Curriculum Vitae

Personal information

First name(s) / Surname(s)	**TANVEER AHMED GADHI, PhD**
Address	H.No. B-5, AZIZABAD HOUSING SCHEME, NEAR HAPPY HOMES, QASIMABAD, HYDERABAD, SINDH.
Mobile	+92 333 2738613, +39 349 3866331
E-mail(s)	tanveer.uspcasw@admin.muet.edu.pk , tanveer.polito@gmail.com.
Nationality	Pakistani
Date of birth	06/01/1986

Work/ Academic Experience

Duration	January 2018- Continue to date
Position held	**Assistant Professor**
Main activities and responsibilities	Academics and Research on Water and Wastewater Treatment and Solid Waste Management. Industrial Liaison and assistance to strengthen Research Portfolio. Pilot Scale Water Treatment Lab Supervision, Operation of Advanced Chromatographic Instruments. Assistance and Supervision to MS/PhD students in the Design and Development of Water/Wastewater Treatment Reactors. Monitoring & Evaluation of Funded Research Projects. HEC Approved Supervisor.
Name and address of employer	**USPCAS-W**, Mehran University of Engineering & Technology, Jamshoro, Pakistan.
Duration	October 2012- October 2017
Role and major Activities	**MS Leading to PhD Scholar @ Politecnico di Torino, Italy** Studied MS Leading to PhD with Dissertations in 'Design of Solar Light-Activated Nanomaterials and Nano-filters for Wastewater Treatment and Energy harvesting through Advanced Oxidation Processes, Electrochemistry and Ultrasonic Treatments for Textile Wet processes, to Conserve Energy and Water.
Name and address of employer	**Higher Education Commission**, Islamabad, Pakistan
Duration	February 2009 - September 2012
Position held	**Environment and Energy Engineer**
Main activities and responsibilities	Environmental Audit and Sustainability. Conservation of Water and Energy Implementation of cleaner production practices within wet textile processes. Audit and Monitoring of reverse osmosis, water softening and wastewater treatment plants. Audit and Monitoring of water and energy recovery and recycling systems.
Name and address of employer	**Yunus Textile Mills**, Karachi, Pakistan

Type of business or sector	Pakistan's largest home textile processing and finishing industry

Education and Training

Duration	November 2014 – November 2017
Title of qualification	**PhD/Doctorate in Chemical Engineering**
University	Department of Chemical Engineering, Politecnico di Torino, Italy
Duration	October 2012 – October 2014
Title of qualification awarded	**Masters in Textile Engineering**
University	Department of Chemical Engineering, Politecnico di Torino, Italy
Duration	January 2010 – June 2012
Title of qualification awarded	**PGD in Environmental Engineering and Management**
University	Department of Environmental Engineering and Management Mehran University of Engineering and Technology, Jamshoro, Pakistan
Duration	October 2019 – December 2020
Title of qualification awarded	**Exchange Researcher**
University	Department of Civil and Environmental Engineering University of Utah, USA
Duration	15- August to 15 - December 2015 & October 2016
Title of qualification awarded	**Scientific Researcher**
Name of organisation	UNIVERSIDAD NATIONAL AUTONOMA DE MEXICO (UNAM), Mexico
Duration	April 2018, August 2018 and October 2018
Title of Training	**O&M of GC-MS, IC-PMS and LC-MS**
Name of organisation	Technological Links in association with SHIMADZU & KAMSTEC International-WATERS
Duration	November 2011
Title of Training	**ISO-50001 EnMS (Environment Management System)**
Name of organisation	SGS, Pakistan (Branched Organization of SGS, Switzerland)

Personal Skills

languages

English	**Understanding**		**Speaking**				**Writing**	
European level (*)	Listening	Reading	Spoken interaction		Spoken production			
C1	Proficient user	Proficient user	B2	Independent user	B1	Independent user	B2	Independent user

(*) Common European Framework of Reference (CEF) level

Italian	**B1- Intermediate**
Social skills	Enthusiast, radical, good communication and research skills obtained during working with experienced and research-oriented scientific groups.
Organizational skills and competencies	Leadership and Management obtained during industrial career in leading textile company with highly experienced directors, managers and dynamic labor force.
Computer skills and competencies	Working experience of MS-Office & Excel, Origin-Pro, MATLAB.
Equipments experties	Advanced Water/Wastewater analysis, GC-MS, LC-MS HPLC, TOC, Spectrophotometer, X-Ray Diffraction, InfraRed spectroscopy, TGA-DTG, SEM, BET-analyzers.

Technical Skills	Environmental Impact Assessment, Integrated Solid Waste Management, Anaerobic Digestion, Environmental Project Monitoring and Evaluation. Water and Energy Conservation, Water and Wastewater Treatment, Wastewater Recovery and Recycling, Textile Processing, Steam and Power Generation. Water Softening, Reverse Osmosis Membranes, Heat Recovery Systems.

Research Projects

Name	**European Project – PHOCSCLEEN** (FP7-PEOPLE-2012-IRSES reference 318977)
Detail	Photocatalytic Materials for Clean Energy and Environment
Position	**Researcher**
Duration	November 2014 – October 2016
Name	**European Project – MAT4TREAT** (FP7-PEOPLE-2012-IRSES-2010-269128)
Detail	Innovative Materials for Water Treatment
Position	**Researcher**
Duration	April 2016 – April 2018
Name	**Wastewater Treatment and Reuse in Al-Rahim Textile Industries (Completed)**
Funding Agency	USPCAS-W, MUET (Funding Amount 2.838 Million PkR)
Position	**Principal Investigator**
Duration	12 Months (June 2018- May 2019)
Name	**Eco-Innovation in Textile Processing (Completed)**
Funding Agency	USPCAS-W, MUET (Funding Amount 3 Million PkR)
Position	**Technical Expert**
Duration	15 Months (July 2018-September 2019)
Name	**Situation Analysis of Solid Waste Management at UEP Pvt. Ltd. (Completed)**
Funding Agency	United Energy Petroleum Limited (Funding Amount 1.1 Million PkR)
Position	**Environmental Expert**
Duration	3 Months (July 2018-September 2018)
Name	Development and Upscaling of Anaerobic Technology in Pakistan: in Partnership with Al- Rahim Textile Mills **(On-going)**
Detail	Technological Development Fund, HEC, Pakistan; Shortlisted for 1st round
Position	**Co-Principal Investigator**
Amount and Duration	15 Million (January 2020-December 2021)
Name	Water Quality Assessment in UC31 of Karachi in collaboration with MDC.
Detail	UNICEF, Pakistan **(Completed)**
Position	**Muet Team Member**
Amount and Duration	7 Million (July 2019-June 2021)
Name	FixGrey Fixures for Onsite Water Reuse
Detail	IEC-RINU Startup Grant: Joint-collaboration of MUET and Sindh Government
Position	**Project Supervisor**
Amount and Duration	0.6 Million (1 year)

Awards and Memberships

PhD/Doctorate with Distinction.
Best PhD Researcher, Awarded by Politecnico di Torino, Italy.
MS Leading to PhD Scholarship for Italy, Awarded by HEC, Pakistan.
Best Employee of the Quarter, Awarded by Yunus Textile Mills, Karachi.
Member of **Carbon Group, Politecnico di Torino, Italy**
Member of **Surface Chemistry of Materials, Politecnico di Torino, Italy**
Registered Engineer of **Pakistan Engineering Council**.

Publications and Dissertations

- Tanveer. A. Gadhi, Rasool Bux Mahar, Barbara Bonelli- Actual mineralization versus partial degradation of wastewater contaminants: Nanomaterials for the Detection and Removal of Wastewater Pollutants 2020, Pages 331-350- *https://doi.org/10.1016/B978-0-12-818489-9.00012-8*
- Muhammad Muqeet, Tanveer. A. Gadhi, Rasool Bux Mahar, Barbara Bonelli - Advanced nanomaterials for ultrafiltration membranes application: Nanomaterials for the Detection and Removal of Wastewater Pollutants 2020, Pages 145-160 - *https://doi.org/10.1016/B978-0-12-818489-9.00006-2*
- Photocatalytic Inactivation of E. coli and S. aureus using Solar Light Responsive α/β-Bi_2O_3 : Submitted in Environmental Research Journal-Under Review (I.F 5.71)
- Bi2O3/Nylon nanocomposite membrane for the photocatalytic inactivation of waterborne pathogen and degradation of mixed organic dyes : Submitted in Chemical Engineering Journal- Under Review (I.F 10.54)
- Insight into Cellulose-based-nanomaterials-A pursuit of environmental remedies Accepted: International Journal of Biological Macromolecules-Under Revision (IF. 5.1)
- Photocatalytic Inactivation of emerging Antibiotic Resistence Microbes using Fe-TiO_2; In progress
- Integration of Micro-Bubbles and Heterogeneous Photocatalysis for the degradation of Emerging Organic compounds using Fe-TiO_2 Nanomaterials; In progress
- Waste Heat and Wastewater Recovery in Textile Processing Industry: A Case Study of Adopted Practices: Submitted: Mehran University of Engineering & Technology Journal.
- Agileo Hernández-Gordillo, Monserrat Bizarro, Tanveer A. Gadhi, Ana Martínez, Alberto Tagliaferro, Sandra E. Rodil: GOOD PRACTICES FOR REPORTING PHOTOCATALYTIC EVALUATION OF VISIBLE-LIGHT ACTIVE SEMICONDUCTORS: Bi2O3 CASE STUDY, **Catalysis Science & Technology** (2019); DOI: 10.1039/C9CY00038K (**I.F 5.36**).
- Chiara Gioncoa, Simelys Hernández, Micaela Castellino, Tanveer A. Gadhi, José Alejandro Muñoz-Tabares, Alberto Tagliaferro, Nunzio Russo , Maria Cristina Paganini Synthesis and characterization of Ce and Er doped ZrO_2 nanoparticles as solar light driven photocatalysts; **Journal of Alloys and Compounds**; Journal of Alloys and Compounds; Volume 775, 15 February 2019, Pages 896-904 (**I.F 3.779**)
- Roberto Nasi, Serena Esposito, Francesca S. Freyria, Marco Armandi, Tanveer A. Gadhi, Simelys Hernande, Paola Rivolo, Nicoletta Ditaranto, Barbara Bonelli 1,5, 'Application of Reverse Micelle Sol–Gel Synthesis for Bulk Doping and Heteroatoms Surface Enrichment in Mo-Doped TiO2 Nanoparticles'; **Materials**, March 2019, (**I.F 2.728**)
- Tanveer A. Gadhi, Simelys Hernández, Micaela Castellino, Thomas Husak, Gabriele Barrera , Paolo Allia, Alberto Tagliaferro, 'Single BiFeO3 and BiFeO3/Fe2O3/Bi2Fe4O9 ferromagnetic heterostructures and their solar light driven photocatalysis for water oxidation and dye pollutants degradation' Journal of Industrial Engineering and Chemistry; Volume 63, 25 July 2018, Pages 437-448 (**I.F 4.669**).
- Tanveer A. Gadhi, Simelys Hernández, Micaela Castellino, Pravin Jagdale, Thomas Husak, Agileo Hernández-Gordillo, Alberto Tagliaferro and Nunzio Russo, 'Insights on the role of β-Bi2O3/Bi5O7NO3 heterostructures synthesized by a scalable solid-state method for the sunlight-driven photocatalytic degradation of dyes'; Volumes 321–322, 1 February 2019, Pages 135-145 (**I.F 4.67**).
- Tanveer A. Gadhi, A. Hernández-Gordillo, M. Bizarro, P. Jagdale, A. Tagliaferro, S.E. Rodil, 'Efficient α/β-Bi2O3 composite for the sequential photodegradation of two-dyes mixture', Journal of Ceramics International, 42 (2016) 13065-13073 (**I.F 3.05**).
- Tanveer A. Gadhi, L.S. Gómez-Velázquez, M. Bizarro, A. Hernández-Gordillo, A. Tagliaferro, S.E. Rodil, 'Evaluation of the photodiscoloration efficiency of β-Bi2O3 films deposited on different substrates by pneumatic spray pyrolysis', Journal of Thin Solid Films, 638 (2017) 119-126 (**I.F 1.9**).

- Agileo Hernández-Gordillo, Monserrat Bizarro, Tanveer A. Gadhi, Ana Martínez, Alberto Tagliaferro, Sandra E. Rodil: GOOD PRACTICES FOR REPORTING PHOTOCATALYTIC EVALUATION OF VISIBLE-LIGHT ACTIVE SEMICONDUCTORS: Bi2O3 CASE STUDY, Journal Catalysis Science & Technology (2019); DOI: 10.1039/C9CY00038K (**I.F 5.36**).
- Research Article (**Under progress**): Designing a Bio-Chemical Combined Process Based Effluent Treatment Plant for a Sox Dyeing Industry in North Karachi.
- Research Article (**Under progress**): Overview of waste heat and wastewater recovery in in textile processing industry: a case study of adopted practices for energy and water conservation
- Research Article (**Under progress**): Bi_2O_3 embedded nanofiber membrane for bacterial inhibition and degradation of organic pollutants.
- Book Chapter (**Under submission**) Actual mineralization versus partial degradation of wastewater contaminants; book entitled **Nanomaterials for the Detection and Removal of Wastewater Pollutants.**
- Book Chapter (**Under submission**) ADVANCED NANOMATERIALS FOR ULTRAFILTRATION MEMBRANES APPLICATION book entitled **Nanomaterials for the Detection and Removal of Wastewater Pollutants.**
- Proceeding Conference Paper: 'Surface chemical characterization of Mo doped TiO2 nanoparticles for photocatalytic dye degradation'; ISA 2018 Incontro di Spettroscopia Analitica, June 2018, Italy.
- Invited Speaker 'Nano/Macro Materials for Environmental Applications'; ISPAD International conference 2019, organized by National Center for Physics
- Session Co-Chair '2nd Young Researcher National Conference', organized by USPCAS-W, August 2018.
- Oral presentation at 253rd ACS International Meeting-American Chemical Society, San Francisco, California, USA; 02-04-2017 to 06-04-2017.
- Poster presentation and attendance at International Winter School MOLECULES@SURFACES, Bardonecchia, Italy; 31-01 to 5-02-2016.
- Poster presentation at BIT's 7th Annual Global Congress of Catalysis-2016 (GCC-2016), Seoul, Korea (South); 28-06-2016.
- Proceeding paper: "Water and Energy Conservation in Textile Continuous Bleaching Machines", 2nd International Conference on Energy, Environment and Sustainable Development, February 2012, MUET, Jamshoro, Pakistan.
- Proceeding paper: "Potential of Waste Heat Recovery in Textile Wet Processing", 2nd International Conference on Energy, Environment and Sustainable Development, February 2012, MUET, Jamshoro, Pakistan

References

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