



Dr. Maliha Uroos

Associate Professor & Director,
Centre for Research in Ionic Liquids,
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Key Research Interests

Synthetic Organic Chemistry, Synthesis & characterization of Ionic Liquids, Application of ionic liquids in Biomass Processing, particularly, the development of integrated future biorefineries for lowering carbon impact on environment, fuel up gradation, effective utilization of natural carbon-rich renewable agricultural waste materials, green and sustainable production of platform chemicals using ionic liquids as green solvents and catalyst, Biocompatible ionic liquids synthesis and applications in drug delivery, Ionic Liquids based biomaterials for various applications including electrochemistry and waste water treatment, medicinal chemistry, Green Chemistry.

Qualifications

- 1. Post Doc (EPSRC Fellowship) (2012-2013)**
Supervisor: Dr. James Dowden
School of Chemistry, University of Nottingham, UK
Project Title: "Efficient Catalytic and Asymmetric and Cycloaddition Routes to Future Medicines"
- 2. PhD Organic Chemistry (HEC Scholarship) (2008-2012)**
Supervisor: Prof. Dr. Chris J Hayes
School of Chemistry, University of Nottingham, UK
Project Title: "Total syntheses of aritasone, cymbodiacetal and progress towards dihydroestoxide"
- 3. M.Sc Organic Chemistry 1st Div (2001-2003)**
Institute of Chemistry, University of the Punjab, Pakistan

Academic Positions

- Associate Professor, School of Chemistry, University of the Punjab, Lahore, Pakistan (2020 to date)
- Assistant Professor, Institute of Chemistry, University of the Punjab, Lahore, Pakistan (2013-2020)
- Lecturer, Institute of Agriculture Sciences, University of the Punjab, Lahore, Pakistan (2007-2013)

Administrative Position

- **Director**, Centre for Research in Ionic Liquids, School of Chemistry, University of the Punjab (2021 to date)

Research Projects Completed:

1. Awarded and completed research project amounting **PKR 14 Million** under the 3rd call of Technology Development Fund (TDF) program funded by Higher Education Commission (HEC) Pakistan with an additional fund of **PKR. 2.5 Million** by industrial partner (2021-2023)
2. Awarded and completed research project amounting **PKR 7.28 Million** under National Research Program for Universities (NRPU) by Higher Education Commission (HEC) Pakistan (2019-2021)
3. Awarded HEC research grant for filing US patent **PKR 0.7 Million** (2019-2020)

RESEARCH OUTPUTS

Publications: 61 (*h-index: 19, i10-index: 30, Cumulative JCR Impact Factor: 250*)

Patents at IPO, Pakistan = 05 (*Accepted/Granted: 2, Under examination: 3*)

Patents Published by USPTO = 01

Authored Reference Book as first author = 01

"Indole Alkaloid: Spirooxindole, Visual Guide to Natural Product Synthesis Series" ISBN: 9780323916745 Elsevier USA (2022),

Book Chapter = 01

Research Thesis Supervised: PhD = 04, MPhil = 25, BS/MSc = 45

Major Achievements:

- Established a research centre as Founding Director under the name of "**Centre for Research in Ionic Liquid**" under School of Chemistry, University of the Punjab, **March 2021**
- As conference chair, organized **1st International Conference on Ionic Liquids for Sustainable Future**, ILSF-2022, organized under Centre for Research in Ionic Liquids, School of Chemistry University of the Punjab, Lahore, **March 10, 2022**
- Design and launch of M.Phil program in "Green & Sustainable Chemistry" at Centre for Research in Ionic Liquids, School of Chemistry, University of the Punjab, **Session 2024-2026** and onwards. The courses of syllabi of this program have been designed in view of increasing demand of graduates with expertise in green chemistry and providing them the opportunity to develop and implement new products and processes that will highlight the role that chemistry has to play to target SDGs of UN Agenda 2030 and ensuring sustainable future.
- To inculcate entrepreneurial culture and skills in chemistry graduates, designed courses of syllabi and launched market oriented 1 year Post Graduate Diploma in "**Chemistry and Entrepreneurship**" at Centre for Research in Ionic Liquids, School of Chemistry, University of the Punjab, **Session 2022-2023** and onwards.
- Establishment of the first Spin-off company **ChemSolTech** from Centre for Research in Ionic Liquids as a team leader under Prime Minister National Innovation Award 2023.

Honors, Awards and Scholarships

- Awarded Technology Award at 9th Invention to Innovation Summit at University of the Punjab, 27th to 28th February, **2024**
- Prime Minister National Innovation Award **2023**
- Nominated from Pakistan by Higher Education Commission (HEC) Pakistan for International award "Economic Cooperation Organisation" (ECO) Award (To be announced)
- Awarded Technology Award at 8th Invention to Innovation Summit at University of the Punjab, 2nd to 3rd April **(2019)**
- Awarded 2nd prize on research presentation at the International Conference on "Emerging Trends on Earth & Environmental Sciences" at CEES, University of the Punjab, 9th to 10th March **(2017)**
- Awarded Performance Evaluation Award, by University of the Punjab for consecutive 5 years **(2014 to 2018)**
- Awarded Incentive Award for research publications by University of the Punjab for consecutive 6 years **(2015 to 2020)**
- Awarded EPSRC Fellowship for Post Doc **(2012-2013)**
- Awarded Leslie Crombie prize for the best PhD graduate at the "Postgraduate Research Symposium" The University of Nottingham, **UK, 7th & 8th July (2011)**
- Awarded PhD Scholarship under Faculty Development Program from HEC, Pakistan **(2008-2011)**
- Roll of Honour in BSc, Lahore College for Women University, Pakistan **(2001)**
- President Talent Forming Scholarship, Pakistan **(2000)**

Travel Grants

- Awarded Punjab University travel grant to present paper at “23rd Lakeland Symposium on Heterocyclic Chemistry” organized by Royal Society of Chemistry at **Grasmere, Ambleside, UK**, May 4th to 8th, **2017**
- Awarded Punjab University travel grant to present paper at 5th EuCheMS Chemistry Congress, **Istanbul, Turkey**, 31st August to 4th September, **2014**
- Awarded HEC travel grant to present paper at 4th EuCheMS Chemistry Congress, **Prague, Czech Republic**, 26th–30th August (**2012**)
- Awarded Graduate School Travel Prize by the University of Nottingham to present paper at the “241st ACS National Meeting & Exposition” in **Anaheim, California state, USA**, 27th to 31st March (**2011**)
- Awarded RSC bursary to present paper at 3rd EuCheMS Chemistry Congress in **Nürnberg, Germany**, 29th August to 2nd September (**2010**)

Professional Memberships

- Royal Society of Chemistry (RSC), UK
- American Chemical Society (ACS), USA
- The Chemical Society of Pakistan

Countries Visited & Languages:

Countries: United Kingdom, Germany, USA, Czech Republic, France, Turkey

Languages: English, Urdu & Punjabi

List of Publications

Cumulative JCR Impact Factor (IF): 252, h-index: 19, i10-index: 30

YEAR 2024

1. Sadia Naz, Maliha Uroos and Nawshad Muhammad, “One-Pot Production of 5-Hydroxymethylfurfural and Simultaneous Lignin Recovery from Non-food Lignocellulosic Wastes using Cost-effective Ionic Liquids” **Biomass Conversion and Biorefinery** (2024), 14, 3223-3234 [IF = 4.050]
2. Maida Akhlaq & Maliha Uroos, Facile fabrication of high capacity citric acid cross linked chitosan and carboxymethyl cellulose based hydrogel for fast removal of Cu (II), **Adsorption**, (2024), 30 (3), 363-375 [IF = 3.3]
3. Bushra Mir, Sadia Naz, Maliha Uroos, Bisma Ali & Faiza Sharif, “Pharmaceutical Applications of Lidocaine-Based Ionic Liquids – A Remarkable Innovation in Drug Delivery” **Journal of Molecular Liquids** (2024), 397, 124052 [IF = 6]
4. Muneeba Munir, Sadaf Nosheen, Nawshad Muhammad, Maliha Uroos, Waleed Mustafa, Rawaiz Khan, Rong Wang & Faiza Sharif, “Ionic Liquid Treated Bacterial Cellulose sheets as prospective biodegradable implant material” **Cellulose** (2024), 31, 2327-2340 [IF = 5.7]

YEAR 2023

5. Maida Akhlaq & Maliha Uroos, “Evaluating the Impact of Cellulose Extraction via Traditional and Ionosolv Pretreatments from Domestic Matchstick Waste on the Properties of Carboxymethyl Cellulose” **ACS Omega** (2023), 8 (9), 8722-8731 [IF = 4.131]
6. Sadia Naz & Maliha Uroos, “Synthesis of 5-Ethoxymethylfurfural (5-EMF) from Sugars and Lignocellulosic Crop Residue Using Ionic Liquids Differing in Their Cationic Structure” **Waste and Biomass Valorization** (2023), 14 (7), 2225-2236, [IF = 3.449]
7. Maida Akhlaq, Umair Mushtaq, Sadia Naz & Maliha Uroos, “Carboxymethyl cellulose-based materials as an alternative source for sustainable electrochemical devices: a review” **RSC Advances** (2023), 13(9), 5723-5743 [IF = 4.036]
8. Muneeba Munir, Nawshad Muhammad, Maliha Uroos, Waleed Mustafa & Faiza Sharif, “Ionic Liquid based treatment - A potential strategy to modify bacterial cellulose” **ChemBioEngReviews** (2023), 10(4), 529-540 [IF

= 4.8]

9. M Alsaiari, K Roghani, S Liaqat, AS Alkorbi, F Sharif, M Irfan, MA Rizk, "Effect of Ionic Liquids on Mechanical, Physical, and Antifungal Properties and Biocompatibility of a Soft Denture Lining Material" **ACS Omega** (2023), 8 (30), 27300-27311 [IF = 4.131]
10. Sajila Hina, Sumera Zaib, Maliha Uroos, Muhammad Zia-ur-Rehman, Rubina Munir, Huma Riaz, Quratulain Syed, Syed Hussain Imam Abidi "N-arylacetamide derivatives of methyl 1,2-benzothiazine-3-carboxylate as potential drug candidates for urease inhibition" **Royal Society Open Science** (2023), 10 (4), 230104, [IF = 3.5]
11. Farah Bashir, Nawshad Muhammad, Meshal Alshamrani, Maliha Uroos, Ahmad Salawi, Awaji Y Safhi, Naveed Ahmed, Abdullah Alsalhi, Fahad Y Sabei, Osama A Madkhali, "Synthesis and Characterisation of Cosmetic Grade Ionic Liquids and Their Application as Skin Whitening Agent" **Journal of Pharmaceutical Innovation** (2023), 18(4), 2277-2286 [IF = 2.6]

YEAR 2022

12. Mubeshar Riaz, ‡ Maida Akhlaq, ‡ Sadia Naz and Maliha Uroos, "An Overview of Biomedical Applications of Choline Geranate (CAGE): A Major Breakthrough in Drug Delivery" **RSC Advances** (2022), 12 (40), 25977-25991. [IF = 4.036]
13. Maliha Uroos, Arshad Javaid, Amina Bashir, Javaria Tariq, Iqra Haider Khan, Sadia Naz, Sameeta Fatima and Misbah Sultan, "Green synthesis of coumarin derivatives using Brønsted acidic pyridinium based ionic liquid [MBSPy][HSO₄] to control an opportunistic human and a devastating plant pathogenic fungus *Macrophomina phaseolina*" **RSC Advances** (2022) 12, 23963 [IF = 4.036]
14. Maida Akhlaq, Hassan Maqsood, Maliha Uroos, Ayesha Iqbal, "A Comparative Study of Different Methods for Cellulose Extraction from Lignocellulosic Wastes and Conversion into Carboxymethyl Cellulose" **ChemistrySelect** (2022), 7 (29), e202201533 [IF = 2.307]
15. Nida Saleem, Sadia Naz, Maliha Uroos, Rabia Muazzam, Muhammad Salman, "Ionic Liquid Functionalized Egg Residues as Efficient Biosorbents for Anionic Orange G Dye" **International Journal of Environmental Analytical Chemistry** (2022), 1-20 [IF = 2.731]
16. Sadia Naz & Maliha Uroos, "Ionic Liquids: Designer Solvents for Cleaner Technologies" **Letters in Organic Chemistry** (2022), 17 (10), 811-813 [IF = 0.797]
17. Sadia Naz & Maliha Uroos, "Ionic Liquids Mediated One-Pot Synthesis of Second Generation 5-Ethoxymethylfurfural (5-EMF); A Potent Biofuel Candidate" **ChemistrySelect** (2022), 7 (18), e202201161 [IF = 2.307]
18. Maliha Uroos, Abdul Hameed, Sadia Naz, Muhammad Raza Shah, "Indole Alkaloid: Spirooxindole, Visual Guide to Natural Product Synthesis Series" ISBN: 9780323916745 Elsevier USA (2022),
19. Siti Aminah Mohd Johari, Muhammad Ayoub, Abrar Inayat, Sami Ullah, Maliha Uroos, Salman Raza Naqvi, Sarah Farukkh, "Utilization of Dairy Scum Waste as a Feedstock for Biodiesel Production via Different Heating Sources for Catalytic Transesterification" **ChemBioEng Reviews** (2022), 9 (6), 605-632 [IF = 6.207]

YEAR 2021

20. Azmat Mehmood Asim, Maliha Uroos, Nawshad Muhammad, and Jason P. Hallett, "Production of Food-Grade Glucose from Rice and Wheat Residues Using a Biocompatible Ionic Liquid" **ACS Sustainable Chemistry and Engineering** (2021), 9(24), 8080–8089. [IF = 9.224]
21. Sadia Naz, Maliha Uroos, Muhammad Ayoub, "Cost-Effective Processing of Carbon-Rich Materials in Ionic Liquids: An Expeditious Approach to Biofuels" **ACS Omega** (2021), 6(43), 29233–29242. [IF = 4.131]
22. Amna Bibi, Sadia Naz, Maliha Uroos, "Evaluating the Effect of Ionic Liquid on Biosorption Potential of Peanut Waste: Experimental and Theoretical Studies" **ACS Omega** (2021), 6(34), 22259–22271. [IF = 4.131]
23. Rabia Muazzam, Azmat Mehmood Asim, Maliha Uroos, Nawshad Muhammad, Jason P. Hallett, "Evaluating the potential of a novel hardwood biomass using a superbase ionic liquid" **RSC Advances** (2021), 11, 19095. [IF = 4.036]
24. Sadia Naz, Maliha Uroos, Nawshad Muhammad, "Effect of Molecular Structure of Cation and Anions of Ionic Liquids and Co-Solvents on Selectivity of 5-Hydroxymethylfurfural from Sugars, Cellulose and Real Biomass" **Journal of Molecular Liquids** (2021), 334, 116523. [IF = 6.633]

25. Azmat Mehmood Asim, Maliha Uroos, Sadia Naz, Nawshad Muhammad, "Pyridinium Protic Ionic Liquids: Effective Solvents for Delignification of Wheat Straw" **Journal of Molecular Liquids** (2021), 325, 115013. [IF = 6.633]
26. Muhammad Ayoub, Suzana Yusuf, Abrar Inayat, Sami Ullah, Maliha Uroos, Mushtaq Ahmad & Muhammad Zafar, "Synthesis and Characterization of Waste Eggshell-Based Montmorillonite Clay Catalyst for Biodiesel Production from Waste Cooking Oil" **E3S Web of Conferences**, 2021, (287), 2006.
27. Rabia Muazzam, Ainy Hafeez, Maliha Uroos, Muhammad Saeed, Fahad Rehman, Nawshad Muhammad, "Plasma-Based Ozonolysis of Lignin Waste Materials for the Production of Value-Added Chemicals" **Biomass Conversion and Biorefinery** (2021), 1– 17. [IF = 4.050]
28. Amna Murtaza, Maliha Uroos, Misbah Sultan, Rabia Muazzam, Sadia Naz, "Enhancing Catalytic Potential of Gold Nanoparticles by Linear and Cross-linked Polyurethane Blending" **RSC Advances** (2021), 11(43), 26635. [IF = 4.036]
29. Hafiza Amna Younus, Mariya Al-Rashida, Abdul Hameed, Maliha Uroos, Uzma Salar, Sobia Rana, Khalid Mohammad Khan, "Multicomponent Reactions (MCR) in Medicinal Chemistry: A Patent Review (2010-2020)" **Expert Opinion on Therapeutic Patents** (2021), 267–289. [IF = 6.714]
30. Muhammad Tariq Shehzad, Aqeel Imran, Abdul Hameed, Mariya Al-Rashida, Mariam Bibi, Maliha Uroos, Asnuzilawati Asari, Shafia Iftikhar, Habsah Mohammad, Muhammad Nawaz Tahir, Zahid Shafiq, Jamshed Iqbal, "Exploring Synthetic and Therapeutic Prospects of New Thiazoline Derivatives as Aldose Reductase (ALR2) Inhibitors" **RSC Advances** (2021), 11(28), 17259–17282. [IF = 4.036]
31. Misbah Sultan, Zunaira Jamal, Farhat Jubeen, Ariba Farooq, Ismat Bibi, Maliha Uroos, Hina Chaudhry, SA Alissa, Munawar Iqbal, "Green Synthesis of Biodegradable Polyurethane and Castor Oil-Based Composite for Benign Transformation of Methylene Blue" **Arabian Journal of Chemistry** (2021), 14(12), 103417. [IF = 6.212]
32. Mahnoor Ijaz, Maryam Fatima, Rukhsana Anwar, Malih Uroos, "Green Synthesis of Gold Nanoparticles from *Manilkara Zapota L. Extract* and the Evaluation of its Intrinsic *in vivo* Antiarthritic Potential" **RSC Advances** (2021), 11(44), 27092–27106. [IF = 4.036]

YEAR 2020

33. Azmat Mehmood Asim, Maliha Uroos & Nawshad Muhammad, "Extraction of Lignin and Quantitative Sugar Release from Biomass using Efficient and Cost-effective Pyridinium Protic Ionic Liquids" **RSC Advances**, 2020, 10(72), 44003-44014 (IF = 4.036)
34. Maliha Uroos, Azmat Mehmood Asim & Nawshad Muhammad, "Extraction of Lignin from Lignocellulosic Waste Material Using Pyridinium Ionic Liquid" **US Patent** US2020/0239508A1, July 2020.
35. Hassan Maqsood, Maliha Uroos, Rabia Muazzam, Sadia Naz & Nawshad Muhammad, "Extraction of Basil Seed Mucilage using Ionic Liquid and Preparation of AuNps/Mucilage Nanocomposite for Catalytic Degradation of Dye" **International Journal of Biological Macromolecules**, 2020, 164, 1847-1857 (IF = 8.025)
36. Sadia Naz and Maliha Uroos, "Ionic Liquids Based Processing of Renewable and Sustainable Biopolymers", **Biofibers and Biopolymers for Biocomposites**, 2020, 181-207.
37. Sadia Naz, Maliha Uroos, Azmat Mehmood Asim, Nawshad Muhammad & Faiz Ullah Shah, "One-Pot Deconstruction and Conversion of Lignocellulose into Reducing Sugars by Pyridinium Based Ionic Liquid-Metal Salt System" **Frontiers in Chemistry**, 2020, 8, 236 (IF = 5.545)

YEAR 2019

38. Muhammad Tariq Shehzad, Abdul Hameed, Mariya al-Rashida, Aqeel Imran, Maliha Uroos, Asnuzilawati Asari, Habsah Mohamad, Muhammad Islam, Shafia Iftikhar, Zahid Shafiq, Jamshed Iqbal "Exploring Antidiabetic Potential of Adamantyl-Thiosemicarbazones via Aldose Reductase (ALR2) Inhibition" **Bioorganic Chemistry**, 2019, 92, 103244. (IF = 5.307)
39. Azmat Mehmood Asim, Maliha Uroos, Sadia Naz, Misbah Sultan, Gregory Griffin, Nawshad Muhammad & Amir Sada Khan, "Acidic ionic liquids: Promising and cost-effective solvents for processing of lignocellulosic biomass" **Journal of Molecular Liquids**, 2019, 287, 110943, (IF = 6.633)
40. Misbah Sultan, Rahid Masood, Ismat Bibi, Imran Sajid, Atif Islam, Sadia Atta, Maliha Uroos, Yusra Safa, & Haq Nawaz Bhatti, "Impact of soft segment size on physicochemical and antimicrobial properties of waterborne

polyurethane dispersions for textile applications” **Progress in Organic Coatings**, 2019, 133, 174-179 (IF = 6.206)

41. Abdul Hameed, Mariya al-Rashida, Maliha Uroos, Syeda Uroos Qazi, Sadia Naz, Mariam Ishtiaq & Khalid Mohammed Khan “A patent update on therapeutic applications of urease inhibitors (2012-2018)” **Expert Opinion on Therapeutic Patents**, 2019, 29(3), 181-189 (IF = 6.714)
42. Muhammad Tariq Shehzad, Aqeel Imran, Guy Sidar Singor Njateng, Abdul Hameed, Muhammad Islam, Mariya al-Rashida, Maliha Uroos, Asnuzilawati Asari, Zahid Shafiq, Jamshed Iqbal, “Benzoxazinone-thiosemicarbazones as antidiabetic leads via aldose reductase inhibition: Synthesis, biological screening and molecular docking study” **Bioorganic Chemistry**, 2019, 87, 857-866, (IF = 5.307)
43. Maliha Uroos, Azmat Asim & Nawshad Muhammad, Extraction of lignin from lignocellulosic waste material using pyridinium ionic liquids, US Patent Application no: 16/742,708, 2020.
44. Bushra Iqbal, Nawshad Muhammad, Abdur Rahim, Farasit Iqbal, Faiza Sharif, Sher Zaman Safi, Amir Sada Khan, Girma Gonfa, Maliha Uroos, Ihtesham Ur Rehman “Development of collagen/PVA composites patches for Osteochondral defects using a green processing of ionic liquids” manuscript under review in **The International Journal of Polymeric Materials and Polymeric Biomaterials**, 2019, 68(10), 590-596, (IF = 3.221)

YEAR 2018

45. Saliha Saher, Haris Saleem, Azmat Mehmood Asim, Maliha Uroos, Nawshad Muhammad, “Pyridinium based ionic liquids: A pretreatment solvent & reaction medium for catalytic conversion of cellulose to Total Reducing Sugars (TRS)” **Journal of Molecular Liquids**, 2018, 272, 330-336 (IF = 6.633)
46. Abdul Hameed, Mariya al-Rashida, Maliha Uroos, Syed Abid Ali, Arshia, Mariam Ishtiaq & Khalid Mohammed Khan “Quinazoline and Quinazolinone as Important Medicinal Scaffolds: A Comparative Patent Review (2011-2016)” **Expert Opinion on Therapeutic Patents**, 2018, 28 (4), 281-297, (IF = 6.714)
47. Misbah Sultan, Asma Javeed, Maliha Uroos, Muhammad Imran, Farhat Jubeen, Shazia Nouren, Nazish Saleem, Ismat Bibi, Rashid Masood, Waqas Ahmed “Linear and crosslinked Polyurethanes based catalysts for reduction of Methylene Blue” **Journal of Hazardous Materials**, 2018, 344, 210-219 (IF = 14.224)

YEAR 2017

48. Maliha Uroos, Phillip Pitt, Laurence M. Harwood, William Lewis, Alexander J. Blake and Christopher J. Hayes “Total synthesis of (-)-aritasone via the ultra-high pressure hetero-Diels–Alder dimerisation of (-)-pinocarvone” **Organic & Biomolecular Chemistry**, 2017, 15, 8523-8528 (IF = 3.890)
49. Huma Aslam Bhatti, Yildiz Tehseen, Kiran Maryam, Maliha Uroos, Bina S. Siddiqui, Abdul Hameed and Jamshed Iqbal “Identification of new potent inhibitor of aldose reductase from *Ocimum basilicum*” **Bioorganic Chemistry**, 2017, 75, 62-70 (IF = 5.307)
50. Abdul Hameed, Mariya al-Rashida, Rima D. Alharthy, Maliha Uroos, Ehsan Ullah Moughal, Syed Abid Ali, and Khalid Mohammed Khan “Small Molecules as Activators in Medicinal Chemistry: A Patent Review (2010-2016)” **Expert Opinion on Therapeutic Patents**, 2017, 27 (10), 1089-1110 (IF = 6.714)
51. Maliha Uroos, Zaigham Abbas, Shumaila Sattar, Nigarish Umer, Arham Shabbir, Shafiq-ur-Rehman and Ahsan Sharif “*Nyctanthes arbor-tristis* Ameliorated FCA-Induced Experimental Arthritis: A Comparative Study among Different Extract” **Evidence-Based Complementary and Alternative Medicine**, 2017, doi.org/10.1155/2017/4634853 (IF = 2.650)
52. Abdul Hameed, Mariya al-Rashida, Maliha Uroos, Syed Abid Ali, and Khalid Mohammed Khan “Schiff Bases and their Metal Complexes in Medicinal Chemistry: A Patent Review (2010-2015)” **Expert Opinion on Therapeutic Patents**, 2017, 27 (1), 63-79 (IF = 6.714)

YEAR 2015

53. Uroos, M.; Bhatti, H.; Uddin, N.; Ayub, K.; Saima, B.; Iqbal, J.; Anjum, S.; Light, M.; Hameed, A.; 1 and Khan, K.; “Synthesis, characterization of flavone, isoflavone, and 2,3-dihydrobenzofuran-3-carboxylate and density functional theory studies” **European Journal of Chemistry**, 2015, 6 (3), 305-313.

54. Magnus D.; Heine, H.; A.; Wriglesworth, A.; Uroos, M.; Calladine, J.; Murphy, T.; Hamilton, M.; Clark, I.; Greetham, G.; Towrie M.; Dowden, J.; Besley, N and George, M. "Calculating Singlet Excited States: Comparison with Fast Time-resolved Infrared Spectroscopy of coumarins" **Journal of Chemical Physics**, 2015,142, 154119 (IF = 4.304)

YEAR 2014

55. Anwar, A. Hameed, A.; Perveen, S.; **Uroos, M.**; Choudhary, M. I.; Basha, F. Z. "1,1-Diphenyl-2-picryl hydrazyl radical scavenging activity of novel dihydropyridine derivatives" **European Journal of Chemistry**, 2014, 5 (1), 990-992.
56. Maliha Uroos and Christopher J. Hayes "Biomimetic total synthesis of Aritasone" European Chemistry Congress – 5th EuCheMS, 2014, P-D4-103, 1170.

YEAR 2013

57. **Maliha Uroos**, Jonathan Day, James Dowden "Alkaloid inspired spirocyclic oxindoles from 1,3-dipolar cycloaddition of pyridinium ylides" **Organic & Biomolecular Chemistry**, 2013, 11, 6502 (IF = 3.890)

YEAR 2012

58. **Maliha Uroos**, Maliha Uroos and Christopher J. Hayes "Synthetic studies towards dihydroestoxie" Chem. Listy 106, O-051, s703, 2012.

YEAR 2011

59. **Maliha Uroos** and Christopher J. Hayes "Total synthesis of (+)-cymbodiacetal" **Abs. Pap. Am. Chem. Soc.** 2011, 241, 257-ORGN

YEAR 2010

60. **Maliha Uroos**, William Lewis, Alexander J. Blake & Christopher J. Hayes "Total Synthesis of (+)-Cymbodiacetal: A Re-evaluation of the Biomimetic Route" **Journal of Organic Chemistry**, 2010, 75, 8465-8470 (IF = 4.198)
61. **Maliha Uroos** and Christopher J. Hayes "Synthesis of the Spirochroman Core of Dihydroestoxide and Stereochemical Proposal for the Natural Product" **Organic Letters**, 2010, Vol. 12, No. 22, 5294-5297 (IF = 6.072)

List of Patents

Patents filed at IPO Pakistan: 05

- 1- Maliha Uroos & Sadia Naz; Synthesis of Ethoxymethylfurfural from agricultural waste material using ionic liquids, Application no: 253/2021. **Accepted**
- 2- Maliha Uroos & Sadia NAz; One pot deconstruction and chemical transformation of lignocellulosic biomass, Application no: 555/2019. **Accepted**
- 3- Maliha Uroos, Azmat Asim & Nawshad Muhammad, Extraction of lignin from lignocellulosic waste material using pyridinium ionic liquids, Application no: 50/2019. **Under 2nd examination**
- 4- Maliha Uroos & Maida Akhlaq, Process Development for the Mass Production of carboxymethyl cellulose (CMC) using Agro-industrial Waste, Application no: 820/2022. **Under 1st examination**
- 5- Maliha Uroos, Hassan Masood & Maida Akhlaq, Ionic Liquid-Mediated Synthesis of Carboxymethyl Cellulose via Extracting Cellulose from Lignocellulosic Waste, Application no: 819/2022. **Under 1st examination**

Patent published at USPTO: 01

- 1- Maliha Uroos, Azmat Asim & Nawshad Muhammad, Extraction of lignin from lignocellulosic waste material using pyridinium ionic liquids, US Patent Application no: 16/742,708,2020. **Published**

RESEARCH Activities

Invited Talks: 8

Trainings/Workshops: 6

Conferences Organized: 4

Presentations and Conferences attended: 28

Workshops Organized: 2

Chemistry Outreach activities: 2

Invited Talk

1. Invited talk at International Conference on Material Chemistry & Industrial Technologies, Topic: "***Ionic Liquids based Processing of Lignocellulosic Biomass for Balanced Carbon Economy***" organized by University of Lahore, **24th-25th April, 2024**
2. Invited talk at 2nd International Conference on Science, Technology & Innovation, Topic: "***Ionic Liquids as Designer Green Solvents and their Widespread Applications***" organized by ORIC Kinnaird College for Women, Lahore, **8th-10th March 2023**
3. Invited talk at 1st International Conference on Sustainable Development Goals, Topic: "***Attaining SDG 2 by utilization of agricultural waste to produce food grade glucose***" organized by Lahore College for Women University, Lahore on **29th-31st March 2022**
4. Delivered a talk as keynote speaker at Innovation Summit Sialkot 2021, entitled "***Utilisation of Agricultural Waste for Efficient Production of Industrially Important Chemicals for Import Substitution***" jointly organized by Center of Innovation and Competitiveness Studies (CISC-USKT), Sialkot and University of the Punjab, **24th-25th March, 2021**.
5. Invited Oral Talk in 19th International and 31st National Chemistry Conference on Emerging Trends in Chemistry, "***Ionic Liquids as Designer Solvents for Green Processing of Agricultural Waste***" Organized by Chemical Society of Pakistan at UMT, **December 16-18, 2021**.
6. Delivered an invited talk as Pakistani Women inventor at the Virtual meeting organized by World Intellectual Property Organisation (WIPO) on the "***Consultations on the Report on the Situation of Women Inventors in Pakistan on their Access to and Use of the Intellectual Property System***" held on 30th September and **1st October, 2020**.
7. Delivered an invited talk as local inventor at "***Training Workshop on Patent Database Searches and Development of Technology and Innovation Support Centers (TISCs) in Pakistan***" organized by the World Intellectual Property Organization (WIPO), the Intellectual Property Organization of Pakistan (IPO Pakistan) And HEC Pakistan, Lahore University of Management Sciences (LUMS), Lahore, held on **20-21 February, 2019**.
8. Guest Speaker at symposium organized by Chemical Engineering Department, University of Engineering and Technology, "***Ionic Liquids: Designer Solvents for Future Sustainability***" UET, KSK Campus **30th November 2021**,

Conferences Organized:

1. As conference chair, organized **1st International Conference on Ionic Liquids for Sustainable Future**, ILSF-2022, organized under Centre for Research in Ionic Liquids, School of Chemistry University of the Punjab, Lahore, **March 10, 2022**
2. Organized a session jointly with Center of Innovation and Competitiveness Studies (CISC-USKT), Sialkot at Innovation Summit Sialkot, entitled held on **24-25 March, 2021**.
3. Member Organising Committee "International Conference of Pakistan on Water & Energy Research (IC-POWER), 3rd Pak Water & Energy Expo-2018, Expo centre, Lahore, October **24th-25th October, 2018**.
4. Member Organising Committee, 6th International Conference on Green & Sustainable Chemistry, University of Nottingham, UK, **4th-6th August, 2013**

Trainings/Workshops:

1. Training workshop for Entrepreneurial Coaching organised under TAKEUP Project (Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan) COMSATS University Islamabad, Lahore Campus, **8-9 November, 2023**
2. **DL-101 certificate**, Awarded by WIPO, (Online) **2020**
3. "Training Workshop on Patent Database Searches and Development of Technology and Innovation Support Centers (TISCs) in Pakistan" organized by the World Intellectual Property Organization (WIPO), the Intellectual Property Organization of Pakistan (IPO Pakistan) And HEC Pakistan held at Lahore University of Management Sciences (LUMS), Lahore, **20-21 February, 2019**
4. Attended a three day workshop "Computational Chemistry Workshop: A New Approach to Understanding & Solving Chemical Problems", FCC, A Chartered University, Lahore, **Jan 20-22, 2016**
5. Attended a short course on "Latest Trends in Green Chemistry", PIEAS, Islamabad, **August 9-11, 2016**
6. **Professional Teaching qualification**, Holds **Intensive Learning Teaching Programme (ILTP)** certificate. Awarded by the University of Nottingham and accredited by the Higher Education Academy UK, **2008**

Chemistry Outreach activities

1. Delivered a talk at "TEDx Punjab University" event organized by Department of English, Punjab University, the talk title was "*The Importance and Implications of Green Chemistry*", **December 1st, 2018**.
2. Delivered a talk at "Book Club", an event organized by Punjab University Main Library, on the Prof. K.C. Nicolau's book entitled "Molecules that Changed the World", **November 28th, 2018**.

Workshop Organised:

- Invited as Resource person in Workshop at 2nd International Conference on Science, Technology and Innovation by ORIC, Kinnaird College For Women, , **6th-10th March 2023**
- Invited as Resource person in Awareness Workshop on National Research Program for Universities (NRPU) by ORIC, University of the Punjab **19th December, 2019**

Presentations and Conferences attended

1. Poster presentation at the "Postgraduate Research Symposium" The University of Nottingham, , 1st & 2nd July, 2010, UK
2. Poster presentation at the 3rd EuCheMS Chemistry Congress, 29th August – 2nd September 2010, Nürnberg, Germany
3. Poster presentation at the symposium titled "New horizons in natural product chemistry" at the School of Chemistry, University of Nottingham, November, 2010, UK
4. Oral presentation, presented my research paper at the "241st ACS National Meeting & Exposition", 27th to 31st March 2011, Anaheim, California state, USA
5. Oral presentation at the "Postgraduate Research Symposium" The University of Nottingham, 7th & 8th July 2011, UK
6. Poster presentation at the symposium titled "New horizons in natural product chemistry" at the School of Chemistry, University of Nottingham, UK, November, 2011
7. Oral presentation at the 4th EuCheMS Chemistry Congress, Prague, Czech Republic, 26th-30th August 2012
8. Poster presentation at the 6th International Conference on Green & Sustainable Chemistry, 4th-6th August, 2013, UK
9. Oral presentation at the Asian Symposium on Medicinal Plants, Spices and other Natural Products, , HEJ Karachi, PK, 9th-12th December, 2013
10. Poster presentation at the 5th EuCheMS Chemistry Congress, Istanbul, Turkey, 31st August to 4th September, 2014
11. Poster presentation at the 25th National and 13th International Chemistry Conference, Institute of Chemistry, PU, 20th to 22nd October, 2014

12. Poster entitled "Biosynthesis of gold nanoparticles using *Aegel marmelos* extract" presented in the 2nd Conference on "Frontiers of Nanoscience and Nanotechnology" PINSTECH, Islamabad, PK, September 8-10, 2015.
13. Poster entitled "The Fungicidal Potential of Coumarin Derivatives" presented in the 5th International conference on "Crop Protection for Sustainable Agriculture" IAGS, PU, Lahore, November 23-25, 2015
14. Poster presentation at the 5th International Symposium on Biomedical Materials, organised by COMSATS, Lahore, December 14-16, 2016
15. Attended a three day international conference on "Current Research in Chemical & Pharmaceutical Sciences" Forman Christian College (A Chartered University), Lahore, January 18-20, 2017
16. Participated with a research display stall and poster presentation at "6th Invention to Innovation Summit" at University of the Punjab, Lahore, PK, March 8th to 9th, 2017
17. Poster presentation in the International Conference on "Emerging Trends on Earth & Environmental Sciences" at CEES, University of the Punjab, Lahore, PK, March 9th to 10th, 2017
18. Poster presentation at Royal Society of Chemistry organised "23rd Lakeland Symposium on Heterocyclic Chemistry" at Grasmere, United Kingdom, May 4th to 8th, 2017
19. Participated with a research display stall and poster presentation at "6th Invention to Innovation Summit" at University of the Punjab, Lahore, PK, March 7th to 8th, 2018
20. Presented research work at "5th International Conference on Drug Development-Natural & Synthetic" at COMSATS University, Abbottabad Campus, Abbottabad, June 28th-29th, 2018.
21. Presented research work at "1st International Conference on Medicinal Chemistry & Drug Discovery" at COMSTECH, Islamabad, October 18th-19th, 2018.
22. Presented research work at "1st International Conference on Modern Trends in Chemistry & Energy Technologies" at COMSATS University Islamabad, Lahore Campus, October 22nd-23rd, 2018.
23. Participated in National conference on energy crisis and its solutions, organised by CEES, University of the Punjab, Lahore, December 10th-11th, 2018
24. Participated in "GRIPS International Conference on Pharmaceuticals & Biochemical Sciences" at Expo Centre, Lahore, January 15th-17th, 2019.
25. Participated in a three day "Expo cum Conference on Science & Technology" at PCSIR Laboratories, Ferozpur Road, Lahore, February 11th-13th, 2019.
26. Presented research work International conference on "Recent Innovations in Molecular Science", at University of the Punjab, Lahore, November 6-8, 2019
27. Poster presentation in the 2nd International Conference on "Emerging Trends on Earth & Environmental Sciences" at CEES, University of the Punjab, Lahore, PK, March 4th to 6th, 2020.
28. Oral presentation in Environmental Conservation for Sustainable Planet, 3rd International Conference on Trends in Earth and Environmental Sciences (ETEES, 2021) Lahore, Pakistan, November, 16-18, 2021

References:

1. Prof. Dr. Chris Hayes, School of Chemistry, University of Nottingham, University Park Campus, NG7 2RD, UK, Phone: +44(0)115 951 3045, Email: chris.hayes@nottingham.ac.uk
2. Dr. Nawshad Muhammad, University of Researchers in this research group: Khyber Medical University, Peshawar, Department: Department of Dental Materials, Institute of Medical Sciences, Cell No./ contact details: 0333-9223834, Email: nawshad.ibms@kmu.edu.pk