



Dr. Aijaz Ali Otho

Phone No: +923022929256
Email: aijazotho@gmail.com
othoaijaz@yahoo.com

Passport No: AA2448122
Age/ D.O.B: 34 Years (2nd Jun, 1988)

Address: National Centre of Excellence in Analytical Chemistry University of Sindh, Jamshoro, Pakistan

 Professional Membership: Life time member of Pakistan Botanical Society

 RG Name: Aijaz Ali Otho

 WeChat ID: Dr Aijaz Ali Otho

+923022929256

ABOUT ME

Research Interests:

- Impact of climate change on medicinal plant (Soil Geography, Plant Eco-Physiology, Genetics, Plant elemental analysis Phytochemistry, antimicrobial anticancer activities)
- Systematics taxonomy (Digitization, Geo- Referencing and Documentation of Herbaria and Botanical Gardens)
- Role of Nano fertilizer apply for the Production of medicinal plant (Improve the Growth, physiology of medicinal plant and improve the Modern day drugs, secondary metabolism)
- Role of Nanotechnology applied for the Agricultural sciences
- Phytoremediation of heavy metal from Soil
- Synthesis of metal nanocomposite and their Applications.
- Fabrication of graphene based membrane and their environmental applications.

TECHNICAL SKILLS

- LC-MS AcquityH I-Class/Xevo TQ-S micro IVD system Waters
- ICP-OES Thermo Scientific ICAP 7000 Plus Series
- AAS Perkin-Elmer Model 700
- Operating UV-Visible Spectrophotometer (Lambda 365, PerkinElmer, USA)
- FTIR Thermo Nicolet 5700
- SEM (model.JSM.6380, Joel, Japan).
- HPLC (Agilent 1200 Series HPLC)
- FAAS (Analytik Jena AG) (Model contrAA 800, Germany)

PROFESSIONAL EXPERIENCE

Lecturer (Department of Botany)

- Government College University Hyderabad is a public university located in Hyderabad, Sindh, Pakistan (11-11-2022 to-date)

Job Responsibilities:

- Planning teaching, including lectures, seminars/tutorials and learning materials
- Meeting students individually to discuss progress
- Checking and assessing students' work
- Pursuing research
- Interviewing potential students
- Carrying out administration, such as attending faculty meetings and writing reports
- Writing research proposals, papers and other publications
- Supervising MPhil students and research staff
- Managing research budgets
- Preparing bids for funding for departmental research projects.

Research Associate

- U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering and Technology (17-08-2022 to-10-11-2022)

Job Responsibilities:

- To conduct the research on removal of pesticides through Nano-filtration membrane in water using of LC-MS and ICP-MS
- Supervises junior research assistances, undergraduate students, and student workers in the laboratory.
- To summarize the scientific articles and manuscripts for publication and presentation.

Research Associate

- National Centre of Excellence in Analytical Chemistry, University of Sindh (76080), Jamshoro, Pakistan (22-02-2021-16-08-2022)

Job Responsibilities:

- To conduct the research on the collect the sampling of plant vegetation assessment of Jamshoro in relation to topography and soil environment
- Identify plant specimens and add open herbarium

- Other simple water quality instruments.

INTER PERSONAL COMMUNICATION

- Excellent human relation skill having dealt with public & Colleagues.
- Good negotiation & analytical skills.
- Team work & ability to get along & cooperate with others.
- Able to plan & execute task on own initiative & within stipulated time.
- Dealing promptly and sensitively with queries from members of the public.

LANGUAGES IN KNOWN

► English ► Urdu ► Sindhi

HOBBIES

- Reading News Papers
- Net Searching
- Research New Things

- Supervises junior research assistances, undergraduate students, and student workers in the laboratory.
- To summarize the scientific articles and manuscripts for publication and presentation.

Research fellow

National Centre of Excellence in Analytical Chemistry, University of Sindh (76080), Jamshoro, Pakistan (21-01-2015 to 20-02-2021)

Job Responsibilities:

- To Research new things related to the project and analyse the product and reports to the principal investigator relative to feasibility, quality, and benefits of such new developments.
- Fabrication of imprinted materials for the elimination of toxic metals from environmental samples.
- To design and implement the research protocols and safety procedures.
- To Supervise safe handling of the hazardous material and coordinate the purchasing requests and writes the specifications and justifications for the equipment purchase.
- To set up and conduct the chemical experiments, tests, and analyse, using techniques such as LC-MS, ICP-OES, GC-MS, SEM, TEM, EDS, XRD, FTIR. Soil and water analysis techniques such as pH meter, conductivity meter TDS meter metal analysis.
- Supervises junior research assistances, undergraduate students, and student workers in the laboratory.
- To summarize the scientific articles and manuscripts for publication and presentation.

RESEARCH PROJECTS

- Mehran University of Engineering & Technology HEC NRP
“Pesticides removal by point of use Nano-filtration membrane and their rapid detection in water using liquid chromatography mass spectrometry HEC Pakistan Project No 16460

ACADEMIC QUALIFICATIONS

Ph.D. (Botany)

Institute of Plant Sciences University of Sindh, Jamshoro, Sindh Pakistan (02-08-2022).

M.Phil. (Botany)

Institute of Plant Sciences University of Sindh, Jamshoro, Sindh Pakistan (01-08-2016).

BS (Botany)

Institute of Plant Sciences University of Sindh, Jamshoro, Sindh Pakistan(12-04-2011).

RESEARCH PUBLICATIONS

- [1] **Otho, Aijaz Ali**, Rabia Asma Memon, Saeed Akhter Abro, and Ayaz Ali Memon. "Elemental Analysis of Medicinal Herb *Fagonia indica* Burm. f. and Its Rhizospheric Soil from Six Geographical Locations of Southeastern Sindh Province, Pakistan, During Spring and Summer Seasons." *Biological Trace Element Research* (2022): 1-16. <https://doi.org/10.1007/s12011-021-02873-1> (Impact factor: 4.081)
- [2] Heer Memon , Anwar Ahmed Memon , Abdul Qadir Ansari , **Aijaz Ali Otho** (2022). Fabrication and characterization of aloe vera and tea tree oil loaded antimicrobial nanofiberous dressing. *Liaquat medical research journal*, 4(4).
- [3] Chandio, Anwar Ali, Shahabuddin Memon, Ayaz Ali Memon, Aamna Balouch, Roomia Memon, Khalid Hussain Thebo, Fakhar N. Memon, Muhammad Hassan Agheem, Safia Sanam Memon, and **Aijaz Ali Otho**. "Eco-Friendly Conversion of p-Nitrophenol into p-Aminophenol Using Calix [4] arene Derived CuO Nanoparticles: An Excellent Catalytic Agent." *Polycyclic Aromatic Compounds* (2022): 1-13. <https://doi.org/10.1080/10406638.2022.2096648> (Impact factor: 3.744)
- [4] Kori, Abdul Hamed, Sarfaraz Ahmed Mahesar, Abdul Rauf Khaskheli, Syed Tufail Hussain Sherazi, Zahid Hussain Laghari, Tariq Panhwar, and **Aijaz Ali Otho**. "Effect of Wall Material and Inlet Drying Temperature on Microencapsulation and Oxidative Stability of Pomegranate Seed Oil Using Spray Drying." *Journal of Oleo Science* 71, no. 1 (2022): 31-41. <https://doi.org/10.5650/jos.ess21105> (Impact factor: 1.628)
- [5] Mugheri, Abdul Qayoom, **Aijaz Ali Otho**, Maqsood Ahmed Abro, Awais Ali, and Shaista Khan. "Versatile noble-metal-free electrocatalyst synergistically accelerating for the highly comprehensive understanding evidence for Electrochemical Water Splitting: Future Achievements & Perspectives." *Surfaces and Interfaces* 24 (2021): 101104. <https://doi.org/10.1016/j.surfin.2021.101104> (Impact factor: 6.137)
- [6] Mugheri, Abdul Qayoom, **Aijaz Ali Otho**, and Arslan Ahmed Mugheri. "Hierarchical fibrous bimetallic electrocatalyst based on ZnO-MoS₂ composite nanostructures as high performance for hydrogen evolution reaction." *Journal of Electroanalytical Chemistry* 883 (2021): 115061. <https://doi.org/10.1016/j.jelechem.2021.115061> (Impact factor: 4.598)
- [7] Mugheri, Abdul Qayoom, **Aijaz Ali Otho**, and Arslan Ahmed Mugheri. "Meritorious spatially on hierarchically Co₃O₄/MoS₂ phase nanocomposite synergistically a high-efficient electrocatalyst for hydrogen evolution reaction performance: Recent advances & future perspectives." *International Journal of Hydrogen Energy* 46, no. 44 (2021): 22707-22718. <https://doi.org/10.1016/j.ijhydene.2021.04.122> (Impact factor: 7.139)
- [8] Mugheri, Abdul Qayoom, Shahid Ali, Ghulam Shabeer Narejo, **Aijaz Ali Otho**, Ramesh Lal, Maqsood Ahmed Abro, Shafqat Hussain Memon, and Furqanullah Abbasi. "Electrospun fibrous active bimetallic electrocatalyst for hydrogen evolution." *International Journal of Hydrogen Energy* 45, no. 41 (2020): 21502-21511. <https://doi.org/10.1016/j.ijhydene.2020.06.005> (Impact factor: 7.139)
- [9] Jokhio, A. H., Memon, R. A., Abro, S. A., & **Otho, A. A.** Growth response of *Cicer arietinum* L. to soil applied sugar cane residue ash. *INT. J. BIOL. BIOTECH.*, 16 (2): 433-441, 2019.
- [10] Abro, Saeed Akhter, **Aijaz Ali Otho**, Farooque A. Bughio, Oan Mohammad Sahito, Abdul Rauf Jamali, and Amanullah Mahar. "Desodification from calcareous saline sodic soil through phytoremediation with *Phragmites australis* (Cav.) Trin. ex Steud. and gypsum." *International journal of phytoremediation* 19, no. 12 (2017): 1142-1149 <https://doi.org/10.1080/15226514.2017.1328395> (Impact factor: 4.003)
- [11] Mujahid Mehdi; Irfan Mehdi; Uroosa Tagar; Azhar Ayaz Pirzada; **Aijaz Ali Otho** "Plant Extracted Natural Fluorescent Protein C-phycocyanin Doped in PVA Nanofibers for Advanced Apparel Application(review)
- [12] Quratulain Shaikh; Huma Shaikh; **Aijaz Ali Otho**; Fakhar N Memon; Safia Sanam Memon; Saeed A. Memon; Saima Parveen Memon; Shakeela Abbas Mahar; Ayaz Memon "comparative phytochemical screening and determination of antioxidant and antimicrobial activities of extracts of catharanthus species" (Under review)

Book Chapters

- [13] Abdul Hameed Kori, Sarfaraz Ahmed Mahesar, Syed Tufail Hussain Sherazi, Zahid Hussain Laghari, **Aijaz Ahmed Otho** "Non-Food Applications of Coriander Seeds and Leaves" Published 2023 Pages 16 eBook ISBN 9781003204626 <https://doi.org/10.1201/9781003204626-17>

Conferences and Workshops

- [1] 1st International Conference & Exhibition Of Chemical Engineering Mehran University Of Engineering And Technology, Jamshoro January 2016
- [2] 11th International Symposium on Analytical and Environmental Chemistry at National Centre of Excellence in Analytical Chemistry University of Sindh Jamshoro, Sindh, Pakistan. 2016.
- [3] 14 National & 5th International Conference Of Botany “Climate Change And Phyto diversity Challenges Opportunities” (2016)
- [4] International Conference And Workshop On Plant Ecology And Dendrochronology In Relation To Global Warming At University Of Karachi, Pakistan (2016)
- [5] The Learning Innovation Division HEC “ Effective Teaching Technique And Modules” (2016)
- [6] Symposium and workshop on “Bio-waste Derived Carbons for waste to bioenergy conversion and water purification” (2017)
- [7] Workshop on “ Science technology and entrepreneurship” (2017)
- [8] 03- day interactive Skill Development workshop on Quality assurance Procedures, Plagiarism and advanced ICT skills for Researchers (2017)
- [9] One day training workshop on Laboratory Safety (2018)
- [10] 03- day International workshop on “Digitization, Geo- Referencing and Documentation of Herbaria and Botanical Gardens in Pakistan” (2018)
- [11] One day workshop on lab safety at NCEAC University of Sindh Jamshoro, Sindh, Pakistan (2019)
- [12] 30 th National & 18 th International Chemistry Conference on Recent Trends in Chemistry- CCUMT at Lahore, Pakistan (2019)
- [13] International Symposium on recent trends in Chemistry (2020)
- [14] 1st European Sample Preparation e-Conference 2021.
- [15] Webinar online International Conference on Research Advancements in Chemistry (ICRA-C 2021) NUST Islamabad, Pakistan (2021)
- [16] DNA FEST 2021 an international event organized by the Community of Biotechnology 2021

References

<p>Dr. Rabia Asma Memon Professor University of Sindh Jamshoro Mobile no: +923338709966 Email: rabia.memon@usindh.edu.pk</p>	<p>Dr. Ayaz Ali Memon Associate Professor National Centre of Excellence in Analytical Chemistry, University of Sindh Jamshoro Mobile no: +923233001741 Email: ayazmemon33@usindh.edu.pk</p>
<p>Dr. Sarfaraz Ahmed Mahesar Associate Professor National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Mobile no: +923233001741 Email: - Sarfaraz.mahesar@usindh.edu.pk</p>	<p>Dr. Azhar Ayaz Ali Pirzado Associate Professor University of Sindh Jamshoro Mobile no: +923341288394 Email: ayaz.pirzada@usindh.edu.pk</p>