

Resume of

DR. MRS. NAVEED KAUSAR JANJUA born on 20-03-1965

Professor (Tenured) since 17-12-2018

RG 27.75

Department of Chemistry, Quaid-i-Azam University, Islamabad, Pakistan-45320

Father's name: Muhammad Khan Janjua

Husband' name: Ijaz Hussain Janjua

Domicile and Nationality: Punjab, Pakistan

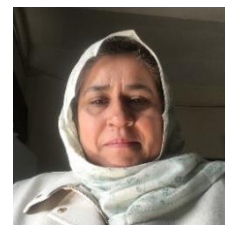
Highest Qualification: **Ph.D. in Physical Chemistry**

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Post-Doc Research

Availed Post-Doc under HEC program for 9 months from 3-2012 to 11-2012 at JTSI Group, University of St Andrews, Fife, Scotland, United Kingdom. The fuel cell research was explored in many directions starting from slurry formulations of materials, particle sizing with rotary and planetary ball milling, screen printing the electrolyte ink, tape casting of electrodes and fuel cell fabrication, the impregnation of catalytic ions onto these cell parts and, finally fuel cell testing in symmetric and fuel cell modes. Besides, the nanostructures of all synthetic/fabrication steps were elaborated using SEM and XRD techniques. The thin films and fractured cells were observed for the true nanostructures under high magnifications in SEM and correlated with the basic synthetic schemes. Engineering the porosity in anode, cathode, and electrolyte parts of the fuel cell, was also learnt and comprehended with the use of slurry formulations and pore formers.

Research interests

My research interests pertain to current and potential applications as well as new methodologies in material science and electrochemistry; to name a few:

- Electrochemistry and fuel cell research with emphasis on SOFCs, PEMFCs
- Material characterization for SOFCs and fuel cell development
- Designing simple routes for synthesis of electroactive nanomaterials for electrodes
- The water contamination problem-solving with simple metal oxides
- Functional nanomaterials like metal oxides and electrochemical applications
- Electrochemical bio-sensing, anti-diabetic drug development and their electrochemical studies.

Association

- ❖ Head of the Physical section in the Department of Chemistry, Quaid-i-Azam University Islamabad, since 1st March 2016 until 31-08-2016
- ❖ Life member of The Chemical Society of Pakistan (CSP)
- ❖ Member of The International Society of Electrochemistry (ISE) US, 2010-2016
- ❖ Member of The American Chemical Society (ACS) 2014- to-2016
- ❖ Associate member of The Royal Society of Chemistry, (AMRSC) UK 2014- to-date
- ❖ Member of the Ph.D. Admission Committee of the Department of Chemistry, Quaid-i-Azam University Islamabad, since 2015-to-date
- ❖ Member of the M. Phil. Admission Committee of the Department of Chemistry, Quaid-i-Azam University Islamabad, since 2013 -to-date
- ❖ Member of the Departmental Tenure Committee of the Department of Chemistry, Quaid-i-Azam University Islamabad, 2015-to-date
- ❖ Member of the Quality Enhancement Cell of the Department of Chemistry, Quaid-i-Azam University Islamabad, 2011-to-date
- ❖ Student Advisor of the Department of Chemistry, Quaid-i-Azam University Islamabad, 2011-to-date
- ❖ Member of the executive council of the Department of Chemistry in Academic Staff Association during 2006 and 2013
- ❖ Member of the Academic Council of the Allama Iqbal open University Islamabad, 2016-to-date
- ❖ Member of the TRC of the Shaheed Benazir Bhutto Women University Peshawar, 2019-to-date
- ❖ Invited meeting at MoST Islamabad Pakistan on Hydrogen Fuel Energy, June 2013

- ❖ Member of The International Bioelectrochemical Society (BES) for 2010-2012
- ❖ Member of the Faculty Board of Natural Sciences, Quaid-i-Azam University Islamabad, 2006-2009, 2015-to-date
- ❖ Coordinated 20th National and 8th International Chemistry Conference, 15-16th Feb, 2010
- ❖ Coordinated 1st Chemistry Alumni Meeting and Seminar on "Frontiers of Chemistry" in Quaid-i-Azam University Islamabad, 15-16th May, 2009
- ❖ Was Girl Guide Incharge of Islamabad College for Girls, F-6/2 Islamabad Company during 1997-2000 and worked for social uplift of the society especially for draught-hit Balochistan in that tenure
- ❖ Reviewer of many international research journals including Elsevier and ACS.

List of publications (Total = 40) * = corresponding author

Impact Factor = 97.66 as on 7-2019

Publications during 2019

1. Synthesis, characterization, docking and electrochemical studies of nitroaromatic amides, Asifa Nigar, Muhammad Shabbir, Zareen Akhter*, Sana Sabahat, M. Qaiser Fatmi, Michael Bolte, Iqbal Ahmad, **Naveed Kausar Janjua**, Sadia Mehmood, *Journal of Molecular Structure*. doi: 10.1016/j.molstruc.2018.09.024. *Journal of Molecular Structure*, 1176 (2019) 791-797.
IF = 2.011
2. CoPt_x/γ-Al₂O₃ bimetallic nanoalloys as promising catalysts for hydrazine electrooxidation, Naveeda Firdous, **Naveed Kausar Janjua**, *Heliyon Elsevier*, 5 (2019) e01380. doi: 10.1016/j.heliyon.2019. **SJR 0.430**
3. Removal of metal ions using metal-flavonoid-DNA, adduct protocol, Erum Jabeen, **Naveed Kausar Janjua***, Safeer Ahmed*, *Journal of Saudi Chemical Society* doi.org/10.1016/j.jscs.2018.05.010 ISSN: 1319-6103 _ 2018 King Saud University 23 (2019) 118–126 **IF = 2.795**
4. Ferrocene Derivatives: Potential Material for Anticancer Drugs, Asifa Nigar, **Naveed Kausar Janjua**, Asghari Gul, Abid Ali, Zareen Akhter*, Sadia Mehmood: *Journal of Chemical Society of Pakistan*, 41 (3) (2019) 1046. No. JCSP-081117-11691. **IF = 0.393**
5. Kinetics, Mechanistic and Theoretical Studies on Scavenging Activities of Antioxidants Using 1,2-Dinitrobenzene DNB/DNB•– and DNB/DNB2– Model Systems: Cyclic Voltammetric and Quantum Semi-Empirical Data Interpretation N. Arshad, and **N. K. Janjua**, *Russian Journal of Electrochemistry*, 55 (2) (2019) 191-213. ISSN 1023-1935. **IF = 1.043**

Publications during 2018

6. Ferrocene-functionalized gold nanoparticles: Study of a simple synthesis method and their electrochemical behavior, Sana Sabahat, **Naveed Kausar Janjua**, Zareen Akhter, Muhammad Umair Hassan, *Chemical Papers*, Springer Slovak Academy of Sciences (2018) https://doi.org/10.1007/s11696-018-0646-9 **IF = 1.246**
7. Effect of lanthanum and hydrogen peroxide on the thermal and microstructural properties of NiO-Ce_{0.8}Sm_{0.2}O_{1.9} composite, M. Naveed Akbar, Mustafa Anwar, Zuhair S. Khan, **Naveed K. Janjua**, *Journal of the Australian Ceramic Society*, 54 (2018) 191–197 **IF = 0.692**

Publications during 2017

8. A selective and sensitive monitoring of the OH radical using flavonoid-modified electrodes Erum Jabeen, **Naveed Kausar Janjua***, Safeer Ahmed, Enrique Domínguez-Álvarez*, Claus Jacob*, *Electrochimica Acta* 258 (2017) 228–235. doi.org/10.1016/j.electacta.2017.10.065 **IF = 5.116**
9. DFT prediction s, synthesis, stoichiometric structures and anti-diabetic activity of Cu (II) and Fe (III) complexes of quercetin, morin, and primuletin, Erum Jabeen, **Naveed Kausar Janjua***, Safeer Ahmed, Iram Murtaza, Tahir Ali, Nosheen Masood, Gulam Murtaza Aysha, Sarfraz Rizvi, *Journal of Molecular Structure*, 1150 (2017) 459-468. doi.org/10.1016/j.molstruc.2017.09.003 **IF = 2.011**
10. Radical scavenging propensity of Cu²⁺, Fe³⁺ complexes of flavonoids and in-vivo radical scavenging by Fe³⁺-primuletin, Erum Jabeen, **Naveed Kausar Janjua***, Safeer Ahmed, Iram

Murtaza, Tahir Ali, Shahid Hameed, *Spectrochimica Acta Part A*: 171 (2017) 432-438.
doi:10.1016/j.saa.2016.08.035, Elsevier **IF = 2.098**

11. Fabrication of Colrx/ γ -Al₂O₃ modified electrode and use in electrochemical oxidation of hydrazine, **Naveed Kausar Janjua**, Naveeda Firdous, *Functional Nanostructures Proceedings*, No.32, vol. 1, Issue 2 (2017) pages 1-3, 4th NANOENERGY Conference, 26-28 July 2017 (Helsinki, Finland).

Publications during 2016

12. Electrochemical study of natural gas fueled electrodes for low temperature solid oxide fuel cell, M. Jafar Hussain, Rizwan Raza, Mukhtar Ahmad, Akbar Ali, Imran Ahmad, Waqar A. A. Syed, **Naveed Kausar Janjua**, M. Anis-ur-Rehman, M. Ajmal Khan, Shaukat A. Shahid, and Ghazanfar Abbas, *International Journal of Modern Physics B*, 30 (2016) No. 23 (doi: 10.1142/S0217979216501617) **IF = 0.769**
13. Study on thermal, spectroscopic and electrochemical behavior of some ferrocene-containing organometallic polyesteramides and their siloxane-based block copolymers, Muhammad Saif Ullah Khan, **Naveed Kausar Janjua**, Sana Sabahat, Zareen Akhter*, Mohibullah, *Journal of Polymer Research*. 23 (2016) 112. DOI 10.1007/s10965-016-1003-8 **IF = 1.530**
14. LiNiFe-based layered structure oxide and composite for advanced single layer fuel cells, Bin Zhu*, Liangdong Fan*, Hui Deng, Yunjune He, Muhammad Afzal, Wenjing Dong, Azra Yaqub, Naveed K. Janjua*, *Journal of Power Sources* 316 (2016) 37-43, **IF = 7.467**
15. AuCu@Pt Nanoalloys for Catalytic Application in Reduction of 4-Nitrophenol, Sadia Mehmood, **Naveed Kausar Janjua***, Farhat Saira and Hicham Fenniri, *Journal of Spectroscopy*, Volume 2016 (2016), Article ID 6210794, 8 pages, <http://dx.doi.org/10.1155/2016/6210794> Hindawi **IF = 1.376**
16. Optimal Co-Ir bimetallic catalysts supported on γ -Al₂O₃ for hydrogen generation from hydrous hydrazine, Naveeda Firdous, **Naveed Kausar Janjua***, Ibrahim Qazi, Muhammad Hamid Sarwar Wattoo. *International Journal of Hydrogen Energy*, 4 (1 (2016) 984-995. Doi:10.1016/j.ijhydene.2015.10.084. Elsevier **IF = 4.084**
17. Electrochemical sensing platform based on CuO@CeO₂ hybrid oxides, Ayesha Mujtaba, **Naveed K. Janjua***, doi:10.1016/j.jelechem.2015.12.050, *Journal of Electroanalytical Chemistry* 763 (2016) 125–133 Elsevier **IF = 3.218**
18. All in One Multifunctional Perovskite Material for Next Generation SOFC, Wenjing Dong, Azra Yaqub, **Naveed K. Janjua**, Rizwan Raza, Muhammad Afzal, Bin Zhu*, *Electrochimica Acta*, 193 (2016) 225–230, Elsevier, <http://dx.doi.org/doi:10.1016/j.electacta.2016.02.061> **IF = 5.116**

Publications during 2015

19. Synthesis and characterization of B-site doped La_{0.20}Sr_{0.25}Ca_{0.45}TiO₃ as SOFC anode materials, Azra Yaqub, **Naveed K. Janjua***, Cristian Savaniu, John T. S. Irvine, <http://dx.doi.org/10.1016/j.ijhydene.2014.08.083>, *International Journal of Hydrogen Energy*, 40 (2015) 760–766. Elsevier **IF = 4.084**
20. Fabrication and electrocatalytic application of CuO@Al₂O₃ hybrids, Ayesha Mujtaba, **Naveed K. Janjua***, doi: 10.1149/2.0351506jes, *Journal of Electrochemical Society*, 162(6) (2015) H328-H337 (2015). (USA) **IF=3.662**
21. Electrochemical Properties of Barium Cerate Doped with Zinc for Methanol Oxidation **Naveed K. Janjua***, Mahwish Jabeen, Mehrosh Islam, Azra Yaqub, Sana Sabahat, Sadia Mehmood, Misbah Mumtaz, Ayesha Mujtaba, Rizwan Raza, Ghazanfer Abbas, *Journal of Chemical Society of Pakistan*, 37 (05) (2015) 850-858. ISSN: 0253–5106. **IF = 0.393**

Publications during 2014

22. Preparation and catalytic evaluation of Ir and Ru catalysts supported in γ -Al₂O₃ for hydrazine **Naveed K. Janjua***, Naveeda Firdous, Arshad Saleem Bhatti, Zuhair S. Khan, *Applied Catalysis A: General*, <http://dx.doi.org/10.1016/j.apcata.2014.04.025>, *Applied Catalysis A: General* 479 (2014) 9–16. Elsevier **IF = 4.630**
23. β -Cyclodextrin assisted solubilization of Cu and Cr complexes of flavonoids in aqueous medium: A DNA-interaction study, Erum Jabeen, **Naveed Kausar Janjua***, Shahid Hameed,

Spectrochimica Acta Part A: 128 (2014) 191–196. Doi: 10.1016/j.saa.2014.02.132, Elsevier
IF = 2.098

24. Microwave assisted non-aqueous sol-gel synthesis of LiNiPO₄ and its copper doped analogues Misbah Mumtaz, **Naveed Kausar Janjua***, Azra Yaqub, Sana Sabahat, *Journal of Sol-Gel Science and Technology*, doi: 10.1007/s10971-014-3423-4 72, Issue 1, (2014) 56–62. Springer
IF = 1.986
25. Cyclic Voltammetric Investigation of Interactions between Bisnitroaromatic Compounds and ds.DNA, **Naveed Kausar Janjua***, Zareen Akhter, Fariya Jabeen, and Bushra Iftikhar, *Journal of the Korean Chemical Society*, 58 (2) (2014) 153–159. Republic of Korea, <http://dx.doi.org/10.5012/jkcs.2014.58.2.153>. SJR 0.168
IF = 0.130
26. Electrocatalytic activity of LiNiPO₄ and the copper doped analogues towards oxygen reduction, **N. Kausar Janjua***, M. Mumtaz, A. Yaqub, S. Sabahat, A. Mujtaba *The Nucleus* 51, 1 (2014) 109–115. NCLE AM, ISSN 0029- 5698

Publications during 2013

27. Preparation via a solution method of La_{0.20}Sr_{0.25}Ca_{0.45}TiO₃ and its characterization for anode supported solid oxide fuel cells, Azra Yaqub, Cristian Savaniu, **Naveed K. Janjua**, John T.S. Irvine*, *Journal of Materials Chemistry A*, 1 (2013) 14189–14197. RSC / ISSN:2050-7488, DOI:10.1039/c3ta12860a.
IF = 10.733
28. Spin Trapping Radicals from Lipid Oxidation in Liposomes in the Presence of Flavonoids, Nasima Arshad*, **Naveed K. Janjua**, Leif H. Skibsted, Mogens L. Andersen, *Journal of Chemical Society of Pakistan*, 35, No.2, (2013) 544. ISSN: 0253–5106.
IF = 0.393

Publications during 2012

29. Synthesis, physicochemical studies and potential applications of high-molecular weight ferrocene-based poly(azomethine)ester and its soluble terpolymers, Asghari Gul, Zareen Akhter*, Arshad Bhatti, Muhammad Siddiq, Abbas Khan, Humaira M. Siddique, **Naveed Kausar Janjua**, Amber Shaheen, Sehrish Sarfraz, Bushra Mirza, *Journal of Organometallic Chemistry*, 719 (2012) 41–53. DOI:10.1016/j.jorganchem.2012.08.010 Elsevier
IF = 2.066
30. Electrochemical studies of interactional mechanism and scavenging activity of antioxidants towards dinitroaromatics, Nasima Arshad*, **Naveed K. Janjua**, Athar Y. Khan, Javeed H. Zaidi, Leif H. Skibsted, *Monatshefte für Chemie / Chemical Monthly*, 143 (2012) 377–383. DOI:10.1007/s00706-011-0606-3. Springer-Verlag
IF = 1.501
31. Natural Flavonoids Interact with Dinitrobenzene System in Aprotic Media: An Electrochemical Probing, Nasima Arshad, **Naveed K. Janjua***, Athar Y. Khan, Azra Yaqub, Torsten Burkholz and Claus Jacob, *Natural Product Communications*, Vol. 7 (3) (2012) 311–315. (USA)
IF = 0.554

Publications during 2011

32. Electrochemical fabrication of self assembled monolayer using ferrocene-functionalized gold nanoparticles on glassy carbon electrode, Sana Sabahat, **Naveed Kausar Janjua***, Mathias Brust, Zareen Akhter, Elsevier *Electrochimica Acta*, 56 (20) (2011) 7092–7096, doi:10.1016/j.electacta.2011.05.10.
IF = 5.116
33. Flavonoid-DNA binding studies and thermodynamic parameters, **Naveed Kausar Janjua***, Amber Shaheen, Azra Yaqub, Fouzia Perveen, Sana Sabahat, Misbah Mumtaz, Claus Jacob, Lalla Aicha Ba, Hamdoon A. Mohammed, *Spectrochimica Acta Part A*, Elsevier. 79 (5), (2011) 1600–1604, doi:10.1016/j.saa.2011.05.018. Elsevier
IF = 2.098
34. Synthesis, structure and DNA binding studies of 1,4-bis((4-nitrophenoxy)methyl)benzene and its reduction derivative, Ali Haider, Zareen Akhter*, Fariya Jabeen, **Naveed Kausar Janjua**, Michael Bolte, Elsevier *Journal of Molecular Structure*, 994 (1-3) (2011) 242–247. doi:10.1016/j.molstruc.2011.03.026 Elsevier.
IF = 2.011

Publications during 2009

35. Spectrophotometric studies of flavonoid-DNA interaction. **Naveed Kausar Janjua***, Asima Siddiqa, Azra Yaqub, Sana Sabahat, Rumana Qureshi, Sayed ul Haque. *Spectrochimica Acta Part A*, 74 (2009) 1135–1137. doi:10.1016/j.saa.2009.09.022 Elsevier. **IF = 2.098**
36. Electrochemical investigations of antioxidant interactions with radical anion and dianion of 1,3-dinitrobenzene, Nasima Arshad, **Naveed Kausar Janjua***, Safeer Ahmed, Ather Y Khan, Leif H Skibsted. *Electrochimica Acta*, 54 (2009) 6184–6189. doi:10.1016/j.electacta.2009.05.087. Elsevier. **IF = 5.116**
37. Solvent-oriented ¹H-NMR chemical shifts of pyridinium iodide and application of Buckingham equation, **N. Kausar Janjua***, R. Qureshi, S. Ahmed, A. Yaseen Khan, M. Muhammad, M. Sadiq Subhani, R. Iqbal, *Journal of Molecular Structure*, 919 (2009) 321–324. Doi:10.1016/j.molstruc.2008.09.026. Elsevier. **IF = 2.011**

Publications during 2008

38. Electrochemical and spectroscopic investigations of protonated ferrocene-DNA intercalation, Afzal Shah, Rumana Qureshi*, **Naveed Kausar Janjua**, Saeed-ul-Haq, and Safeer Ahmad, 24th Nov. 11 (2008) 1437–1441, *Journal of Analytical Sciences*, Chem. Soc. Japan. Doi: 10.2116/analsci.24.1437. **IF = 1.618**
39. Charge transfer complexes of picolines with σ - and π - acceptors, H. Razzaq, R. Qureshi*, **Naveed K Janjua**, Farhat Saira, Samia Saleemi, *Spectrochimica Acta Part A*, 70, (2008) 1034–1040. doi:10.1016/j.saa.2007.10.030 Elsevier. **IF = 2.098**

Publications during 1992

40. Surface tension measurements of binary mixtures of glycerol with organic co-solvents, M.J. Iqbal*, M.A. Rauf, **Naveed Ijaz**, *Journal of Chemical & Engineering Data*, 37 (1992) 45–47, JACS (USA). DOI: 10.1021/je00005a015 **IF = 2.298**

Academic Record

Title of Ph.D. Thesis

“Investigations of application of Buckingham equation in charge transfer complex, 1-ethyl-4-carbomethoxypyridinium iodide” (The research involved synthesis and ¹H-NMR studies).

Title of M.Phil. Thesis

“Surface tension measurements of binary organic mixtures” (using capillary rise and torsion balance methods)

Exam	Year	Institution	Subject(s)	Division/Grade
Ph.D.	1999	Quaid-i-Azam University Islamabad Pakistan	Physical Chemistry	Degree
M.Phil.	1990	“	“	1 st /A
M.Sc.	1987	“	“	1 st /B

Total Experience: >29 Years

17-12-2018 to-date **Professor (Tenured)**, Department of Chemistry, Quaid-i-Azam University, Islamabad

31-05-2014 to-17-12-2018 Associate Professor (Tenured), Department of Chemistry, Quaid-i-Azam University, Islamabad

Selection Board Date:26-11-2013

31-05-2008 to 31-05-2014	Assistant Professor (TTS), Department of Chemistry, Quaid-i-Azam University, Islamabad
14-4-2005 to 31-05-2008	Assistant Professor (BPS), Department of Chemistry, Quaid-i-Azam University, Islamabad
20-10-2000 to 14-4-2005	Assistant Professor, F.G. Margala College for Women, (Post-Graduate College) F-7/4, Islamabad
22-8-1996 to 20-10-2000	Lecturer, Islamabad College for Girls, (Post-Graduate College) F-6/2, Islamabad
23-10-1990 to 22-8-1996	Scientific Officer, NPSL/PCSIR, 16-H/9, Islamabad
16-9-1990 to 18-10-1990	Lecturer (against leave vacancy), F.G. College for Women, (Post-Graduate College) F-7/2, Islamabad

Recent R & D / Teaching Experience: Theory courses at:

i) M.Phil./Ph.D. Levels

- | | |
|--|---|
| 1) Advance Molecular Spectroscopy | 2) Electrode Processes |
| 3) Advance Nuclear & Radiation Chemistry | 4) Review papers and Seminars for Ph.D. |

ii) M.Sc. Level

Physical Chemistry-I, Physical Chemistry Labs-I, II, III, IV. Electrochemistry, Nuclear and Radiation Chemistry, Chemical Thermodynamics, Solid State Chemistry.

iii) B.S. Level

- 1) General Chemistry, 2) Lab for General Chemistry, 3) Physical Chemistry 4) Physical Chemistry lab
5) Solid State Chemistry 6) Electrochemistry
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Ph.D. Students Supervised and Awarded Degree (08)

- 1. Dr. Ms. Nasima Arshad** is Assistant Professor at AIOU, Islamabad. Dr. A. Y. Khan co-supervised her Ph.D. Thesis. She had a 6 months training under Dr Lief Skibsted at Copenhagen University, Denmark. Ph.D.
Thesis Titled: Electrochemical and ESR Investigations of Antioxidants. Her Viva Voce exam was held on 11-02-2010. Employed in AIOU Islamabad.
- 2. Dr. Ms. Sana Sabahat** is working as Assistant Professor at COMSATS CIIT, Islamabad). She had a 12 months training with Dr Mathias Brust at Liverpool University, UK. Her Viva Voce exam was held on 7-7-2011. Prof. Dr. Zareen Akhter co-supervised her Ph.D. Thesis.
Thesis titled: Electrochemical and Spectroscopic Studies of Ferrocene Modified Gold Nanoparticles (3-9-2005 to 7-7-2011). Employed in CIIT Islamabad.
- 3. Dr. Ms. Azra Yaqub** is working as Research Officer at PINSTECH, Islamabad. She had 18 months training with Prof. Dr John TS Irvine at University of St. Andrews, Fife, Scotland, UK. Her Viva Voce was held on 5-6-2014. Thesis titled: Synthesis and Application of Calcium Doped Lanthanum Strontium Titanate as Anode Support for Fuel Cell Applications (8-7-2009 to 5-2014). Employed in PINSTECH.
- 4. Dr. Ms. Misbah Mumtaz.** She had a 20 months training with Prof. Dr John TS Irvine at University of St. Andrews, Fife, Scotland, UK. Her Viva Voce exam was held on 16-2-2015. Thesis titled: Synthesis and characterization of lithium metal phosphates as conductive materials for electrochemical devices (24-5-2008--- 16-2-2015). Interim placement at PIEAS.
- 5. Ms. Sadia Mehmood** She had a 6 months training under IRSIP/HEC with Prof. Hicham Fenneri at University of Alberta Canada. Her Viva Voce exam was held on 24-6-2016. Thesis titled: Synthesis, Characterization and Applications of Noble Metal Nanoalloys. Visiting Teacher.
- 6. Ms. Ayesha Mujtaba.** She did all her experimental work indigenously. Her Viva Voce exam was held on 24-6-2016. Thesis titled: Fabrication and electrocatalytic applications of metal oxide–metal oxide hybrids. Teaching BS courses at QAU.
- 7. Ms. Erum Jabin.** She did all the experimental work indigenously in our labs and collaborated with biochemistry researchers for biological studies. Thesis titled: Synthesis and Evaluation of Radical Scavenging Potencies and DNA Binding of Metal-Flavonoid Complexes for their Versatile Applications (delivered seminar on 01-06-2016) Thesis submitted for foreign evaluation on 13-10-

2016 and was approved. Her Viva Voce exam held on 28-2-2017. (1-12-2013---9-3-2017). Employed in AIOU Islamabad.

8. Ms. Naveeda Firdous. She did all the experimental work indigenously in our labs and published high quality research papers. Thesis titled: γ - Al_2O_3 Supported Bimetallic Catalysts: Synthesis and Applications for Hydrazine Decomposition (delivered seminar on 08-06-2016). Thesis submitted for foreign evaluation on 4-2017. Voce exam held on 06-12-2017. (20-09-2012---06-12-2017). Employed in Research Islamabad.

Ph.D. Theses in Progress (5) Plus one as co-supervisor

Name of Student	Title/Status	Registration-Completion Date
1. Ms. Amina Hanna	Electrochemical study on HEAs including Mg-alloys Seminar Delivered on 10-4-2019	9-2014---2019
2. Ms. Mehwish Huma Nasir	Electrochemical study on titanates with reference to fuel cell applications Seminar Delivered on 8-5-2019	9-2014---2019
3. Ms. Banafsha Habib	Materials development for fuel cell applications	9-2015---2020
4. Ms. Javeria Arshad	Synthesis and Electrochemical Characterization of High Entropy Mixed Metal Oxides	2-2016 ---2020
5. Ms. Tehmeena Maryum Butt	Nanocomposites: Fabrication, characterization and electrochemical applications in fuel cells	13-2-2017---2021

M.Phil. Students Supervised and Awarded Degree (34)

Name of Student	Title	Registration-Completion Date
1. Ms. Farhat Saira	Synthesis and Characterization of Electroactive Materials with Emphasis on Nanoscale Synthetic Routes.	16-2-2005 to 27-2-2007
2. Ms. Saira Imtiaz	Synthesis and Characterization of NiFe_2O_4 Nanoparticles.	7-9-2005 to 31-8-2007
4. Ms. Wajda Kanwal	Synthesis and characterization of silver coated Al_2O_3 nanoparticles	2-2006 to 3-2008
3. Ms. Asima Siddiq	Electrochemical and Spectroscopic Investigations of Antioxidants–DNA Interactions.	5-9- 2006 to 25-9-2008
5. Ms. Naveeda Firdous	Synthesis and Characterization of Alumina Based Ir and Ru Catalysts.	19-2-2007 to 5-3-2009
6. Ms. Amber Shaheen	Interactions of DNA with some new flavonoids: A spectroscopic and electrochemical study.	18-9-2008 to 5-8-2010
7. Ms. Faria Jabeen	Spectroscopic and electrochemical interactional studies of DNA with some nitro- and amine-based organic compounds.	18-9-2008 to 30-8-2010
8. Mr. Mohibullah	Interactional studies between polymeric ferrocene-siloxane derivatives and ds.DNA using UV-vis spectroscopic and cyclic voltammetric techniques.	15-2-2009 to 15-3-2011
9. Mr. M. Usman	Gold electrode modification by thiolated triazoles (SAMs) for ascorbic acid sensing.	12-2-2010 to 18-3-2011
10. Mr. Abid Ali	Interactional studies of new nitrocompounds with ds.DNA: Towards potential drug development.	17-2-2011 to 5-4-2012
11. Ms. Mahwish Jabeen	Tuning of Barium Cerate Properties with Zinc for Fuel Cell Application	3-2013 to 5-3-2014

12. Ms. Mehrosh Islam	Tuning of Barium Cerate Properties with Copper for Fuel Cell Application.	6-2013 to 6-2014
13. Ms. Rakhshan Javed	Synthesis, Characterization and Antioxidant Properties of Metal Quercetin Complexes.	2-2014 to 26-3-2015
14. Ms. Javeria Arshad	Synthesis and Electrochemical Characterization of LiCoPO_4 and $\text{LiCo}_{1-x}\text{Zn}_x\text{PO}_4$ Olivines.	2-2014 to 25-8-2015
15. Mr. Ghaus ur Rehman	Synthesis, electrochemical and spectroscopic characterization of morin–metal complexes.	2-2014 to 10-9-2015
16. Ms. Sehrish Khan	Electrochemical and Spectroscopic Studies of Flavonoid-Metal Complexes with 1,4-Dinitrobenzene	2-2015 to 24-2-2016
17. Ms. Safia Khan	Impregnation of CuO onto γ -Alumina for Electrocatalytic Applications	9-2015 to 4-7-2016
18. Ms. Saba Khan	Fabrication of $\text{NiO}@ \gamma\text{-Al}_2\text{O}_3$ and Electrochemical Application of Hybrid Electrocatalyst	9-2015 to 4-10-2016
19. Ms. Asiya Hassan	$\text{Fe}_2\text{O}_3@ \gamma\text{-Al}_2\text{O}_3$ nanocomposites: Synthesis, characterization and electrocatalytic applications	3-2016 to 25-1-2017
20. Ms. Tehmeena Maryum Butt	Fabrication, characterization and electrochemical applications of alumina supported Ag_2O	3-2016 to 6-2-2017
21. Ms. Mariam Khan	Synthesis of $\gamma\text{-Al}_2\text{O}_3$ supported $\text{Ag}_2\text{O}-\text{PrO}_2$ nanocomposites for electrochemical applications	3-2016 to 24-2-2017
22. Ms. Faiza Ismail	Synthesis and characterization of $\text{CoO}@ \text{Al}_2\text{O}_3$ nanoparticles for electrochemical applications	3-2016 to 3-2017
23 Ms. Rotaba Ansir	Iron doped lanthanum cerate materials: synthesis, characterization, electroanalysis and applications in SOFC	9-2016 to 21-7-2017
24. Ms. Shabana Ali Zaman	Synthesis and characterization of chromium doped lanthanum cerate materials for solid oxide fuel cell and electrochemical applications	9-2016 to 17-8-2017
25. Ms Sadaf Jabeen	Aluminum doped lanthanum cerate materials: synthesis, characterization, electroanalysis and applications in SOFC	9-2016 to 17-8-2017
26. Ms. Maria Pervaiz	Synthesis, Characterization and Electrochemical Applications of Zinc Doped Lanthanum Cerate Materials for SOFCs.	3-2017 to 4-2018
27. Ms. Maria Mukhtar	$\text{LaCe}_{1-x}\text{Cu}_x\text{O}_3$ Perovskite Materials: Synthesis, Electrochemical and Fuel Cell Applications	3-2017 to 4-2018
28. Ms. Poshmal Sumreen Ahmad	Synthesis and characterization of chromium doped lanthanum cerate materials for solid oxide fuel cell and electrochemical applications	9-2017 to 4-10-2018
29. Ms. Ammara Rafique	Synthesis and Characterization of Iron-doped Lanthanum Cerate Materials and their use in Electrochemical Study of Hydrazine Oxidation	9-2017 to 3-10-2018
30. Ms Safia Erum	Synthesis of Nickel Doped Lanthanum Cerates and their Applications in Electrochemical Water Splitting	3-2018 to 9-4-2019
31. Ms Mehwish Khurshid	Synthesis, Characterization and Electrochemical Analysis of Magnesium Doped Lanthanum Cerate Nanomaterials	3-2018 to 17-4-2019

32. Ms Roheen	Cobalt Doped Lanthanum Cerates: Characterization and Electrochemical Applications in Water Electrocatalysis	3-2018 to 19-4-2019
33. Ms Amina Zara	LaCe _{1-x} Li _x O ₃ Perovskite Materials: Synthesis and Electrochemical Applications	3-2018 to 4-2019
34. Ms Misbah Rasheed	Ball-Mill Assisted Synthesis of Doped Barium Titanates and Their Electrochemical Applications	7-2018 to 8-2019
M.Phil. Students in progress (04)		

Conferences/ Seminars/ Workshops (a) Attended in Pakistan		
Period	Title/Details	Place and Organizer
28-30 th October 1999	10 th National Chemistry Conference (CSP). Oral Talk on "Nuclear Magnetic Resonance Studies of Pyl and Application of Buckingham Equation (Proton Chemical Shifts of Charge Transfer Complex, Pyridinium Iodide in Binary Mixtures of Chloroform + Dichloromethane).	Department of Chemistry Quaid-i-Azam University, Islamabad
24-26 th July 2001	Oral Talk on Chemical Kinetics. As Trainer in Teacher Training Programme,	F.G. College for Women, G-10/4, Islamabad, F.D.E.
17-29 th April 2006	Teacher Training Program, Oral Talk and Practical Demonstration in Electrochemistry	F.G. College for Women, F-7/2, Islamabad, F.D.E.
6-11 th Sep. 2009	19 th National Chemistry Conference. Synthesis and Characterization of TiO ₂ contained Conducting nanocomposites. Talk: S. Ahmad*, M. Javed & N. K. Janjua.	Bara Gali Campus, Abbottabad.
15-17 th May, 2009	Coordinated 1 st Chemistry Alumni Meeting and Seminar on "Frontiers of Chemistry"	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
15-17 th Feb. 2010	8 th International & 20 th National Chemistry Conference Talk: Nasima Arshad*, Naveed K. Janjua, Leif H. Skibsted, Mogens L. Andersen & Charlotte U. Carlsen.PTC-16 (SL).	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
5-17 th Feb. 2010	8 th International & 20 th National Chemistry Conference Talk: Sana Sabahat*, Naveed K. Janjua, Z. Akhter & Mathias Brust. M-21 (SL)	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
15-17 th Feb. 2010	8 th International & 20 th National Chemistry Conference Talk: Fouzia Perveen*, R. Qureshi, Naveed K. Janjua, S. Ahmad, et. al. PTC-18 (SL)	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
25 th Feb, 2010	4 th National Seminar on Intellectual Property Rights and its Role in	PCSIR, Islamabad

	Economic Growth organized by GoP, Patent Advisory Cell, PCSIR, Karachi	
27-29 th May, 2011	Workshop on Molecular Modeling in Chemistry and Beyond	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
19 th December, 2012	Pakistan Industry Academia Relations Association, PIARA	Islamabad Club, Pakistan
30 th April 2013	Talk: Use of B site doped spinels for the Li Ion batteries. Misbah Mumtaz*, Naveed Kausar Janjua	National seminar on Energy Materials 2013 Institute of Chemical Engineering and Technology, University of the Punjab, New Campus, Lahore. Pakistan
2 nd -30 th May 2013	Recent Trends in Computational Chemistry	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
22 nd -24 th August 2013	Talk: BCZY-based Proton Conducting Electrolyte for SOFCs Naveed Kausar Janjua*	International Conference on Emerging Materials 2013 NUST H-12 Islamabad
22 nd -24 th August 2013	Talk: Spinel chemistry use in Li ion batteries Misbah Mumtaz*, Naveed Kausar Janjua	International Conference on Emerging Materials 2013 NUST H-12 Islamabad
22 nd -24 th August 2013	Poster: Synthesis and characterization of lithium metal phosphate for electrochemical devices. Misbah Mumtaz*, Naveed Kausar Janjua. Poster got 2nd Prize in all	International Conference on Emerging Materials 2013 NUST H-12 Islamabad
4 th Nov 2013	Talk: Use of lithium rich and poor phase in Li ion batteries, Misbah Mumtaz*, Naveed Kausar Janjua	5 th Chemistry Conference 2013 on "Chemistry in life Sciences" PINSTECH Nilore Islamabad
18-20 th March 2014	Talk: Electrochemical Properties of Barium Cerate Tuned with Zinc Naveed Kausar Janjua*, Mahwish Jabeen, Sana Sabahat	NANOSET-14, COMSATS IIT Lahore
18-20 th March 2014	Talk: Synthesis and Processing of $\text{La}_{0.20}\text{Sr}_{0.25}\text{Ca}_{0.45}\text{TiO}_3$ as SOFC Anode Material *Azra Yaqub, Naveed K. Janjua, Cristian Savaniu, John T.S. Irvine	NANOSET-14, COMSATS IIT Lahore
18-20 th March 2014	Poster: Improved electrical properties via copper doping in LiNiPO_4 crystal lattice using Microwave heating Misbah Mumtaz*, Naveed Kausar Janjua, Azra Yaqub Poster got 1st Prize in all	NANOSET-14, COMSATS IIT Lahore
24-26 th Nov 2015	Talk: Synthesis and Electrochemical Characterization of $\text{LiCo}_{1-x}\text{Zn}_x\text{PO}_4$ Olivines Javeria Arshad, Naveed Kausar Janjua*, Misbah Mumtaz, Ibrahim Qazi	7 th Chemistry Conference 2015 on "Chemistry in Engineering and life Sciences" PINSTECH-PIEAS Nilore Islamabad
24-26 th Nov 2015	Poster: Synthesis and characterization of carbon microspheres as pore former in a titanate based anode material for SOFCs. Azra Yaqub*, Cristian	7 th Chemistry Conference 2015 on "Chemistry in Engineering and life Sciences" PINSTECH-PIEAS Nilore Islamabad

	Savaniu, Naveed K. Janjua, John T.S. Irvine	
24-26 th Nov 2015	Talk: Investigation of enhanced electrical properties of copper doped lithium nickel phosphate for lithium ion battery application. Misbah Mumtaz*, Paul A. Connor, Naveed Kausar Janjua	7th Chemistry Conference 2015 on "Chemistry in Engineering and life Sciences" PINSTECH-PIEAS Nilore Islamabad
24-26 th Nov 2015	Talk: Electrochemical analysis of interactions between metal-querccetin complexes and 1,4-dinitrobenzene Sehrish Khan*, Naveed Kausar Janjua, Rakhshan Javed	7th Chemistry Conference 2015 on "Chemistry in Engineering and life Sciences" PINSTECH-PIEAS Nilore Islamabad
8 th March 2016	Talk: Potential of LiCoPO ₄ and LiCo _{1-x} Zn _x PO ₄ for methanol electrooxidation Naveed Kausar Janjua*, Javeria Arshad, Misbah Mumtaz, Ibrahim Qazi	ISESCO Women in Science Conference, ISESCOWINS Department of Biochemistry, Quaid-i-Azam University Islamabad, Pakistan
24-25 th Nov 2016	Talk: Robust Electrochemical Sensors Based on TiO ₂ Supported CuO for Methanol and Glucose Oxidation Ayesha Mujtaba, Naveed Kausar Janjua*	2 nd International Chemistry Conference on "Recent Trends in Chemistry" AIOU Islamabad
9 th Dec 2016	One day workshop on EU's higher education program ERASMUS+	European Union Delegation to Pakistan and Higher Education Commission (HEC)
25-27 th Oct, 2017	Invited Talk: Perovskites Materials for Energy Applications Naveed Kausar Janjua*	Impact of Nanoscience on Energy Technologies (NanoSET-2017) Department of Physics, COMSATS Campus CIIT Lahore
25-27 th Oct, 2017	Poster: Ag ₂ O-PrO ₂ Supported on γ -Al ₂ O ₃ Nanocomposites for Electrochemical Applications. Mariam Khan, Naveed Kausar Janjua*, Tariq Yaseen, Misbah Mumtaz, Zareen Akhtar, Ayesha Mujtaba	Impact of Nanoscience on Energy Technologies (NanoSET-2017) Department of Physics, COMSATS Campus CIIT Lahore
22-12-2017	Organized One day interactive seminar on Energy technologies with Prof. Dr Jawwad S. Darr from UCL UK	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
13-02-2018	Organized and hosted one day International interactive seminar on Future Energy Technologies with Prof. Dr. Bin Zhu from KTH Sweden, Prof. Dr. Jung-Sik Kim from Loughborough University UK, Mr. Afzal Farooqi from KTH Sweden,	Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
7-8 th Nov 2018	Talk: Doped Perovskite Materials for Energy Applications Dr. Naveed Kausar Janjua	4 th International Chemistry Conference on "Recent Trends in Chemistry" AIOU Islamabad
24 th to 26 th April 2019	Keynote Speaker Substituted Cerate Materials for Electrocatalysis Applications Naveed Kausar Janjua*	International Conference on Chemical Sciences Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan

24 th to 26 th April 2019	Poster Mixed Metal Oxide Electrocatalysts for Facile Enzyme-less Glucose Oxidation Ayesha Mujtaba*, Naveed Kausar Janjua	International Conference on Chemical Sciences Department of Chemistry Quaid-i-Azam University Islamabad, Pakistan
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Conferences/ Seminars/ Workshops(b) Attended Outside Pakistan

1-6 th July 2007	Talk: Low Cost Synthesis of NiFe ₂ O ₄ Nanoparticles, International Conference on Materials for Advanced Technology (ICMAT-07) Symposium-P	Suntec Centre, Singapore Material Research Society of Singapore
23-25 th June, 2008	Chemical Lab Safety and Security Workshop	Bangkok Thailand Scandia Labs. US State Department
19 th Dec 2011	The Royal Society of Chemistry (RSC) Solid State Chemistry Group Christmas Meeting, Poster: Misbah Mumtaz*, Naveed Kausar Janjua, Paul Cornnor, John TS Irvine	University of Liverpool UK
19 th Dec 2011	The Royal Society of Chemistry (RSC) Solid State Chemistry Group Christmas Meeting. Poster: Azra Yaqub*, Cristian Savaniu, Naveed K. Janjua and John T.S. Irvine	University of Liverpool UK
2012	Lab safety and security workshops, academic paper writing seminars, lectures from international academia and industry figures in School of Chemistry during Post-Doc	University of St. Andrews Fife Scotland United Kingdom
17 th -21 st March, 2013	Talk: Electrochemical Quantification of Water Soluble Ferrocene Modified Gold Nanoparticles onto Electrode Surface. 12 th Topical Meeting of the International Society of Electrochemistry, ISE, BES Sana Sabahat*, Zareen Akhter, Mathias Brust, Naveed Kausar Janjua	Bochum Germany
23-26 th August 2016	Invited Talk: CuO@TiO ₂ Based Electrochemical Sensor for Methanol and Glucose Oxidation Energy Material and Nanotechnology (EMN) Meeting on Smart and Multifunctional Material	Berlin, Germany
18-19 th August 2016	Scientific Workshop on Advanced Materials and Fuel Cell Technology hosted by Professor Bin Zhu (Head of Fuel Cell & Solar Cell Group, EGI, KTH) and Muhammad Afzal (Ph.D. Candidate) KTH	KTH Stockholm Sweden
22 nd August 2016	One day training on the Fiaxell fuel cell tester (EPFL) for recently awarded HEC project	Lausanne Switzerland

26-28 th 2017	July	Talk: Fabrication of $\text{CoIr}_x/\gamma\text{-Al}_2\text{O}_3$ Modified Electrode and use in Electrochemical Oxidation of Hydrazine. Naveed Kausar Janjua, Naveeda Firdous 4 th International NANOENERGY 2017 Conference	Aalto University Espoo Helsinki Finland
1 st -3 rd 2017		Scientific meetings with Professor Bin Zhu (Head of Fuel Cell & Solar Cell Group, EGI, KTH) and Muhammad Afzal (Ph.D. Candidate KTH) for new scientific horizons on advanced materials and fuel cell technology	KTH Stockholm Sweden
14 th -16 th 2018		Talk: Facile water electrocatalysis on glassy carbon electrode supported with doped lanthanum cerates, *Naveed Kausar Janjua	Edinburgh UK
10 th -11 th September 2018		Invited: Doped Lanthanum Cerate Catalytic Materials for Fuel cell Applications, Video 3 rd International Conference on Battery and Fuel Cell Technology 2018, September 10-11, 2018 London, UK Theme: Technological Developments in Improvising Battery and Fuel Cell *Naveed Kausar Janjua	London UK

Research Projects

Project Title	Principal/Co-Principal Investigator	Amount (Pak Rs.)	Sponsoring Agency	Duration
1. Synthesis and characterization of electroactive materials with emphasis on nanoscale synthetic routes.	PI	70,000	URF/QAU	2005-2006
2. Study of the effect of various chelating agents on synthesis, structural and electrochemical properties of LiMO_2 (M = Co, Ni, Mn, etc.).	PI	100,000	URF/QAU	2006-2007
3. Spectrophotometric and electrochemical studies of flavonoid-DNA interactions.	PI	95,000	URF/QAU	2009-2010
4. Synthesis and Characterization of olivine type (LiNiPO_4) and doped analogues.	PI	69000	URF/QAU	2010-11
5. Investigation of interactions of gold nanoparticles with ds.DNA	PI	41,071	URF/QAU	2011-2012
6. Metal complexation of flavonoids: Spectroscopic and electrochemical studies towards drug development	PI	3.6419/M	HEC	Three years 2012-2015

7. Synthesis and characterization of CuO coated materials for catalytic applications.	PI	44,882	URF/QAU	2013
8. Synthesis and aqueous solubilization of metal-flavonoid complex for anticancerous applications	PI	25,088	URF/QAU	2014
9. Preparation and catalytic evaluation of Ir and Ru catalysts supported onto γ -Al ₂ O ₃ for hydrazine decomposition	PI	60,000	URF/QAU	2015
10. Synthesis and characterization of CuO@CeO ₂ catalytic materials for glucose sensing applications	PI	80,000	URF/QAU	2016
11. Electrochemical properties of CuO coated alumina for ammonia oxidation.	PI	100,000	URF/QAU	2016-17
12. Synthesis of aluminum doped lanthanum cerate materials for fuel cell applications	PI	70,000	URF/QAU	2018
13. Synthesis of aluminum doped lanthanum cerate materials for electrocatalytic water splitting	PI	50,000	*URF/QAU	2019
14. Development of materials for fuel cell applications * = Continued	PI	8.07/M	*HEC	2016 to 2019

References

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