cadmium Removal Efficiency of Sugarcane Biochar: A Comparative Study. Presented at Asia Pacific Biochar Conference, 17-20 May 2009, Gold Coast, Australia.
25. *Surendra Prasad*; A Catalytic Kinetic Spectrophotometric Method for the Trace Determination of Selenium in Water Samples [PP-71]. National Conference on Recent Developments in Metallo-organic Chemistry (RDMC 2009), 28 February - 1 March 2009, Lajpat Rai P.G. College, CCS University (formerly Meerut University), Sahibabad, Gaziabad, India.
26. *Surendra Prasad*, Ram K. Agarwal and Rashmi Kumari; Synthesis, Physico-Chemical and Biological Properties of Complexes of Cobalt(II) Derived from Hydrazones of Isonicotinic Acid Hydrazide[PP-70]. National Conference RDMC, 28 February-1 March 2009; Lajpat Rai P.G. College, CCS University (formerly Meerut University), Sahibabad, Gaziabad, India.
27. *Surendra Prasad* and Vimlesh Chand; Determination and Chemical Speciation of Selenium in Environmental Water Samples Using Catalytic Kinetic Spectrophotometric Method. Presented during 16th Annual Royal Australian Chemistry Institute's (RACI) Analytical Chemistry Division R&D Topics Meeting, 6-9 December 2008, Macquarie University, Sydney, Australia.
28. *Surendra Prasad* and Adrian Chetty; Nitrate-N Determination in Fiji's Leafy Vegetables: Study of the Effects of Cooking and Freezing. Presented at 41st New Zealand Institute of Food Science and Technology Inc. Conference 2007 (41st NZIFST Conference 2007), 19-21 June 2007, Wellington, New Zealand.
29. *Surendra Prasad* and Adrian Chetty; Determination of Nitrate Contents in Fresh and Cooked Vegetables Using Flow Injection Analysis with UV Detection. Presented at 41st NZIFST Conference 2007, 19-21 June 2007, Wellington, New Zealand.
30. *Surendra Prasad*; Catalysed Ligand Substitution Kinetics as an Analytical Tool for Trace Analysis. Eastern Analytical Symposium & Exposition 2006: EAS 2006, 13-16 November 2006, Somerset, New Jersey, USA.
31. *Surendra Prasad*; Kinetics and Catalytic Reactions as Applied to Trace Analysis. Conference of the Federation of Analytical Chemistry and Spectroscopy Societies: FACSS 2006, 24-28 September 2006, Florida, USA.
32. *Surendra Prasad*; Catalytic Abstraction of Cyanide in Hexacyanoferrate(II) by Mercury(II) in the Presence of α -Nitroso- β -Naphthol as Indicator Reaction for Determination of Mercury(II) by Kinetic Method [IL-15]. Presented Invited lecture at 92nd Indian Science Congress, 3-7 January 2005, Nirma University, Ahmedabad, India.

33. *Surendra Prasad*; Ligand Substitution Reactions in Kinetic Methods of Analysis [AEC(II)-2]. Invited Lecture at 41st Annual Convention of Chemists (Conference of the Indian Chemical Society), 23-27 December 2004, University of Delhi, Delhi, India.
34. *Surendra Prasad*; Kinetic Method for Determination of Nanogram Amounts of Copper(II) by Its Catalytic Effect of Hexacyanoferrate(III)-Citric Acid Indicator Reaction [Mo4/L/05]. Presented at the International Symposium: Analytical Forum 2004, 4-8 July 2004, Warsaw University of Technology, Poland. ***It was funded by the Organization for the Prevention of Chemical Weapons (OPCW), The Netherlands.***
35. *Surendra Prasad*; Kinetic Determination of Organo-sulphur Ligands by Inhibition: Trace Determination of Cysteine and Maleonitriledithiolate (MNDT) [We16/P/57]. Presented at the International Symposium: Analytical Forum 2004, 4-8 July 2004, Warsaw University of Technology, Poland. ***It was funded by the Organization for the Prevention of Chemical Weapons (OPCW), The Netherlands.***
36. *Surendra Prasad*; Development and Validation of a Novel Catalytic Kinetic Spectrophotometric Method for Determination of Copper(II) [OP164]. Presented at the 90th Indian Science Congress, 3-7 January 2003, Bangalore University, Bangalore, India.
37. *Surendra Prasad*; Development of Method for Determination of Nanogram Amounts of Copper(II) by Its Catalytic Effect of Hexacyanoferrate(III)-Citric Acid Indicator Reaction [AEC(OP)-34]. Presented during the 39th Annual Convention of Chemists (Conference of the Indian Chemical Society, Kolkata), 22-24 December 2002, Nagarjuna University, Nagarjuna Nagar, Andhra Pradesh, India.
38. *Surendra Prasad*; Kinetics of Metal Catalysis in Ligand Exchange Reaction of Cyanide in Hexacyanoferrate(II) by *N*-Methylpyrazinium ion [O 3.18: Metals in Catalysis]. Presented during 35th International Conference on Coordination Chemistry (ICCC-35), 21-26 July 2002, University of Heidelberg, Heidelberg, Germany.
39. Tu'ikolongahau Halafihi and *Surendra Prasad*, A Novel Catalytic Kinetic Spectrophotometric Method for Determination of Copper(II) [PP-5]. Regional Chemistry Symposium, 8-9 July 2002, the University of the South Pacific, Suva, Fiji.
40. Tu'ikolongahau Halafihi and *Surendra Prasad*; Kinetic Determination of Nitrite Based on Its Catalytic Effect on an Indicator Reaction [PP-6]. 1st Regional Chemistry Symposium (RCS-1), 8-9 July 2002, the University of the South Pacific, Suva, Fiji.
41. *Surendra Prasad*; Role of Kinetics of Oxidation Reactions in Analytical Chemistry; Presented at the 88th Indian Science Congress, 3-7 January 2001, Indian Agricultural Research Institute, New Delhi, India.
42. N.K. Mehra, Archana Kapoor, Jyotsna Saxena, Rita Kumar and *Surendra Prasad*; Biodegradation of Phenol by Free and Immobilized Microorganisms [P-30]. National Symposium Environment III, 10-12 December 1996, National Chemical Laboratory, Pune, India.
43. Anil Kumar, Alka Sharma, Rita Kumar and *Surendra Prasad*; Biodegradation of Phenol in Waste Waters using Free and Immobilized Microbial Consortia [14 0181 PP]. 17th Annual Session of Academy of Environmental Biology, 16-18 November 1996, M.D. University Rohtak, India.

44. *Surendra Prasad* and *Smita Gupta*; Kinetics and Mechanism of Exchange of Cyanide in Hexacyanoferrate(II) by N-Methylpyrazinium ion in Presence of Mercury(II) as a Catalyst [PO-59]. 13th Annual Conference of the Indian Council of Chemists (13th AC ICC), 24-26 October 1994, University of Jammu, Jammu, India.
45. *Surendra Prasad*; Kinetic Aspects of Analytical Chemistry Based on Oxidation Reactions: An Example for Determination of Ruthenium(III) [AO-7.2]. Presented at 12th AC ICC 28-30 December 1993, Kakatiya University Warangal, India.
46. *Surendra Prasad*; Kinetic and Mechanistic Study of Secondary Reactions in the Substitution of [FeL(OH)] by Cyanide Ion [PO-4]. Presented at 12th AC ICC, 28-30 December 1993, Kakatiya University Warangal, India.
47. *Surendra Prasad*; Catalytic Kinetic Determination of Ultratrace Amount of Ruthenium(III) based on the Oxidation of Benzylamine by Alkaline Hexacyanoferrate(III) [AO-56]. Presented at 11th AC ICC, 12-13 March 1993, University of Bihar, Muzaffarpur, India.
48. P.C. Nigam and *Surendra Prasad*; Kinetic Aspects of Analytical Chemistry Based on Ligand Exchange Reactions. Presented at All India Symposium on Structure, Activity and Dynamics-Advancing Frontiers, 3-4 June 1991, National Council of Educational Research and Training (NCERT) New Delhi, India.
49. *Surendra Prasad* and P.C. Nigam; Kinetic Determination of Mercury(II) at ppm Level from its Catalytic Effect [L-13]. 3rd International Symposium on Kinetics in Analytical Chemistry, 25-28 September 1989, University of Belgrade, Yugoslavia.
50. *S. Prasad* and P.C. Nigam; Kinetics and Mechanism of Mercury(II) Catalysed Replacement of Cyanide in Hexacyanoferrate(II) by N-Methylpyrazinium Ion [C-6]. Presented at Natl. Conf. on Co-ord. Chem., 15-16 January 1989, Calcutta University, Calcutta, India.
51. *Surendra Prasad* and P.C. Nigam; Mercury Catalysed Exchange Reaction of Hexacyanoferrate(II) and Its Application in Trace Element Determination in Environmental Pollution [SO-6]. Presented at Intl. Sem. Analyt. Technique in Monitoring the Environment [ISAME], 10-12 January 1989, Sri Venkateswara University, Tirupati, India.
52. *S. Prasad* and P.C. Nigam; Kinetic Determination of Mercury(II) Based on its Catalytic Effect on a Ligand Substitution Process [AO-9]. Presented at 8th AC ICC, 28-30 October 1988, Sri Venkateswara University, Tirupati, India.
53. *S. Prasad*, R.M. Naik and P.C. Nigam; The Study of Kinetics and Mechanism of Ligand Substitution reactions of Cd(PAR) and Cd(PAR)₂, [PAR = 4-(2-pyridylazo)resorcinol] with Cyanide Ions [PO-9]. Presented at 7th AC ICC, 28-30 December 1987, Jiwaji University Gwalior, India.