

RESUME

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He is a working as Professor/ Director, in U.S.-Pakistan Center for Advanced Studies in Water at Mehran University of Engineering and Technology, Jamshoro and also as **Chief Editor of Mehran University Research Journal of Engineering & Technology**. He did PhD from Tsinghua University, Beijing, China and Post Doctorate from University of Utah, USA. He has more than 25 years teaching and research experience. He is also Chief Editor, Mehran University Research Journal. Dr. Mahar published more than 100 research papers in International Repute Journals and presented more than 50 papers in National and International conferences and symposiums. He has been remained as a Co-director/ HoD of Environmental Engineering Department, in the Institute of Environmental Engineering & Management; Mehran University. Worked as a Project Coordinator/P.I in various research projects funded by various donors, i.e. Pak (HEC) & US(S&T), HEC, DFID, TEARFUND, & UNEP etc. He worked on bio-energy especially converting organic waste into energy. He conducted various Environmental Impact Assessments (EIAs) of rehabilitation of canals, minors and distributaries, which includes Baseline survey, identification of environmental issues and their mitigation measures, formulation of Environmental Management Plan (EMP); Environmental Scoping and Screening Reports (ESSR) of various projects. Worked as a Team Leader,” Third Party Validation/Monitoring of Environmental & Social Management Plan (ESMP) & Resettlement Plan (RP) of 6th Secondary Transmission and Grid (STG) project under HESCO and SEPCO funded by World Bank.

Job Experiences

Position held (March 2017- to date)

Employer

Description of Duties

Director, in U.S.-Pakistan Center for Advanced Studies in Water

U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W) at Mehran University of Engineering and Technology, Jamshoro.

To lead, manage and foster a culture of academic and research excellence in the Center and worked in close collaboration with Center’s faculty and staff as well as with designated UU faculty in design and development of academic/curriculum and research, projects.

Working as a team member for the selection of students for Exchange visit. Organized three conferences on Water & Environment, first conference as a Convener and two as Co-patron. In charge of overall admission process including conduct of test etc.

Planned and organized the graduate seminar series on Water security including identification and invitation of the Resource Persons of each seminar and ensured the presence of students and faculty.

As a Deputy Director coordinated with all aspects of research planning and management, including mobilization of research projects and resources from external resources around 50

Position held (December 2014- to Feb, 2017)	projects. Professor, in Environmental Engineering (Sectional Head), U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W)
Employer	U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W) at Mehran University of Engineering and Technology, Jamshoro.
Description of Duties	Working as a Professor/HOD, Environmental Engineering program of Masters and PhD, Curriculum development, Developing Lecture plan, updating the course contents, establishment of labs.
Position held (2008 - 2014)	Professor/ Co-Director Institute of Environmental Engineering and Management, Jamshoro.
Employer	Mehran University of Engineering and Technology, Jamshoro.
Description of Duties	Teaching, Research and Design as well as to carry out various Environmental studies. Supervising Post graduate and PhD students; development of course works for under and post graduate students.
From	July 2003 to July 2007
Employer	School of Environmental Science & Engineering, Tsinghua University, Beijing, China.
Position held	Research Associate / PhD Candidate
Description of Duties	Research work carried out at laboratory and pilot scale on MSW Landfill leachate migration and its impacts on ground water and surface water quality. Leachate generation and migration phenomenon were studied. Leachate quality analysis was carried out in which heavy metals in leachate water were the main focus. Coal fired power plants' effects on ecology and risk assessment. During this period research papers were got published in international reputed journal.
From	1999 to 2003
Employer	Mehran University
Position held	Assistant Professor: Department of Civil Engineering, Environmental/ Subject Specialist
Description of Duties	Teaching and Research
From	1997-1999
Employer	Mehran University
Position held	Assistant Professor
Description of Duties	Impacts of thermal power effluents' disposal on the water quality of River Indus, Joint Project between Mehran University and Environmental Protection Agency (EPA) Sind sponsored by World Bank.
From	1993-1997
Employer	Mehran University
Position held	Lecturer
Description of Duties	In-charge of Environmental Laboratory, demonstrated and conducted water quality analysis, lecturer of Public Health Engineering subject to undergraduate students

Additional Assignments

Position	Activity/Responsibility	Period
Team leader	Worked as a Team Leader,” <i>Third Party Validation/Monitoring of Environmental & Social Management Plan (ESMP) & Resettlement Plan (RP) of 6th Secondary Transmission and Grid (STG) project under HESCO and SEPCO funded by World bank.</i>	2012-2014
Team leader	<ul style="list-style-type: none"> ○ Environmental Impacts Assessments of Lining of Dadu and Rice Canals Client WAPDA with ACE-BARQAB-NESPAK ○ Environmental Impacts Assessments of Lining of Rohri Canal Client WAPDA with ACE-BARQAB-NESPAK ○ Environmental Impacts Assessments of Lining of Phullely, Pinyari and K.B. Feeder Canals Client WAPDA with ACE-BARQAB-NESPAK. ○ Environmental Impacts Assessments of Construction of flood water diversion channels from Spinal drain to Kalankar and Hathongo lakes complexes Canals Client WAPDA with ACE-BARQAB-NESPAK. 	2010-2012 (Time to time assignments)
Environmental Specialist	<ul style="list-style-type: none"> ○ Worked as a Environmental Specialist “Sind On Farm Water Management (SOFWM) Project for Rehabilitation of Branch canals, minors and distributaries” funded by World Bank 	2009-2010
Chairman Pre-Admission Test Committee	To conduct Pre-Admission Test for Students entering in Mehran University for undergraduate program overall responsible for transparency in conduct of Pre-Admission Test and Assessment.	2008-2015
Editor, Mehran University Research Journals	To process the research paper for review and evaluate the comments of the reviewer and publish.	2012 to date
Convenor, Health and Safety Committee	Developed guidelines for health and safety manual for Mehran University and monitoring the implementation process.	2009 to date

Advisory Experiences

Designation	Description	Duration
Member	Senate & Academic Council MUET, Jamshoro	2008 – to date
Member	Board of Studies (BOS) Department of Environmental Engineering and Management	2009 - to date
Member	Advanced Studies and Research Board (ASRB)	2010 – to date
Member	Consultant Selection Committee Works and Services Department, Govt. of Sind	2008 – 2011
Member	Steering Committee on Urban Development Centre, P&D	2010-2014

Member	Department Govt. of Sind	2015 to date
Convener	Board of Sindh Irrigation and Drainage Authority (SIDA) Health and Safety Committee, at Mehran University of Engineering & Technology, Jamshoro	2009 to 2014

FOREIGN TRAINING COURSES

- Participated in meeting On Solid Waste Management Experts in Asia and Pacific Islands (SWAPI) from 22 to 26 February 2015 organized by Japan Environment and Sanitation Center.
- Global Dissemination Workshop on Converting Waste Agricultural Biomass into Energy Osaka, Japan 16-19 December 2014.
- Sub-regional Dissemination Workshop on Converting Waste Agricultural Biomass into Energy South Asia, 12-14 November 2013, Delhi, India
- Fifth Asia-Pacific Urban Forum held on from 22 – 24 June 2011 at the United Nations Conference Center (UNCC) in Bangkok, Thailand
- Regional Workshop on Waste Agricultural Biomass held on from 2-5 March, 2010 organized by UNEP/GEC, Osaka Japan.
- Training Workshop on Integrated Solid Waste Management held on 4-9 October, 2009 organized by UNEP, IETC Osaka Japan.
- 2-days Training Workshop on Capacity Building in Geospatial Information and Environmental Data held on 13-14 June-2011 at Regent Plaza Hotel Karachi Organized by NIEMS and UNDP, Pakistan.

List of Papers

- 1 A Latif, AM Memon, TA Gadhi, IA Bhurt, N Channa, **RB Mahar**, I Ali(2022). Bi₂O₃ immobilized 3D structured clay filters for solar photocatalytic treatment of wastewater from batch to scale up reactors. *Materials Chemistry and Physics* 276, 125297
- 2 S Ansari, N Ahmed, **RB Mahar**, Z Khatri, M Khatri(2022). Fabrication and characterization of electrospun zein/nylon-6 (ZN6) nanofiber membrane for hexavalent chromium removal. *Environmental Science and Pollution Research* 29 (1), 653-662
- 3 SQ Sahulka, B Bhattarai, AS Bhattacharjee, W Tanner, **RB Mahar**, R Goel(2022). Differences in chlorine and peracetic acid disinfection kinetics of *Enterococcus faecalis* and *Escherichia fergusonii* and their susceptible strains based on gene expressions. *Water Research* 203, 117480
- 4 TA Gadhi, I Ali, **RB Mahar**, HA Maitlo, N Channa(2022). Waste heat and wastewater recovery in textile processing industry: A case study of adopted practices. *Mehran University Research Journal Of Engineering & Technology* 40 (3), 606-616
- 5 RA Hakro, M Mehdi, RF Qureshi, **RB Mahar**, M Khatri, F Ahmed, Z Khatri(2022). Efficient removal of reactive blue-19 dye by co-electrospun nanofibers. *Materials Research Express* 8 (5), 055502
- 6 N Channa, TA Gadhi, **RB Mahar**, A Chiadò, B Bonelli, A Tagliaferro(2021). Combined photocatalytic degradation of pollutants and inactivation of waterborne pathogens using solar light active α/β -Bi₂O₃. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 615, 126214
- 7 KM Safar, **MR Bux**, U Faria, S Pervez(2021). Integrated model of municipal solid waste management for energy recovery in Pakistan. *Energy* 219, 119632
- 8 N Bakhsh, Z Ahmed, **RB Mahar**, Z Khatri (2021). Development and application of electrospun modified polyvinylidene fluoride (PVDF) nanofibers membrane for biofouling control in membrane bioreactor. *Desalination and Water Treatment* 217, 74-82
- 9 ROZ Brohi, MY Khuhawar, **RB Mahar**, MA Ibrahim(2021). Novel bimetallic nano particles for sorption of mercury (II) from drinking water: adsorption experiment and computational studies. *Journal of Water Process Engineering* 39, 101727
- 10 TA Gadhi, A Qureshi, N Channa, **RB Mahar**, A Chiadò, C Novara(2021). Bi₂O₃/nylon multilayered nanocomposite membrane for the photocatalytic inactivation of waterborne pathogens and degradation of mixed organic pollutants. *Environmental Science: Nano* 8 (1), 342-355

- 11 U Imran, **RB Mahar**, A Ullah, K Shaikh(2021).Seasonal variability of heavy metals in Manchar lake of arid southern pakistan and its consequential human health risk.Polish Journal of Environmental Studies 30 (1), 163
- 12 IN Unar, AG Pathan, **RB Mahar**, G Maitlo, MA Uqaili(2021).Kinetic modeling of gasification reactions of CO₂ and H₂O for Thar lignite char at elevated pressures.Chemical Papers 75 (1), 169-190
- 13 J Lawrence, **RB Mahar**, JL Ullman, Z Ahmed(2021).Digestion of linoleic acid using an anaerobic fluidized bed reactor.DESALINATION AND WATER TREATMENT 206, 144-152
- 14 M Muqet, **RB Mahar**, TA Gadhi, NB Halima(2021).Insight into cellulose-based-nanomaterials-A pursuit of environmental remedies.International Journal of Biological Macromolecules 163, 1480-1486
- 15 ZK Nabi Bakhsh, Zubair Ahmed, **Rasool Bux Mahar**(2021).Development and application of electrospun modified polyvinylidene fluoride (PVDF) nanofibers membrane for biofouling control in membrane bioreactor.Desalination and Water Treatment 217, 74-84
- 16 R Jamal, S Mubarak, SQ Sahulka, JA Kori, A Tajammul, J Ahmed, **RB Mahar**, R Goel(2021).Informing water distribution line rehabilitation through quantitative microbial risk assessment. Science of the Total Environment 739, 140021
- 17 AA Noonari, **RB Mahar**, AR Sahito, KM Brohi(2021).Effects of isolated fungal pretreatment on bio-methane production through the co-digestion of rice straw and buffalo dung. Energy 206, 118107
- 18 A Ali, **RB Mahar**, STH Sherazi(2021).Methane augmentation of anaerobic digestion of food waste in the presence of Fe₃O₄ and carbamide capped Fe₃O₄ nanoparticles. Waste and Biomass Valorization 11 (8), 4093-4107
- 19 MHS Wattoo, FH Wattoo, TG Qazi, SA Tirmizi, MI Bhangar, **RB Mahar**(2020).Quality Characterization of Phulali Canal water for irrigation purposes.The Nucleus 41 (1-4), 69-75.
- 20 MW Ijaz, **RB Mahar**, K Ansari, AA Siyal, MN Anjum(2020).Integrated assessment of contemporary hydro-geomorphologic evolution of the Indus River Estuary, Pakistan in context to regulated fluvial regimes.Estuarine, Coastal and Shelf Science 236, 106657
- 21 G Maitlo, **RB Mahar**, KM Brohi(2020).Simulation of Cotton Stalks for Syngas Generation Using CO₂ and Air as Gasifying Agents.Mehran University Research Journal of Engineering and Technology 39 (2), 371-379
- 22 U Imran, M Khan, R Jamal, SQ Sahulka, R Goel, **R Mahar**, J Weidhaas(2020).Probabilistic risk assessment of water distribution system in Hyderabad, Pakistan reveals unacceptable health hazards and areas for rehabilitation.Ecotoxicology and environmental safety 191, 110233
- 23 S Ahmed, IN Unar, HA Khan, G Maitlo, **RB Mahar**, AS Jatoti, AQ Memon(2020).Experimental study and dynamic simulation of melanoidin adsorption from distillery effluent.Environmental Science and Pollution Research 27 (9), 9619-9636
- 24 MS Korai, M Ali, C Lei, **RB Mahar**, D Yue(2020).Comparison of MSW management practices in Pakistan and China.Journal of Material Cycles and Waste Management 22 (2), 443-453
- 25 ROZ Brohi MY Khahawar **RB Mahar**(2020).Graphene oxide functionalized with a Schiff Base for the removal of Pb(II) ions from contaminated water: experimental and modeling approach.Journal of Chemical Technology and Biotechnology
- 26 M Muqet, TA Gadhi, **RB Mahar**, B Bonelli(2020).Advanced nanomaterials for ultrafiltration membranes application.Nanomaterials for the Detection and Removal of Wastewater Pollutants, 145-160
- 27 TA Gadhi, **RB Mahar**, B Bonelli(2020).Actual mineralization versus partial degradation of wastewater contaminants.Nanomaterials for the Detection and Removal of Wastewater Pollutants, 331-350
- 28 J Ahmed, LP Wong, YP Chua, N Channa, **RB Mahar**, A Yasmin(2020).Quantitative microbial risk assessment of drinking water quality to predict the risk of waterborne diseases in primary-school children.International journal of environmental research and public health 17 (8), 2774
- 29 A Ali, **RB Mahar**, EM Abdelsalam, STH Sherazi(2019). Kinetic modeling for bioaugmented anaerobic digestion of the organic fraction of municipal solid waste by using Fe₃O₄ nanoparticles.Waste and biomass valorization 10 (11), 3213-3224
- 30 Y Wada, A Vinca, S Parkinson, BA Willaarts, P Magnuszewski, **RB Mahar**(2019)Co-designing Indus water-energy-land futures, One Earth 1 (2), 185-194

- 31 JA Kori, **RB Mahar**, MR Vistro, H Tariq, IA Khan, R Goel(2019).Metagenomic analysis of drinking water samples collected from treatment plants of Hyderabad City and Mehran University Employees Cooperative Housing Society.Environmental Science and Pollution Research 26 (28), 29052-29064
- 32 M Muqet, UA Qureshi, **RB Mahar**, Z Khatri, F Ahmed, IS Kim (2019). Ionic cross-linking of cellulose nanofibers: an approach to enhance mechanical stability for dynamic adsorption.Environmental Science and Pollution Research 26 (28), 28842-28851
- 32 MW Ijaz, **RB Mahar**, K Ansari, AA Siyal(2019).Optimization of salinity intrusion control through freshwater and tidal inlet modifications for the Indus River Estuary.Estuarine, Coastal and Shelf Science 224, 51-61
- 33 S Panhwar, AR Sahito, GS Solangi, **RB Mahar**, J Lal(2019). Methane production by anaerobic digestion of spent wash in continuous stirred tank reactor.Mehran University Research Journal of Engineering & Technology 38 (3), 791-798
- 34 G Maitlo, IN Unar, **RB Mahar**, KM Brohi.Numerical simulation of lignocellulosic biomass gasification in concentric tube entrained flow gasifier through computational fluid dynamics.Energy Exploration & Exploitation 37 (3), 1073-1097
- 35 M Memon, AM Narejo, FA Memon, **RB Mahar**, H Kakar(2019). Treated residential greywater and its effect on shoot dry matter and nutrient uptake in maize (*Zea mays*). Pakistan Botanical Society
- 36 G Maitlo, **RB Mahar**, ZA Bhatti, IN Unar (2019). A comprehensive literature review of thermochemical conversion of biomass for syngas production and associated challenges. Mehran University Research Journal of Engineering & Technology, 38(2), 495-512.
- 37 A Ali, **RB Mahar**, STH Sheerazi (2019). Renewable electricity generation from food waste through anaerobic digestion in Pakistan: a mini-review. Earth Systems and Environment 3 (1), 95-100.
- 38 AA Noonari, **RB Mahar**, AR Sahito, KM Brohi (2019). Anaerobic co-digestion of canola straw and banana plant wastes with buffalo dung: Effect of Fe₃O₄ nanoparticles on methane yield. Earth Systems and Environment 3 (1), 95-100.
- 39 AA Noonari, **RB Mahar**, AR Sahito, KM Brohi (2019). Optimization of methane production from rice straw and buffalo dung by H₂O₂ and Ca (OH) 2: pretreatments and its kinetics. Renewable Energy 133, 1046-1054.
- 40 KM Safar, **RB Mahar**, UM Aslam, BK Muhammad, MS Ahmed (2019). Analysis of the feasibility of fruit and vegetable wastes for methane yield using different substrate to inoculum ratios at Hyderabad, Sindh, Pakistan. Waste And Biomass Valorization 10 (4), 899-908.
- 41 S Panhwar, SS Hassan, **RB Mahar**, K Carlson, MY Talpur (2019). Highly sensitive and selective electrochemical sensor for detection of escherichia coli by using L-cysteine functionalized iron nanoparticles. Journal of the Electrochemical Society, 166 (4), B227.
- 42 Imran Nazir Unar, Sohail Ahmed Soomro, Ghulamullah Maitlo, Shaheen Aziz . **RB Mahar**..(2019). Numerical study of coal composition effects on the performance of gasification through computational fluid dynamic. International Journal of Chemical Reactor Engineering, 17(7).
- 43 M Ghulamullah, **RB Mahar**, ZA Bhatti, N Imran (2019). A comprehensive literature review of thermochemical conversion of biomass for syngas production and associated challenge. Mehran University Research Journal of Engineering and Technology, 38 (2), 495-512.
- 44 M Muqet, A Khaliq, UA Qureshi, **RB Mahar**, F Ahmed, Z Khatri, IS Kim, KM Brohi (2018). Aqueous hardness removal by anionic functionalized electrospun cellulose nanofibers. Cellulose 25 (10), 5985-5997.
- 45 S Panhwar, SS Hassan, **RB Mahar**, A Canlier, M Arain (2018). Synthesis of l-cysteine capped silver nanoparticles in acidic media at room temperature and detailed characterization. Journal of Inorganic and Organometallic Polymers and Materials 28 (3), 863-870.
- 46 KM Safar, **RB Mahar**, UM Aslam (2018). Waste to energy: power generation potential of putrescible wastes by anaerobic digestion process at Hyderabad, Pakistan. Journal of Material Cycles and Waste Management 20 (2), 1239-1247.
- 47 G Maitlo, **RB Mahar**, IN Unar, KM Brohi (2018). Kinetic study of cotton stalk and rice husk samples under an inert and oxy combustion atmosphere. Mehran University Research Journal of Engineering & Technology 37 (2), 327-336
- 48 KM Safar, **RB Mahar**, UM Aslam, BA Shankar, RK Goel (2018). The feasibility of putrescible components of municipal solid waste for biomethane production at Hyderabad, Pakistan. Waste

- 49 H Malik, UA Qureshi, M Muqet, **RB Mahar**, F Ahmed, Z Khatri (2018). Removal of lead from aqueous solution using polyacrylonitrile/magnetite nanofibers. *Environmental Science and Pollution Research* 25 (4), 3557-3564.
- 50 MW Ijaz, **RB Mahar**, AA Siyal, MN Anjum (2018). Geospatial analysis of creeks evolution in the Indus Delta, Pakistan using multi sensor satellite data. *Estuarine, Coastal and Shelf Science* 200, 324-334
- 51 A Ali **RB Mahar**, EM Abdelsalam, STH Sherazi (2018). Kinetic Modeling for Bioaugmented Anaerobic Digestion of the Organic Fraction of Municipal Solid Waste by Using Fe.
- 52 M Safar (2018). Exploitation of Energy Potential through Utilization of Municipal Solid Waste. *Mehran University of Engineering & Tech., Jamshoro*.
- 53 SJ Burian, M Ward, S Ahmad, DL Stevenson, T Banuri, MA Chaudhry, **RB Mahar**, JD Ullman (2018). Assessment of a Peer Mentoring Program to Build Capacity for Course Development and Delivery. 2018 American Society for Engineering Education.
- 54 M Arain, **RB Mahar**, AR Sahtio (2018). Biohydrogen production from co-digestion of high carbohydrate containing food waste and combined primary and secondary sewage sludge. *Mehran University Research Journal of Engineering & Technology* 37 (1), 139-148.
- 55 MS Korai, **RB Mahar**, MA Uqaili (2018). The seasonal evolution of fruit, vegetable and yard wastes by mono, co and tri-digestion at Hyderabad, Sindh Pakistan. *Waste Management* 71, 461-473.
- 56 M Muqet, H Malik, **RB Mahar**, F Ahmed, Z Khatri, K Carlson (2017). Cationization of cellulose nanofibers for the removal of sulfate ions from aqueous solutions. *Industrial & Engineering Chemistry Research* 56 (47), 14078-14088.
- 57 IA Kandhar, GB Khaskheli, AR Sahito, **RB Mahar** (2017). Assessing the removal of turbidity and coliform transport through canal-bed sediment at lab-scale: Column experiments. *Mehran University Research Journal of Engineering and Technology* 36 (4), 995-1008.
- 58 A Ali, **RB Mahar**, RA Soomro, STH Sherazi (2017). Fe₃O₄ nanoparticles facilitated anaerobic digestion of organic fraction of municipal solid waste for enhancement of methane production. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 39 (16), pp.1815-1822.
- 59 MW Ijaz, **RB Mahar**, GS Solangi, S Panhwar, AK Ansari (2017). Impairment of Water Quality of Phuleli Canal, Sindh Pakistan: A Review. *Mehran University Research Journal of Engineering and Technology* 36 (3), 681-692.
- 60 M Memon, HB Jatoti, AM Narejo, **RB Mahar**, AK Ansari, MI Bhangar (2017). Use of aquatic plants for treatment of greywater. *Mehran University Research Journal of Engineering and Technology* 36 (3), 681-692.
- 61 MW Ijaz, AA Siyal, **RB Mahar**, W Ahmed, MN Anjum (2017). Detection of hydromorphologic characteristics of Indus River Estuary, Pakistan, using satellite and field data. *Arabian Journal for Science and Engineering* 42 (6), 2539-2558.
- 62 **RB Mahar**, K Ansari, MS Ahmed (2017). Treatment of domestic wastewater by sustainable microbial fuel cell having an inexpensive reliable and recycles anodes. *Water & Environment* 59.
- 63 MS Korai, **RB Mahar**, MA Uqaili (2017). The feasibility of municipal solid waste for energy generation and its existing management practices in Pakistan. *Renewable and Sustainable Energy Reviews* 72, 338-353.
- 64 AA Siyal, AG Siyal, **RB Mahar** (2017). Spatial and temporal dynamics of Pai forest vegetation in Pakistan assessed by RS and GIS. *Journal of Forestry Research* 28 (3), 593-603.
- 65 S Panhwar, **RB Mahar**, AA Abro, MW Ijaz, GS Solangi, M Muqet (2017). Health and safety assessment in Lakhra coal mines and its mitigation measures. *Iranian journal of health, safety and environment* 4 (3), 775-780.
- 66 L Wang, YJ Jia, S Kumar, R Li, **RB Mahar**, M Ali, IN Unar, U Sultan, K Memon (2017). Numerical analysis on the influential factors of coal gasification performance in two-stage entrained flow gasifier. *Applied Thermal Engineering* 112, 1601-1611.
- 67 SJ Burian, M Ward, T Banuri, MA Chaudhry, S Ahmad, B Lashari, **RB Mahar**, D Stevenson, JA VanDerslice, K. Ansari, M. Babar (2017). Higher education capacity building in water resources engineering and management to support achieving the sustainable development goal for water in

- 68 S Bukhary, J Weidhaas, K Ansari, **RB Mahar**, C Pomeroy, JA VanDerslice, S Burian, S Ahmed (2017). Using distributed solar for treatment of drinking water in developing countries. World Environmental and Water Resources Congress 2017, 264-276.
- 69 AA Noonari, **RB Mahar**, AR Sahito, KM Brohi (2017). Improving methane production through co-digestion of canola straw and buffalo dung by H₂O₂ pretreatment. Mehran University Research Journal of Engineering & Technology 36 (1), 193-200.
- 70 MS Korai, **RB Mahar**, MA Uqaili (2016). Optimization of waste to energy routes through biochemical and thermochemical treatment options of municipal solid waste in Hyderabad, Pakistan. Energy Conversion and Management 124, 333-343.
- 71 **RB Mahar**, AM Motlagh, AS Bhattacharjee, R Goel (2016). Evaluation of various disinfection processes for isolated multidrug resistant bacteria in wastewater treatment plant. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, 252.
- 72 IA Kandhar, GB Khaskheli, AR Sahito, **RB Mahar** (2016). Effect of canal bank filtration on quality of water long Hyderabad city. Mehran University Research Journal of Engineering & Technology 35 (3), 437-452.
- 73 M Khatri, F Ahmed, AW Jatoi, **RB Mahar**, Z Khatri, IS Kim (2016). Ultrasonic dyeing of cellulose nanofibers. Ultrasonic dyeing of cellulose nanofibers. Ultrasonics sonochemistry 31, 350-354.
- 74 KM Safar, **RB Mahar**, UM Aslam, MS Ahmed, LI Ahmed (2016). Energy recovery from organic fractions of municipal solid waste: A case study of Hyderabad city, Pakistan. Waste Management & Research 34 (4), 327-336.
- 75 AR Sahito **RB Mahar**, F Ahmed (2016). Optimization of organic loading rate and hydraulic retention time for maximum production of methane through anaerobic co-digestion of canola straw and buffalo dung. Journal of Animal & Plant Sciences 26 (2).
- 76 AA Noonari, **RB Mahar**, AR Sahito (2016). Assessment of air pollution and its effects on health of workers of steel Re-Rolling mills in Hyderabad. Mehran University Research Journal of Engineering & Technology 35 (2), 293-302.
- 77 **RB Mahar**, AR Sahito, D Yue, K Khan (2016). Modeling and simulation of landfill gas production from pretreated MSW landfill simulator. Mehran University Research Journal of Engineering & Technology 35 (2), 293-302.
- 78 AAS Memon, AA Pathan, IA Kandhar, **RB Mahar**, A Balouch (2016). Microspora Floccosa; A Potential Biofuel Producer. Frontiers of Environmental Science & Engineering 10 (1), 159-167
- 79 A Ali, L Rundong, F Shah, **RB Mahar**, M Wajidljaz, M Muhammad (2016). Predictive modeling of biogas production from anaerobic digestion of mixed kitchen waste at mesophilic temperature. Pakistan Journal of Analytical & Environmental Chemistry 17 (1), 106.
- 80 MS Korai, **RB Mahar**, MA Uqaili (2016). Estimation of energy potential from organic fractions of municipal solid waste by using empirical models at Hyderabad, Pakistan. Int J Waste Resour 6 (3), 2-4.
- 81 AR Sahito, **RB Mahar**, MUH Rajput (2015). Development of volumetric methane measurement instrument for laboratory scale anaerobic reactors. Mehran University Research Journal of Engineering & Technology 35 (1)
- 82 R MANZOOR-UL-HAQ, AK Ansari, **RB Mahar** (2015). Onsite greywater treatment using pilot scale "GROW" technology. Mehran University Research Journal of Engineering & Technology 34 (3), 309-316.
- 83 AA Pathan, **RB Mahar**, F Alimemon (2015). Effect of flow rate and disc area increment on the efficiency of rotating biological contactor for treating greywater. Mehran University Research Journal of Engineering and Technology 34 (2), 169-175.
- 85 AA Siyal, AG Siyal, **RB Mahar** (2015). Remote sensing and GIS based wheat crop acreage and yield estimation of district Hyderabad, Pakistan. Int J Electr Power Energy Syst 64, 1073-80.
- 86 AR Sahito, **RB Mahar**, FA Chandio (2015). Anaerobic digestion of buffalo dung: Simulation of process kinetics. Mehran University Research Journal of Engineering and Technology 34 (1), 33-39.
- 87 MS Korai, **RB Mahar**, MA Uqaili (2014). Assessment of power generation potential from municipal solid wastes: A case study of Hyderabad city, Sindh, Pakistan. Mehran University Research Journal Of

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- 89 AR Sahito, **RB Mahar** (2014). Enhancing methane production from rice straw co-digested with buffalo dung by optimizing effect of substrate ratio, alkaline doze and particle size. *JAPS: Journal of Animal & Plant Sciences* 24 (4).
- 90 AR Sahito, **RB Mahar**, F Ahmed (2014). Effect of buffalo dung to the water ratio on production of methane through anaerobic digestion. *Mehran University Research Journal of Engineering and Technology* 33, 237-244.
- 91 AR Sahito, **RB Mahar**, KM Brohi (2014). KINETICS OF ANAEROBICALLY CO-DIGESTED CROP RESIDUES AND BUFFALO DUNG. *Sindh University Research Journal-SURJ (Science Series)* 46 (1).
- 92 MS Korai, **RB Mahar** (2014). Characterization and aerobic biological treatment of MSW: a case study of Hyderabad city. *Mehran University Research Journal of Engineering and Technology* 33 (3), 322-329.
- 93 AR Sahito, **RB Mahar**, KM Brohi (2014). Anaerobic co-digestion of canola straw and buffalo dung: optimization of methane production in batch experiments. *Mehran University Research Journal of Engineering & Technology* 33 (1).
- 94 AR Sahito, **RB Mahar**, KM Brohi (2013). Assessment of ex vitro anaerobic digestion kinetics of crop residue through first order exponential models: effect of lag phase period and curve factor. *Mehran University Research J. Engineering and Technology* 32 (4), 657-668
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List of Patents

1. Zeeshan Khatri, Farooq Ahmed, **RB Mahar**. Gravity water filter using nanofiber membranes. PK Patent filed 6/2017 (March 2017)
2. Zeeshan Khatri, Farooq Ahmed, **R.B. Mahar**, Najma Memon, Rafiuzzaman Brohi Zein-Polyvinyl alcohol Nanofiber as a biphasic drug release and method of making/using thereof. US Patent Submitted (July 2015).

DOCTORAL STUDENTS

Total 12 PhDs supervised.

MASTER STUDENTS

More than 100 Masters students supervised.

COMPUTER SKILLS

Primavera, MATLAB, MS Office SPSS, Mini Tab, ANSYS, AUTOCAD, FORTAN, VB (Visual Basic) & C++, WaterCAD

LANGUAGE SKILLS

Languages	Reading	Writing	Speaking
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English	Excellent	Excellent	Excellent
Urdu	Excellent	Excellent	Excellent
Siraiki	Good	Good	Good
Thari			Good

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