

CURRICULUM VITAE

Name Gulrez Fatima Durrani
Father's Name Sardar Muti Ullah Khan Saddozai
Date of Birth 08-07-1963
Domicile Dera Ismail Khan
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Present Address Department of Chemistry
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Academic Qualifications

| <u>Degree/ Certificate</u> | <u>University /Board</u> | <u>Year</u> | <u>Division</u> | <u>Position</u> |
|----------------------------|---|-------------|-----------------|-----------------|
| Post-Doctoral | 1-Dongguk University, 2004 South Korea. | | | |
| | 2- Quaid-e-Azam University, 2007 Islamabad. | | | |
| Ph.D. | Islamia University Bahawalpur, Punjab (Pakistan). | 2002 | | |
| M.Sc (Chem) | Gomal University, D.I.Khan. | 1986 | Ist | Ist class Ist |
| B.Sc | Gomal University, D.I.Khan. | 1983 | Ist | 3rd |
| F.Sc | B.I.S.E Peshawar. | 1981 | 2nd | - |
| S.S.C | B.I.S.E Peshawar. | 1978 | 2nd | - |
| Specialization: | Physical Chemistry | | | |

Ph.D. Dissertation: Quantum and Statistical Mechanical Description of Photosynthesis.

Supervisor Two Ph.D Students(Indiginous), Six M.Phil Students

Co-supervisor Three Ph.D Students(Indiginous)

Co-Principal Investigator Project entitled “Investigation of the interaction of water soluble polymers with surfactants” No. 20-165/R&D/2003

Administrative Experience

- i. Joint secretary of GUASA for year 1990 , 2003, 2009
- ii. Teacher Proctor for year 2006-2007 , 2007-2008 and 2008-2009.
- iii. Member of Technical committee of Research center of polymer and colloid Sciences.
- iv. Member of Quality Enhancement Cell,Gomal University,Dera Ismail Khan.
- v. Member of Board of Advanced Studies and Research

1st Post Doctoral Research Quantum Chemical and Spectroscopic Study of Photochemical Reaction of Spirocompounds.

2nd Post Doctoral Research Characterization of Block Copolymers.

Field of Research:

- i. Photochemical Reaction (Photosynthesis)
- ii. Polymer Characterization
- iii. Environmental Pollution

Computer Knowledge:

- i. Handling of Many softwares such as GAMESS, Hypercam, Guassian etc. (Learned in Dongguk University, South Korea, 2004).

Academic Awards:

- i. **Merit Scholarship** in M.Sc Chemistry (1984-86) for securing 3rd position in B.Sc by Gomal University.
- ii. **A cash award of Rs.2000/-** for securing 3rd position in B.A/B.Sc (1983) by the Govt.: of Pakistan, Ministry of Education, Islamabad..
- iii. **Gold Medal in M.Sc Chemistry** for securing 1st class 1st position in the Department of Chemistry (1986).

- iv. Appointed as Assistant Professor on the basis of Ph.D.
- v. **Post Doctoral fellowship awarded by Korea Science & Engineering Foundation** under 2003 KOSEF Post Doctoral fellowship program for foreign researchers.
- vi. Higher Education Commission (HEC) **approved Ph.D Supervisor.**
- vii. **Member of National Testing Service (NTS)** Pakistan.
- viii. **Faculty member of High Tech: Research Centre,** Gomal University, Dera Ismail Khan.
- ix. **Productive Scientist of Pakistan,2007**(Copy of Directory attached)
- x. Post Doctoral Fellowship awarded by National Core group in chemistry (NCGC) at Quaid-e-Azam University, Islamabad, (2007).

Experience:

- i. Working as **Lecturer** in Physical Chemistry at the Department of Chemistry, Gomal University since 30th November 1986.
- ii. Working as Assistant Professor in Physical Chemistry at the Department of Chemistry, Gomal University, D.I.Khan, NWFP, (Pakistan) since 1st February 2003.
- iii. Working as Associate Professor in Physical Chemistry at the Department of Chemistry, Gomal University, D.I.Khan, NWFP, (Pakistan) since 4th December 2008.

Courses Attended:

- i. 273 hours intensive course in English for Academic purposes.
- ii. 15 days computer training for Scientific purpose at the Department of Physics, Gomal University. (1987)
- iii. Training course in Pharmacy held from March 26-31/2001 at the Faculty of Pharmacy, Gomal University, Dera Ismail Khan.
- iv. 6 month Post doctoral training in Dongguk University, South Korea from 28th April 2004 to 26th October 2004.
- v. 3 month training in computer in ICIT Department Gomal University, Dera Ismail Khan on 16th April 2005.

**Conferences/Workshops
/Seminars Attended/
Delivered.**

- i. Third National Chemistry Conference held on 20-23 Dec. 1991 at Gomal University, Dera Ismail Khan.
- ii. 4th National Polymer Science symposium held on 24-31 August, 1991 at University of Peshawar, Peshawar.
- iii. Workshop entitled "theoretical and computational chemistry" held on 6-11 Feb., 1993 at National Academy for Higher Education, University Grants Commission, Islamabad.
- iv. 1st International Chemistry Conference held on April 10-14, 2001 at University of Peshawar, Peshawar.

- v. Executive Management Seminar on "Environment and Health" held on Oct. 1-3, 2002 at Pakistan Atomic Energy Commission, Pakistan.
- vi. Six days training workshop on "Environmental Concerns and Management Strategies" held on August 16-21, 2003 at Fatima Jinnah Women University, Rawalpindi.
- vii. One-day workshop on ISO 17025 at Gomal University on 22nd Oct. 2003 from SMEDA and Gomal University.
- viii. In Service Teacher Training Program held on 20-25th October 2003 sponsored by HEC at Department of Chemistry Gomal University D.I.Khan. (As Resource person)
- ix. International Conference on Environmental Challenges in University of Peshawar, March 11-13, 2004.
- x. Seminar on "Introduction to Electrochemistry" by Dr. Vu Thi Thu Ha, Institute of Chemistry Vietnam Academy of Science & Technology Hanoi in Dongguk University, South Korea on 31st May 2004.
- xi. Seminar on "Application of Electrochemistry" by Dr. Vu Thi Thu Ha, Institute of Chemistry Vietnam Academy of Science & Technology

- Hanoi in Dongguk University, South Korea on 14th June 2004.
- xii. Seminar on “Experimental Method of Electrochemical Detection” by Dr. Vu Thi Thu Ha, Institute of Chemistry Vietnam Academy of Science & Technology Hanoi in Dongguk University, South Korea on 5th July 2004.
 - xiii. Seminar on “Introduction to Micellar Electrochemical Separation by Dr. Vu Thi Thu Ha, Institute of Chemistry Vietnam Academy of Science & Technology Hanoi in Dongguk University, South Korea on 2nd August 2004.
 - xiv. Seminar on “Application of Capillary Electrophoresis method to the Separation of Isomers in Minute amount in reaction mixture” by Dr. Vu Thi Thu Ha, Institute of Chemistry Vietnam Academy of Science & Technology Hanoi in Dongguk University, South Korea on 13th September 2004.
 - xv. Seminar **presented** on “Introduction to Photochemistry” in Department of Chemistry, Dongguk University, South Korea on 7th June 2004.
 - xvi. Seminar **presented** on “Photochemical Reactions” in Department of Chemistry Department, Dongguk University, South Korea on 21st June 2004.
 - xvii. Seminar **presented** on “Introduction to Hypercam program for Theoretical Study of Photochemical Reactions” in Department of Chemistry Department, Dongguk University, South Korea on 12th July 2004.
 - xviii. Seminar **presented** on “Introduction to Guassian program for theoretical study of Photochemical Reactions” in Department of Chemistry Department, Dongguk University, South Korea on 9th August 2004.
 - xix. Seminar **presented** on “Quantum Chemical and Spectroscopic Study of Photochemical Reaction of Spirocompounds” in Department of Chemistry Department, Dongguk University, South Korea on 20th September 2004.

- xx. First Kashmir International Science Conference held at University of Azad Jammu and Kashmir, Muzaffarabad, Pakistan on 20-21st September 2005.
- xxi. Training on 300 MHz NMR software at Gomal University, D.I.Khan from 17- 24th Oct. 2005.
- xxii. 6-days workshop on Chromatography Coordination Chemistry and Polymer Chemistry at Department of Chemistry, Gomal University, Dera Ismail Khan from 23-28th Jan.2006.
- xxiii. Minisymposium on Nanotechnology held at H.E.J Research Institute of Chemistry from 8-9th January 2006.
- xxiv. 7th International and 17th National chemistry Conference held at the Department of Chemistry, Gomal University, Dera Ismail Khan, Pakistan on Feb.26-28,2007.
- xxv. 18th National Chemistry Conference held at Institute of Chemistry, University of the Punjab, Lahore, Pakistan on Feb 25-27, 2008.
- xxvi. 1st National symposium on Analytical, Environmental and Applied Chemistry held at Shah Abdul Latif University, Khair Pur on 24-25 October 2008.
- xxvii. 19th National Chemistry held at Kohat University of Science and Technology, Kohat on 9-11 June 2009
- xxviii. 8th International and 120th National chemistry Conference held at the Department of Chemistry, Quaid-i-Azam University, Islamabad, Pakistan on Feb.15-17,2010.
- xxix. One day workshop on Problems related to sugar Industries held at Department of Chemistry,Gomal University, Dera Ismail Khan on 8th Feb. 2011.
- xxx. 4th Academic Workshop for Effective PhD Supervision scheduled to be held at Islamia University Bahawalpur on 15-17th March 2011.
- xxxi. Two days International Interdisciplinary Conference "Women Universities as agents of Change"at International Islamic University, Islamabad on 26-27th Nov.2010

Theses Supervised:

1. Viscometric study of poly (ethylene oxide) as effected by thermodynamic quality of the solvent, Fazal Wahab, M.sc Chemistry thesis, Gomal University, Dera Ismail Khan. (1987-89).
2. Viscometric study of poly (ethylene oxide) in the presence of some Inorganic salts, Syeda Anjum, M.sc Chemistry thesis, Gomal University, Dera Ismail Khan. (1988-90).
3. Study of the effect of Inorganic salts on the aqueous solution of poly (ethylene oxide) by viscosity and conductance measurement, Fahim Siddique, M.sc Chemistry thesis, Gomal University, Dera Ismail Khan. (1988-90).
4. Effect of industrial pollution on Photosynthesis, Shoaib Ahmad, M.sc Chemistry thesis, Gomal University, Dera Ismail Khan. (1999-2001).
5. Effect of traffic pollution on photosynthesis, Ashfaq Hussain, M.sc Chemistry thesis, Gomal University, Dera Ismail Khan. (1999-2001).
6. A comparative survey of various nutrients in milk of different mammals and packed milk. Miss Nayar Nawab Dar, M.Sc. Chemistry Session 2000-2002.
7. Effect of caffeinated cold Beverages on Human Health. Miss. Nabila Younis, M.Sc Chemistry Session 2000-2002.
8. Effect of caffeinated Hot Beverages on Human Health. Miss. Zubaida Ahmad, M.Sc Chemistry Session 2000-2002.
9. Effect of concentration of electrolytes on CMC of SDS, Mr.. Muhammad Sheraz Ahmad, M.Sc Chemistry Session 2002-2004.
10. Effect of concentration of electrolytes on Critical Micelle Concentration of Surfactants, Mr. Hidayat Ullah, M.Sc Chemistry Session 2002-2004.
11. Effect of Temperature and drug on Critical Micelle Concentration of Surfactants, Noor Saeed Khattak, M.Sc Chemistry Session 2006-2008.
12. Effect of electrolytes on CMC of Surfactants, Syed Ali Ather, M.Phil Chemistry, 2009
13. Development of Low Energy Cement from Industrial Waste, M.Phil Chemistry, 2011.

Publications:

1. Zia Farooq Khan, Noor-i-Ain-Naqvi and **Gulrez Fatima Durrani**: Single Crystal and Polycrystalline E.P.R. Studies of Photochemical Reaction of the ^{15}N Labelled Humulene Nitrosite ($\text{C}_{15}\text{H}_{24}\text{N}_2\text{O}_3$), Gomal Univ. J.Res.(B)15(2): 199-215,1995.
2. Zia Farooq Khan, Karamat Mehmood, Tahira Saleem, Abida Rafique, Raheela Nazli, Noor-i-Ain-Naqvi and **Gulrez Fatima Durrani**: E.P.R Studies of the Photochemical Reactions of Humulene Nitrosite ($\text{C}_{15}\text{H}_{24}\text{N}_2\text{O}_3$); Extraction of Various Hyperfine Tensor Components for the Most Stable Nitroxide Radical Formed in the Single Crystal Platelet). Gomal Univ. J. Res.(B)15(1): 155-171,1995.
3. Zia Farooq Khan, Karamat Mehmood, Iftikhar Ahmad, Abdul Hadi Hassan, Noor-i-Ain-Naqvi and **Gulrez Fatima Durrani**: E.P.R Studies of The Photochemical Reaction Of ^{15}N Labelled Poly-Crystalline Hummulene Nitrosite ($\text{C}_{15}\text{H}_{24}\text{N}_2\text{O}_3$). Extraction of the Hyperfine Tensor Components Of The Nitroxide Radical. Journal Of Pure And Applied Sciences Vol. 15, No:2, Dec. 1996, pp 39-48.
4. Zia Farooq Khan, Karamat Mehmood, Tahira Saleem, Abida Rafique, Raheela Nazli, Noor-i-Ain-Naqvi and **Gulrez Fatima Durrani**: E.P.R Studies of the Photochemical Reaction of Humulene-Nitrosite ($\text{C}_{15}\text{H}_{24}\text{N}_2\text{O}_3$); Extraction of various Hyperfine Tensor Components for The Most Stable Nitroxide Radical Formed in the Single crystal (Platelet). Journal of Pure and Applied Sciences Vol. 16, No.1 June 1997, pp 27-46.
5. Karamat Mehmood, Hafiz Muhammad Farooq, **Gulrez Fatima Durrani**, M. Siddique, M. Abdul Qadir and Amin Athar: 2 (1,2,4-Trizol-1yl) Pyridine. A Novel Analytical Reagent For The Spectrophotometric Determination Of Cobalt (Ii). *Acta Sci.*, **11(2)**,pp. 91-98, 2001.
6. **G.F. Durrani** , and M.K. Baloch: Effect of Industrial Pollution on Growth of Plants, Scientific Journal of Pakistan Atomic Energy Commission, The Nucleus, 40 (1-4) 2003: 63-66.
7. **G.F. Durrani** , M. Hassan, M.K. Baloch and G. Hameed: Effect of Traffic Pollution on Photosynthesis, International African Journal of Environmental Extension Vol.4 (2003) PP-51-52.
8. **G.F. Durrani** , M.K. Baloch and M. Hassan: Effect of Industrial pollution on Photosynthesis. Jour. Chem. Soc. Pak. Vol. 26, 1, 2004.

9. **G.F. Durrani**, M.K. Baloch and G. Hameed: Flow And Conductance Behavior of Poly (Ethylene Oxide) In The Presence Of Some Inorganic Salts. Jour. Chem. Soc. Pak. Vol. 26, 3, 2004.
10. **G.F. Durrani**, M. Hassan, M.K. Baloch and G. Hameed: Effect of Traffic Pollution on Photosynthesis, Jour. Chem. Soc. Pak. Vol. 26, 2, 2004.
11. **G.F.Durrani**, Musa Kaleem Baloch and Shoaib Ahmad: "Effect of Water Pollution on Photosynthesis", The Environ Monitor.Vol:VI.No.3 March 2006.
12. **G.F.Durrani**, Musa Kaleem Baloch: "The Response of Human Health on taking Caffeinated Beverages".The Environ Monitor.Vol:VI.No.10 Oct.2006.
13. **G.F. Durrani**, M.K. Baloch: Analysis of Physiochemical Characteristics of Industrial Effluents of H.I.E (Industrial state) of Haripur, Jour. Chem. Soc. Pak. Vol. 29, 4, 2007.
14. **G.F. Durrani**, M.K. Baloch: Environmental Pollution, A threat to Photosynthesis in healthy plants. Jour. Chem. Soc. Pak. Vol. 31, 6, 2009.
15. Abbas Khan, **Gulrez Fatima Durrani**, Mohammad Usman, Wayne Harrison and Muhammad Siddiq, "Effect of hydrophilic block length on the micellar properties of oxyethylene-oxybutylene diblock polymer in aqueous solution: density and viscosity studies", Jour.Chem.Soc.Pak, vol.31No.5,2009.
16. Abbas Khan, **Gulrez Fatima Durrani**, Mohammad Usman, Wayne Harrison and Muhammad Siddiq, "Effect of hydrophilic block length on Surface active and micellar thermodynamic properties of oxyethylene-oxybutylene diblock polymer in aqueous solution", Jour.Chem.Soc.Pak vol.31No.4,2009.
17. Musa Kaleem Baloch, Farzana Ahmad, Abdur Rauf, **Gulrez Fatima Durrani**, "Effect of Polyethylene oxide and sodium chloride over the Micellization behavior of sodium dodecyl sulphate". American Journal of Applied polymer Science, Vol.114,1444-1448,2009.
18. Musa Kaleem Baloch ,Abdur Rauf,Farzana Ahmad, **Gulrez Fatima Durrani** and Gulzar Hameed " Investigating the micellization behaviour of cetyltrimethyl ammonium bromide;as affected by the contents of Poly(ethylene Oxide) and temperature of system",

American Journal of Applied polymer Science, Vol.116,2133-2142,2010.

19. Musa kaleem Baloch, Arshad Ali, Abdur Rahim, **Gulrez Fatima Durrani**, "Impact of Industrial effluents of Gadoon Amazi Industries over quality of ground Water". Asian Journal of water, Environment and Pollution(AJWEP),Vol.7,No.2,pp.65-71, 2009.
20. Shahid Iqbal, Musa Kaleem Baloch,Gulzar Hameed, **Gulrez Fatima Durrani**, " Emulsification of oil in water:as effected by Ultrasonification Period", Gomal Journal of Research, 25-2:23-29,2009.
21. Abdur Rauf,Musa Kaleem Baloch and **Gulrez Fatima Durrani**, "Effect of Molecular Mass of Polyethylene Oxide over its Aggregation Behavior", Jour.Chem.Soc.Pk.Vol.32,No.2,2010.
22. Yahya Khan, Abbas Khan, Syed Sakhawat Shah, Gulzar Hamid, **Gulrez Fatima Durrani** and Muhammad Siddiq, " Stabilization of Hydrogen Peroxide used as Oxidizing agent in the In-situ Leaching of Uranium from Arkosic Sandstone". Journal of Chemical Society of Pakistan , 2011.
23. Jehanzeb Khurram,Musa Kaleem Baloch and **Gulrez FatimaDurrani**, "Application of different method for the Thermogravimetric analysis of polyethylene sample", International Journal of Applied Polymer Science, vol.120, 3511-3518,2011.
24. Mohammad Irfan, Musa Kaleem Baloch and **Gulrez Fatima Durrani**, "Solubility of Nonsteroidal Anti-inflammatory Drugs (NSAIDs) In Aqueous Solution of Non-ionic Surfactants" Accepted in International Journal of Solution Chemistry, Jan.2011.
25. Mohammad Irfan, Musa Kaleem Baloch and **Gulrez Fatima Durrani**, "solubility of Lidocaine in Ionic, Non Ionic and Zwitterionic Surfactants" Accepted in International Journal of Solution Chemistry, April 2011.
26. Mohammad Irfan, Musa Kaleem Baloch and **Gulrez Fatima Durrani**, Effect of Mixed Ionic/Non Ionic Surfactant systems on Solubility of Nonsteriodal Anti Inflammatory drugs (NSAIDS). (Submitted in Journal of Solution Chemistry)
27. **Gulrez Fatima Durrani** , Musa Kaleem Baloch, Noor Saeed K., Ayesha Niazi, Abdur Rauf and Mohd.Irfan " Effect of Temperature and Naproxen Sodium(Drug) over the Micellization Behavior of Cetyl Trimethyle Ammonium Bromide".(Submitted in Journal of Solution Chemistry)

PAPER PRESENTED / PROCEEDING

1. Musa Kaleem Baloch, **Gulrez Fatima Durrani** and Fazal Wahab,. "Viscometric Study of Poly(ethylene) oxide as affected by thermodynamic quality of the solvent" presented in 3rd National Chemistry Conference held at Gomal University, D.I.Khan on 20-23rd December 1991.
2. Musa Kaleem Baloch, **Gulrez Fatima Durrani**, "Study of the effect of Inorganic salts on the aqueous solution of Poly (ethylene Oxide) by viscosity and conductance measurement" presented in 3rd National Chemistry Conference held at Gomal University, D.I.Khan on 20-23rd December 1991.
3. Musa Kaleem Baloch, **Gulrez Fatima Durrani**,. "Flow and Conductance Behavior of Poly(ethylene) oxide in the presence of some inorganic salts, presented in "1st International Chemistry Conference 2000" held at Peshawar University, Pakistan on 10-14th April 2001.
4. **Gulrez Fatima Durrani**, Musa Kaleem & Mukhtiar Hassan, Effect of Industrial wastes on Photosynthesis in Plants, presented in Executive Management Seminar on "Environment and Health" held at Pakistan Atomic Energy Commission Islamabad on 1 -3rd October 2002.
5. **Gulrez Fatima Durrani**, Musa Kaleem & Mukhtiar Hassan, Effect of Traffic pollution on Photosynthesis, presented in Executive Management Seminar on "Environment and Health" held at Pakistan Atomic Energy Commission Islamabad on 1 -3rd October 2002.
6. **Gulrez Fatima Durrani** & Musa Kaleem Baloch "Effect of Traffic Pollution on the growth rate of plants" Presented in Workshop on "Environmental Concerns and Management Strategies" held at Fatima Jinnah Women University, Rawalpindi Pakistan on 16-21st August 2003.
7. **Gulrez Fatima Durrani** & Musa Kaleem Baloch "Effect of Environmental Pollution on the growth rate of plants" presented in International Conference on Environmental Challenges held at Peshawar University, Pakistan on 11-13th March 2004.
8. **Gulrez Fatima Durrani** & Musa Kaleem Baloch" Environmental Pollution, A threat to Photosynthesis in healthy plants" presented in First Kashmir International Science Conference held at University of Azad Jammu and Kashmir, Muzaffarabad, Pakistan on 20-21st September 2005.

9. **Gulrez Fatima Durrani** and Musa Kaleem Baloch, “-Self assembling in amphiphilic Block Copolymers”. Presented in” Minisymposium on Nanochemistry” held at H.E.J Research Institute of Chemistry on 8-9th January 2006.
10. **G.F.Durrani**, M.K.Baloch, G.Hameed, Ayesha Niazi,”Effect of Temperature over the thermodynamic properties of Surfactants” presented in 7th international and 17th National Chemistry Conference held at Gomal University, Dera Ismail Khan,Pakistan on Feb.26-28,2007.
11. M.Jehanzeb Khuram,M.K.Baloch and **G.F.Durrani** ”Thermal degradation of Polyethylene” presented in 7th international and 17th National Chemistry Conference held at Gomal University, Dera Ismail Khan,Pakistan on Feb.26-28,2007.
12. G.Hameed , M.K.Baloch and **G.F.Durrani**,”Effect of Surfactants and oil contents over stability of oil in water emulsion” presented in 7th international and 17th National Chemistry Conference held at Gomal University, Dera Ismail Khan,Pakistan on Feb.26-28,2007.
13. M.K.Baloch, **G.F.Durrani**, and Farzana Ahmad ”Effect of Polyelectrolytes over the micellization behaviour of Surfactants” presented in 7th international and 17th National Chemistry Conference held at Gomal University, Dera Ismail Khan,Pakistan on Feb.26-28,2007.
14. M.K.Baloch,**G.F.Durrani** and Abdur Rauf “Effect of electrolyte on the micellization behavior of Poly(ethylene oxide)” presented in 18th National chemistry Conference held at Institute of Chemistry, University of the Punjab, Lahore, Pakistan on Feb.25-27, 2008.
15. M.K.Baloch, **G.F.Durrani** and Malik Jehan Zeb Khurram, “Thermogravimetric Analysis of Polyethylene Bags” presented in 1st National Symposium on Analytical, Environmental and Applied Chemistry, 24-25 October 2008, Shah Abdul Latif University, Khair Pur.