

CURRICULUM VITAE OF SYED ARIF KAZMI, Ph.D.

PERSONAL DATA

NAME **SYED ARIF KAZMI**

PLACE & DATE OF BIRTH LUCKNOW, INDIA: APRIL 7, 1944

***CURRENT ADDRESS* : A8, Staff Town, University of Karachi Campus, Karachi 75270**

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ACADEMIC QUALIFICATIONS:

HIGH SCHOOL : Government Secondary School,
Jehangir Road, Karachi : Secondary School Leaving Certificate
Examination of the Board of Secondary Education, Karachi with a
distinction in Mathematics (1957)

COLLEGE : ***D.J. Science College, Karachi*** B.Sc. University of Karachi with a major in
Chemistry and Microbiology. Also studied English, Physics, Botany and
Zoology (1961)

UNIVERSITY (I)***University of Karachi, Pakitan*** M.Sc. Chemistry (1963)

(II) ***Kent State University, Kent, Ohio, U.S.A.*** Ph.D. in Chemistry (1970);

Dissertation Supervisor: Professor E.S. Gould

WORKSHOPS ATTENDED

* Summer Workshop in Inorganic Biochemistry, Organized by Centre for
Metalloenzyme Studies, University of Georgia, Athens, Ga (Summer 1992)

* School of Photochemistry organized by International Centre for High
Science and Technology at Trieste, Italy (November 1993) Lecturers
included V. Balzini, Mostafa El-Syed

* College on BioPhysics organized by International Centre for
Theoretical Physics (September-October 1994) at Trieste, Italy

* Summer Workshop on Microbial Physiology, University of Georgia, Athens, Ga
(June/July 1998)

WORK EXPERIENCE

<i>ORGANIZATION</i>	<i>Designation</i>	<i>Years</i>
Pakistan Council of Scientific & Industrial Research	Technical Assistant	1963-64
Kent State University (Kent, Ohio) (Department of Chemistry)	Graduate Teaching Assistant/ Teaching Fellow	1964-70
Hunter College of The City University of New York	Assistant Professor	1971-75
University of Karachi	Assistant Professor	1975-1989
University of Karachi	Professor	1989-2004
Balochistan University of IT and MS	Professor	2004-2006
HEJ Research Inst of Chem	Eminent Scholar	2006-todate
University of Maryland* (College Park, Md)	Postdoctoral Research Assoc.	1980-82
University of Illinois* (Urbana, IL)	Postdoctoral Research Assoc.	1982-83
Rutgers University* (Piscataway, NJ)	Visiting Lecturer	1983-84
Georgia State University*	Visiting Scientist	1999-2000

*On leave of absence from University of Karachi

Courses taught at various Institutions:

Physical for non-Science majors (Hunter)
General Chemistry (Rutgers, Hunter, Georgia State)
Quantitative Analysis -Lab and Lectures (Kent State, Rutgers)
Inorganic Chemistry and Advanced Inorganic Chemistry (Karachi, Georgia State)
Inorganic Reaction Mechanisms (Karachi)
Bioinorganic Chemistry (Karachi)

Current Interests

**Nutrition, Environment, Renewable and Clean Energy, Bioinorganic Chemistry
Inorganic Reaction Mechanisms**

ADMINISTRATIVE RESPONSIBILITIES

Dean, Faculty of Basic Sciences, Balochistan University of Information Technology and Management Sciences, Quetta, August 2004-todate

CHAIRMAN, Department of Chemistry. University of Karachi, 2002 -todate

Incharge of the Inorganic Section of the Chemistry Department, University of Karachi (1990-91 and 2001-)

Editor of the Physical Sciences section of the Journal of Science, University of Karachi (1993-95)

Editor of *AL-CHEMY*, News and Views Magazine of the Chemical Society of Pakistan (1995-97)

PRINCIPAL INVESTIGATOR, Pakistan Science Foundation Research Project on Biological Iron Release Mechanism

PROJECT DIRECTOR, HEC Funded project “Improvements of Teaching and Research Facilities in the Chemistry Department, University of Karachi” (Rs. 35.45 million)

PROJECT DIRECTOR, HEC Funded project “Creation of a Centralized Instrument Laboratory for the Faculty of Science, University of Karachi” (Rs. 39.9 million)

MEMBERSHIPS OF SOCIETIES and LEARNED BODIES

Member, Pakistan Chemical Society

Member, American Chemical Society

Member, Karachi University’s Board of Studies in Chemistry

Member, Jinnah Women’s University’s Board of Studies in Chemistry

Member, Board of Faculty of Science, University of Karachi

Member, Academic Council, University of Karachi

Member, Senate, University of Karachi

Member, Karachi University Teachers’ Society

Secretary, Karachi University Teachers’ Society (1995-96 – by General Elections)

President, Karachi University Teachers’ Society (1978-79-by General Elections)

Member, Scientists and Engineers for Social and Political Action, U.S.A. (SESPA) 1973-78

Executive Member, Hunter College Unit of The Professional Staff Congress (CBA) 1973-74

PUBLICATIONS OF *S. ARIF KAZMI*, Ph.D.

1. S. Arif Kazmi and Bukhari, A.I. (1978): A mutant of E. Coli which accumulates large amounts of Coproporphyrin. *Biochim et Biophys Acta*, 540, 420-424.
2. Mazher I. Khan and Kazmi, S. Arif, (1979): *J.Chem. Soc. (Pak)* 1, 73-75.
3. S.M.Ifzal, Akhter, R., Kazmi, S. Arif and Khan, Mazher, I., (1980): Reaction of Acetophenone with Curpic Bromide, *J.Chem. Soc. (Pak)* 2, 111-112.
4. S. Arif Kazmi and McArdle, James V., (1981): Kinetics of Formation of bis and tris (Acetohydroxamato) Fe(III), *J.Inorg, Nucl. Chem. (Bioinorganic Section)*, 43, 3031-34
5. S. Arif Kazmi and McArdle, J.V., (1981): Kinetics of formation of Ferrioxamine B, *J.Inorg. Biochem.*, 15, 153-162.
6. S. Arif Kazmi, Shorter, A.L. and McArdle, J.V., (1982): Kinetics of reduction of Ferrioxamine B by Cr(II), V(II) and dithionite, *J.Inorg. Biochem.*, 17, 269-281.
7. S. Arif Kazmi and Naqvi, R.R., (1981): Cu(I) reductions of S-phenyl and S-benzyl thioglycolato pentaammine Cobalt(III) complexes, *J. Sci. Tech.*, 1-3
8. R.A. Scott, H. Beinert, M.H.Emptage, J.E. Hahn, K.G. Hodgson and S. Arif Kazmi, (1983): *Inorg. Chim. Acta*, 79, 142.
9. S. Arif Kazmi, A. Lee Shorter and James V. McArdle, (1984), Kinetics of Reduction of Ferrichrome and Ferrichrome A by Cr(II), V(II), Eu(II) and dithionite, *Inorg. Chem.*, 23, 4332.
10. S. Arif Kazmi, Mary Mills, Zacchary W. Pitluk and Robert A. Scott, (1985) Kinetics of dithionite reduction of Heme Nonapeptide of Cytochrome c, *Journal of Inorg. Biochem.*, 24, 9.
11. S. Arif Kazmi, A. Lee Shorter and James V. McArdle, (1986), Mechanism of Iron Release from Microbial Iron Transport Compounds, in *New Trends in Natural Products Chemistry*, Atta-ur-Rahman and P.W. Le Quesne (eds.), Elsevier Science Publishers B.V., Amsterdam
12. Rolf Bechtold, Mary B. Gardineer, S. Arif Kazmi, Bruno Van

Hemelryck and Stephen S. Isied, (1986), Ruthenium modified Cytochrome c, : Effect of pH and Ligation on the rate of intramolecular electron transfer between Ru(II) and Heme(III), J. Phys. Chem. 90, 3800.

13. S. Arif Kazmi, M. Saqib Qureshi and Zahida Maqsood, (1987), Reactivity of Iron complex of gallic acid, Inorg. Chim. Acta (bioinorganic section), 137, 151

14. S. Arif Kazmi, (1987), Reduction of Fe(III) bound to N-terminal Transferrin by Ascorbate in presence of o-phenanthroline-Mechanism of Iron Release from Biological Iron transport compounds, First Yearly Report submitted to Pakistan Science Foundation for Project No. S-KU/CHEM(164).

15. S. Arif Kazmi, M.E.S.Shawoo, Kishwar Sabih, S. Siddiqui and S. Ghani, (1988), In Vitro Estimation of Bioavailable Iron in Typical Pakistani Foods, in NUTRIENT AVAILABILITY, Royal Society of Chemistry Monograph (Special publication No. 72), D. Southgate, I. Johnson and R.G. Fenwick (eds.).

16. S. Arif Kazmi, (1988), A reductive Mechanism for mobilization of Iron from Transferrin like proteins, Second Yearly Report submitted to Pakistan Science Foundation for Project No. S-KU/CHEM(164).

17. S. Arif Kazmi and Yaseen Ahmed, (1989), Reductive Mechanism for Iron release from biological Iron transfer compounds, Proceedings of The First National Chemistry Conference (Chemical Society of Pakistan, M. Khawaja and M. Arafan (eds.), pp. 386-393.

18. Zahida T. Maqsood and S. Arif Kazmi (1990), A study of Fe(III)-gallic acid complex formation at pH 4, J. of Research (Science), Islamia University, Bahawalpur) 2, 17.

19. S. Arif Kazmi, (1991) Reactivity of Ru-modified Cytochrome c towards cytochrome oxidase and cytochrome reductase, J. Chem. Soc. (Pak) 13, 49.

20. Zahida T. Maqsood and S. Arif Kazmi, (1991), Role of water in aqueous solutions of Fe(III)-gallic acid complexes, Pak. J. of Sci. and Ind. Res., 34, 45.

21. Zahida T. Maqsood and S. Arif Kazmi, (1991), Reduction of Iron complex with Gallic Acid and Methyl Ester of Gallic Acid using Ascorbate as reducing agent, Proceedings of Second National Chemistry Conference (Chemical Society of Pakistan), Kazmi, Naqvi, Zaidi and Rahman (eds.), pp.184-187.

22. S. Arif Kazmi, (1991), Kinetics of Formation and Reduction of Models of Microbial Iron Transport Compounds, *J. Inorg. Biochem.*, 43 , 145.
23. Mazher Iqbal, Zahida T. Maqsood and S. Arif Kazmi, (1991): Estimation of redox potentials of Fe(III)-Gallic acid complexes at different pH by spectrophotometric titrations with Ascorbate. Proceedings of the National Symposium on Modern Trends in Contemporary Chemistry. Pak. Atomic Energy Commission, Nilore.
24. Zahida T. Maqsood and S. Arif Kazmi, (1992): Reduction of different species of Fe(III)-gallic acid complexes by ascorbate. *J. Chem. Soc. (Pak)*, 14, 243.
25. S. Arif Kazmi, Kousar Usman and Muti-ur-Rahman, (1991): Potentiometric Estimation of stability constants of Fe(III)-Salicylhydroxamic acid. Proceedings of the National Symposium on Modern Trends in Contemporary Chemistry. Pak. Atomic Energy Commission, Nilore.
26. Amin, S., Maqsood, Z.T. and Kazmi, S.A. (1993): Study of Al(III)-Gallic acid and Al(III)-Gallic acid Methyl ester potentiometrically using Computer program BEST. *J. Chem. Soc.(Pak)*, 15,4, :244
27. Maqsood, Z.T. and Kazmi, S.A. (1993): Determination and comparison of stability constants, enthalpy and entropy of formation of Iron(III) complexes of gallic acid and gallic acid methyl ester. *J. Chem. Soc. (Pak)*, 15(1):30
28. Maqsood, Z.T. and Kazmi, S.A. (1993): Formation of Iron (III) gallic acid complexes at different pH and determination of their stability constants: *Pak. J. Sci. Ind. Res.* 36(11) 511.
29. Maqsood, Z.T. and Kazmi, S.A. (1993): Comparison of rates of reduction of different species of Iron(III)-gallic acid and Iron(III)-gallic acid Methyl ester by Ascorbate. *Pak. J. Sci. Ind. Res.* 36(11):405
30. Fatima,N., Maqsood, Z.T. and Kazmi, S.A. (1994): Studies on lower oxidation states of Vanadium stabilized by catechol chelation. Proc. Of 5th. National Chemistry Conference, pp25-28. QAU, Islamabad.
31. Maqsood, Z.T., Sultana, F., Amin, S. and Kazmi, S.A. (1994): Comparisons of stability constants of complexes formed between gallic acid and other biologically available metals with Iron gallate. Proc. Of

5th. National Chemistry Conference, pp. 192-95 QAU, Islamabad.

32. Naqvi, S.M.A., Maqsood, Z.T. and Kazmi, S.A. (1994): Complexation of Iron(III) by some antibiotics and their reduction by ascorbate at very low pH. Proc. Of 5th. National Chemistry Conference, pp. 196-99 QAU, Islamabad.

33. Qureshi, M.S. and Kazmi, S.A. (1994) : Kinetics and Mechanism of formation of Fe(III)-tris gallate and Fe(III)-bisgallate complexes from Fe(III)-mono gallate complex. J.Chem. Soc.(Pak) 16(4):248

34. Kazmi, S.A. (1995): Reduction of Ferrioxamine E. J. Inorg. Biochem. 59, 121.

35. Kazmi, S.A. and Ahmed, Y. (1995): Reductive Mechanism of Iron release from Biological Iron transfer compounds. J. Chem. Soc. (Pak) 17(3):183.

36. Fouzia Sultana, Zahida T. Maqsood and S. Arif Kazmi, (1996): Determination of Enthalpy and Entropy values of Metal-Gallic Acid complexes and their comparison with Iron gallate , J. Chem. Soc.(Pak), 18 , 1.

37. Fouzia S. Rehmani, Zahida T. Maqsood and S. Arif Kazmi (1997): Comparative studies on stability constants of trace metal complexes of salicylhydroxamic acid. J. Chem. Soc.(Pak), 19, 38.

38. Fatima, N, Maqsood, ZT and Kazmi, SA
Comparative study of V(II) and V(III) gallic acid complex
J. Chem. Soc. Pak. (1998) 20 295-298

39. Qureshi, MS and Kazmi, SA Kinetics of formation of Fe(III) complexes of 3,4,5 trihydroxybenzoic acid J. Chem. Soc. Pak. (1998) 20 175-178

40. Kazmi, SA, Waqar, D and Saeed, R **Stopped-flow kinetic study of reduction of a binuclear iron(III)-cobalt(III) complex.** Abstr. Pap. Am. Chem. Soc.1998 AUG 23 VOL 216, 187-INOR

41. Kazmi, SA and Amin, S **Kinetics and mechanism of reduction of iron (III)-maltol complex by ascorbate.** 188-INOR Abstr. Pap. Am. Chem. Soc., 1998, AUG 23, VOL 216

42. Kazmi, SA and Rahman, MU **Kinetics and mechanism of conversion of carcinogen hexavalent Cr(VI) to Cr(III) by reduction with ascorbate** J. Chem. Soc. Pak., (1997) 19 201-204

43. Rehmani, FS, Maqsood, ZT and Kazmi, SA; **Comparative studies of stability constants of trace metals salicylhydroxamic acid complexes** J. Chem. Soc. Pak.(1997) 19 38-41

44. Shabana Amin and S. Arif Kazmi : " Kinetics of reduction of Fe(III)-Maltol complex by Ascorbate" 2005, in press
45. Dilshad Waqar and S. Arif Kazmi; "Intramolecular electron transfer in an Fe-Co binuclear complex bridged by DTPA; in press

45. Naheed Kausar, S. Arif Kazmi, Khalid Khan, Humayun Ateeq, Saleh Shekhani and Shabbir A. Zubairi; "Assymetric synthesis using copper complexes containing chiral ligands" 2005; in press

PUBLICATIONS (update2004-06)

- 1) **Stopped-flow kinetic study of reduction of a Binuclear complex Fe^{3+} -L- Co^{3+} by ascorbate; Dilshad Waqar and S. Arif Kazmi, J. Saudi. Chem. Soc. 9 (1), 65-76 (2004)**
- 2) **Complexation of Vanadium(IV) by hydroxamate chelators and their stability relation with pH, K. Ali, N. Fatma, Z.T. Maqsood and S. Arif Kazmi, JICS, 2004, 1(1), 65-70.**
- 3) **Kinetics and Mechanism of Reduction of a Binuclear complex Fe^{III} -L- Co^{III} : D. Waqar and S. Arif Kazmi, J. Chem. Soc. (Pak) 27(2), 137-143 (2005)**
- 4) **Intramolecular electron transfer between Fe and Co in a dinuclear complex bridged by DTPA, Dilshad Waqar and S. Arif Kazmi, J. Chem. Soc. (Pak), in press.**
- 5) **Cysteine based novel noncompetitive inhibitors of urease(s)—Distinctive inhibition susceptibility of microbial and plant ureases, Zareen Amtul, Naheed Kausar, Cristian Follmer, Richard F. Rozmahel, Atta-Ur-Rahman, Syed Arif Kazmi, Mohammed Saleh Shekhani, Jason L. Eriksen, Khalid M. Khan and Mohammad Iqbal Choudhary, *Bioorganic and Medicinal Chemistry*, 14(19), 6737-6744 (2006)**
- 6) **Kinetic basis of Ureases inhibition by Organogermaniums---a treatment perspective on urease dependent pathogenic bacteria; Zareen Amtul, Cristian Follmer, Sumera Mahboob, Atta-ur-Rahman, Mohammad Mazhar, Khalid M. Khan, S. Arif Kazmi, Rafat Siddiqui, Sajjad Mohammad and M. Iqbal Chaudhary, submitted for publication to Journal of Inorganic Biochemistry.**
- 7) **Kinetics and Mechanism of reduction of Fe(III)-Acetohydroxamic acid complex by Cysteine, Shazia Nisar and S. Arif Kazmi, submitted for publication to *Inorganica Chimica Acta***
- 8) **Kinetics and Mechanism of reduction of Fe(III)-Acetohydroxamic acid complex by Hydroxylamine Hydrochloride Mohatshim Hassan, and S. Arif Kazmi, Journal of Science, University of Karachi vol. , pp.11-16, 2004**

9) Stopped-flow kinetics of reduction of Ferrioxamine B by Eu(II). (submitted for publication to *Inorganic Reaction Mechanisms*)

10) Spectroelectrochemistry and kinetics of reduction of reduction of Ferrioxamine E by dithionite. (submitted for publication to *Inorganic Reaction Mechanisms*)

Manuscripts of forthcoming papers under preparation:

1. Stopped-flow kinetics of reduction of ferrioxamine E by Cr(II), Eu(II) and V(II)
2. Reduction of models of microbial iron transport compounds- Cyclic Voltametry and stopped-flow kinetics of reduction of acetoxyhydroxamic acid complex of Fe(III).
3. Kinetics of reduction of models of microbial iron transport compounds-reduction of salicyl and benzohydroxamic acid complexes of Fe(III).
4. Reduction of Fe(III) maltol complex by ascorbate and dithionite
5. Reduction of Fe(III)-maltol complex by glutathione.

PRESENTATIONS AT CONFERENCES

Papers presented at a number of Conferences including :

American Chemical Society National Meetings (Several occasions)

International Conference on Co-ordination Chemistry (Colorado 1984)

International Conference on BioInorganic Chemistry (Frienze 1983)

Nutrient Availability Conference (Norwich, U.K., 1988)

Protein Structure Function Relationship (Karachi, Pakistan, 1988)

Conference on Natural Products Chemistry (Karachi, Pakistan, 1986)

Chemical Society of Pakistan, National Conferences (several occasions)

EXTERNAL Ph.D. THESES EXAMINER AT FOLLOWING UNIVERSITIES

1. University of Sindh (Jamshoro)

2. Bahauddin Zakaria University (Multan)
3. Quaid-e-Azam University (Islamabad)

INVITED LECTURES

1. National Institute of Aging, Baltimore, MD (1983)
2. Georgia State University, Atlanta, GA (1998)
3. Radford University, Radford, VA (2001)
4. HEJ Research Institute of Chemistry (1982)
5. HEJ Research Institute of Chemistry (2004)
6. Center of Excellence in Analytical Chemistry, University of Sindh (2003)
7. Balochistan University of Information Technology and Management Sciences (2004)
8. Pakistan Society of Microbiology (2005)

M.Phil./Ph.D. Scholars Guided:

1. **Dr. Zahida Maqsood**, Awarded **Ph.D.** in 1992
(Presently Professor of Chemistry, University of Karachi)
2. **Dr. Saqib Qureshi**, Awarded **Ph.D.** in 1994
(deceased; was Assistant Professor, University of Karachi)
3. **Dr. Samina Siddiqui**, Awarded **Ph.D.** in 1997
(Currently Research Chemist, Proforma Labs, San Diego, CA, USA)
4. **Dr. Shabana Amin**, Awarded **Ph.D.** in 1998
(Presently Group Leader, Baxter Pharmaceuticals Chicago, IL)
5. **Dr. Fouzia Sultana Rehmani** : Awarded **Ph.D.** in 1999
(Presently, Director, Institute of Biochemistry, Balochistan University, Quetta)
6. **Dr. Dilshad Waqar**, Awarded **Ph.D.** in 2001
(Presently Associate Professor, Department of Chemistry, KU)
7. **Dr. Naheed Kausar**, Awarded **Ph.D.** in 2001
(Presently Senior Research Officer, PCSIR, Lahore)
9. **Mr. Yaseen Ahmad**, Awarded **M.Phil.** degree in 1989
(Currently employed in Chemical Industry in Canada)
9. **Ms. Nasreen Fatma**, Awarded **M.Phil.** degree in 1998
(Presently, Lecturer of Chemistry, University of Karachi)

SUMMARY OF S. ARIF KAZMI's CV

Full Name: Syed Arif Kazmi; ***Date of Birth:*** 7-4-1944

Address(w): H.E.J. Research Institute of Chemistry, University of Karachi, Karachi 75270

Address(h): A 8 Staff Town, University of Karachi, Karachi-75270; ***Phone:*** (h)92-21-4801306 (c)92-0300-8213565

Professional and Academic Experience:

Hunter College of the City University of New York: Assistant Professor (4 years)

University of Karachi (Department of Chemistry) Assistant Professor, Professor, Chairman
26 years;

Balochistan University Information Technology and Management Sciences: Professor and
Dean Faculty of Basic Sciences (1.5 years)

CURRENT POSITION: Eminent Scientist, H.E.J. Research Institute of Chemistry,
University of Karachi, Karachi 75270, Pakistan

Highest degree: Ph.D. (Kent State University, Kent, Ohio, USA)

Post Doctoral Experience : 3 years (University of Maryland, University of Illinois)

Experience as Visiting Scientist : 3 years (Rutgers University, Georgia State University)

Number of refereed research publications: 46 (13 in foreign journals of developed countries)

Presentations in International Meetings: 16

Number of Ph.D. students' supervised who have already been awarded Doctorates: 7

CURRENT ACTIVITIES

- 1) I have 8 research students at M.Phil. and Ph.D. level working under my supervision at the Department of Chemistry, University of Karachi. At least two of them will be submitting their Ph.D. dissertations this year. The other students are actively pursuing their research. One student is an HEC indigenous Ph.D. Scholar.
- 2) I have two students enrolled to work for their M.Phil./Ph.D. degrees at the HEJ Research Institute of Chemistry, University of Karachi.
- 3) I am teaching currently a course on "Inorganic Reaction Mechanisms" at the Department of Chemistry, University of Karachi under the HEC's STEP program.

I am scheduled to teach a course at the HEJ Research Institute of Chemistry, University of Karachi during the next session.

