
Prof. Dr. Ali Dad Chandio

(HEC Approved PhD Supervisor)

(Materials & Metallurgical Consultant, Failure Analyst, Expert

Materials/Metals Sorting ; export & imports)

(Expert Iron & Steel Feasibility Studies)

Department of Metallurgical Engineering

NED University of Engineering & Technology, Karachi, Pakistan

alidad_24@hotmail.com



Education

- PhD in Materials (The University of Manchester, UK, 2015)
- ME in Materials (NED UET, June 2009)
- BE Metallurgy & Materials (Mehran UET, April 2006)

Research Interests

Working with various research groups locally and internationally on wide variety of subjects which include; Engineering Materials, Characterisation Techniques, Corrosion Science and Engineering, High Temperature Materials and Superalloys, Surface Engineering, Biomaterials, Nanomaterials and Polymer/composites and ceramics.

Selected Publications

1. Azmat A, Tufail M, **Chandio AD**, Synthesis and Characterization of Ti-Sn Alloy for Orthopedic Application. *Materials*. 2021; 14(24):7660. <https://doi.org/10.3390/ma14247660>
2. I. A. Channa, A. A. Shah, M. Rizwan, M. A. Makhdoom, **A. D. Chandio**, M. A. Shar, et al. Process Parameter Optimization of a Polymer Derived Ceramic Coatings for Producing Ultra-High Gas Barrier, *Materials* 2021 Vol. 14 Issue 22 Pages 7000.
3. **Ali Dad Chandio**, Asif Ahmed Shaikh and Haseeb Ahmed, Isothermal Oxidation Studies of β NiAl Coatings for Aeroengine Applications, *High Temperature Materials*, (accepted manuscript), 2022.
4. **Ali Dad Chandio**, S. Bilal Hasan Rizvi, Asif Ahmed Shaikh, S. M. Shabbir Madad, Haseeb Ahmed, Zulfiqar Ali and M. Aftab Qureshi, Root Cause Analysis of the Defects in Grey Iron Castings, *Journal of Engineering Science and Technology (JESTEC)*, Volume 17, Issue 5 (October 2022)
5. **Ali Dad Chandio**[†], Nafisul Haque, and Asif Ahmed Shaikh, Interdiffusion Studies of β NiAl Bond Coats: Understanding the Zr, Pt, and Al Migration Trends and Their Beneficial Effects, *Korean Journal of Advanced Materials*, Vol 31, No. 8 (2021)
6. Muhammad Samiuddin, Li Jinglong, Ali Dad Chandio, Muammad Muzamil, Sumair Uddin Siddiqui and Xiong Jiangtao Diffusion welding of CoCrNi Medium Entropy Alloy (MEA) and SUS 304 stainless steel at different bonding temperatures, *Welding in the World*, July 2021 (accepted manuscript).
7. Iftikhar Ahmed Channa, **Ali Dad Chandio**, Muhammad Rizwan, Aqeel Ahmed Shah, Jahanzeb Bhatti, Abdul karim Shah, Fayaz Hussain, Muhammad Ali Shar and Abdul Aziz AlHaza, Solution Processed PVB/Mica Flake Coatings for the Encapsulation of Organic Solar Cells, *Materials* May 2021.
8. **Ali Dad Chandio**, Iftikhar Ahmed Channa, Muhammad Sufyaqn Javed, Muhammad Saleem, Sajid Hussain Siyal, Polynivyal Alcohol and Nanoclay based solution processed packaging coatings, *Coatings* July 2021
9. Aqsa Khan ^A, Ghazna Hassan Khan ^A, Eraj Humayun Mirza^{*}, **Alidad Chandio** ^B, Maliha Mohsin ^A, Mahnoor Hassan ^A, Manal Naushad ^A And Ali Raza Jafri , Development and Characterization of Acrylic Based Bone Cements, *Journal of Biomaterials and Tissue Engineering* (accepted manuscript).
10. Warda Rehman, Summyia Masood, Samreen Begum, **Ali Dad Chandio**, Sameera Razi Khan, Lubna Gulnar, Rozina Khattak, Muhammad Sufaid Khan, Viscometric and FTIR studies of chloroquine phosphate, acefylline piperazine and gentamicin sulfate in aqueous-polyethylene glycol and aqueous-polyvinyl pyrrolidone at different temperatures, *Arabian Journal of Chemistry*, Volume 14, Issue 8, 2021,
11. Iftikhar Ahmed Channa, **Ali dad Chandio**, Muhammad Rizwan, Aqeel Ahmed Shah, Jahanzeb Bhatti, Abdul Karim Shah, Abdulalaziz Al Hazaa, Muhammad Ali Shar, Fayaz Hussain, Solution coated PVB/mica flake coatings for the encapsulation of organic solar cells, *Materials*, 2021.
12. Shafaq Asrar, Muhammad Tufail and **Chandio AD**, Facile coating of HAP on Ti6Al4V for Osseointegration", *Engineering, Technology & Applied Science Research* (accepted manuscript), 2021.
13. Shafaq Asrar, **Chandio AD** and Muhammad Tufail "Design and Development Of Titanium Based Alloy for Medical Applications ", *Mehran University Research Journal* (accepted manuscript), 2021.
14. **A. D. Chandio**, M. N. Alghamdi ^{*}, S. H. Abro, H. Moria^{*}, Measurement of mechanical properties of nickel thin film over steel substrate through simulation of Nano Indentation Technique, *Sindh Univ. Res. Jour. (Sci. Ser.) Vol. 53 (01) 99-104 (2021)*
15. **Chandio, A. D., et al.** (2021). "Variation in Mechanical Properties of SAE 1006 Interstitial Free (IF) Steel Sheets During Cold Rolling.", *NUST Journal* 13(2): 74-80.
16. Shahid Hussain Abro, **Ali Dad Chandio**, Asif Ahmed Shaikh, , Mohammad N. Alghamdi, **Alidad Chandio** , Norbaizura Nordin; Hamza Suharwardi Effect of Aluminum Addition with Nitrogen on K-Carbide Formation in Carbon-Mn Steel , *Materials Science*, Vol.28 No.1, 2022.
17. **Ali Dad Chandio**, Shahid Hussain Abro, Asif Ahmed Shaikh, Haseeb Ahmed, Baber Farooqi; Faraz Mahmood, Yousra KHAN, Areeba Sohail, Effect of Concrete Admixtures on Structural Properties and their Influence on Corrosion Resistance of Steel Reinforced Bars, *Materials Science*, Vol.27 No.3, 2021.
18. **Ali Dad Chandio**, Asif Ahmed Shaikh, Waqas Salman and Haseeb Ahmed, Processing, Characterisation and Oxidation Resistance of β NiAl Bond Coat: Al and Zr Effects, *Journal of Mining and Metallurgy, Section B: Metallurgy*, 2021
19. Muniba, Muhammad Khalid, **Ali Dad Chandio**, Muhammad Saeed Akhtar, Junaid Kareem Khan, Ghulam Mustafa, Naimat Ullah Channa, Zaheer Abbas Gilani, And Hm Noor Ul Huda Khan Asghar, Aluminum Substitution in Ni-Co

Based Spinel Ferrite Nanoparticles by Sol–Gel Auto-Combustion Method, Journal of Electronic Materials, <https://doi.org/10.1007/s11664-021-08819-6>, 2021.

20. Syeda Mahrukh Kamal Naqvi¹, Zara Khan¹, Eraj Humayun Mirza^{1, *}, **Alidad Chandio**, Farina Manzoor¹, Rida Niaz¹, Aftab Ahmed Khan³, and Abdulaziz Abdullah AlKhureif⁴, Fabrication and characterization of polyvinyl alcohol/chitosan/moringa-extract hydrogel patch for wound-healing applications, Materials Express, 2021.
21. Muhammad Khalid; **Ali Dad Chandio**; Saeed Akhtar; Junaid Kareem Khan; Ghulam Mustafa; Muniba Khan; Zaheer Abbas Gilani, Ni-Co Based Spinel Ferrite nanoparticle by Sol-gel auto-combustion method, journal of electronic materials (**accepted manuscript**).
22. Muhammad Ali bhatti,^a Aneela Tahira^d, **Ali Dad Chandio**^c, Khalida Faryal Almani^a, Adeel Liaquat Bhatti^e, Baradi Waryani^g, Ayman Nafady^f, Zafar Hussain Ibupoto^b, Enzymes and phytochemicals from neem extract robustly tuned the photocatalytic activity of ZnO for the degradation of malachite green (MG) in aqueous media, *Res Chem Intermed* (2021), <https://doi.org/10.1007/s11164-020-04391-6>
23. **A.D. Chandio**, Residual Stress Study of Nickel Aluminide (βNiAl) Coatings Deposited by *In Situ* Chemical Vapour Deposition Method, Key Engineering Materials Vol. 875, February 2021.
24. Naimatullah Channa; Muhammad Khalid; **Ali Dad Chandio**; Saeed Akhtar; Junaid Kareem Khan; Ghulam Mustafa; Muniba Khan; Zaheer Abbas Gilani, Structural, Dielectric, Impedance and Electric Modulus properties of Cu²⁺-Substituted CuMn^{1-x}Fe₂O₄ Spinel Ferrites Nanoparticles, Journal of Materials Science: Materials in Electronics, 2020-21.
25. Junaid Kareem Khan, Muhammad Khalid, **Ali Dad Chandio** Kiran Shahzadi, Zaheer Uddin, Ghulam Mustafa, Muhammad Saeed Akhtar, Naimat Ullah Channa and Zaheer Abbas Gilani, Properties of Al³⁺-substituted nickel ferrite (NiAl_xFe_{2-x}O₄) nanoparticles synthesised using wet sol-gel auto-combustion, Journal of Sol-Gel Science and Technology, November 2020, <https://doi.org/10.1007/s10971-020-05426-5>
26. Eraj H. Mirza, **Ali Dad Chandio**, Fabrication and characterization of pva/chitosan/moringa extract hydrogel patch for wound healing application, Materials Express, 2020
27. Aqeel Ahmed Shah, **Ali Dad Chandio**, Asif Ahmed Sheikh, Boron Doped ZnO nanostructures for photo degradation of methylene blue, methyl orange and rhodamine B, Journal of Nanoscience and Nanotechnology – Special Issue: “Advanced Nanomaterials and Devices: environmental and healthcare applications”, December 2020.
28. **Ali Dad Chandio**, Muhammad Hamza Saleem, Hasan Raza Khan, Iqra Naeem Hyder, Maryam Ali, Modified zinc oxide nanoparticles for corrosion resistance applications Journal of the Chemical Society of Pakistan, Volume 42, No. 05, October 2020.
29. Muhammad Ali Bhatti, Khalida Faryal Almani, **Ali Dad Chandio**, Aneela Tahira, Aqeel Ahmed Shah, Adeel Liaquat Bhatti, Abdul Qayoom Mugheri, Magnus Willander^c, Omer Nour^c, Baradi Waryanif, Zafar Hussain Ibupoto^d Low Temperature aqueous chemical growth method for the doping of W into ZnO nanostructures and their photocatalytic role for the degradation of methylene blue, Journal of Electronic Materials, 2020.
30. Ghulam Mustafa, Muhammad Khalid, **Ali Dad Chandio**, Kiran Shahzadi, Zaheer Uddin, Junaid Kareem Khan, Naimat Ullah Channa, Zaheer Abbas Gilani, H. M. Noor ul Huda Khan Asghar, Dielectric, impedance, and modulus spectroscopic studies of lanthanum-doped nickel spinel ferrites NiLa_xFe_{2-x}O₄ nanoparticles, Journal of Sol-Gel Science and Technology, August, 2020.
31. **Ali Dad Chandio**, Syed Bilal Hasan Rizvi, Shahid Hussain Abro, M. Shabbir Madad^{3,c}, M. Aftab Qureshi^{4,d}, and Zulfiqar Ali^{5,e}, Effect of Heat Treatment on Microstructure and Mechanical Properties of Medium Carbon Low-Alloy Steel, Sindh University Research Journal, (accepted manuscript 2020)
32. Shahid Hussain Abro, Muhammad Ali Siddiqui **Alidad Chandio**, Humair Ahmed Siddiqui, Impact of Nano sized Aluminum Nitride Second phase Particles on Gamma and Alpha Phase Transformation in Low Carbon added Manganese Steel, Pak. J. Engg. Appl. Sci. Vol. 27 July, 2020 (p. 1–8).
33. Aqeel Ahmed Shah, Muhammad Ali Bhatti, **Ali Dad Chandio**, Khalida Faryal Almani, Adeel Liaquat Bhatti, Abdul Qayoom Mugheri, Magnus Willander^c, Omer Nour^c, Baradi Waryanif, Aneela Tahira^c, Zafar Hussain Ibupoto^d, Tin as an effective doping agent into ZnO for the improved photodegradation of Rhodamine B, Journal of nano science and nano technology" American Scientific Publishers, 2020.
34. **Ali Dad Chandio**, S.H. Abro, A. Rasheed, K. Zehra, M.B Ansari, W. Salman, Processing Characterization and Application of Graphene Sindh University Research Journal, Volume 52, No. 02, Sept 2020.
35. Naimatullah Channa; Muhammad Khalid; **Ali Dad Chandio**; Ghulam Mustafa; Saeed Akhtar; Junaid Kareem Khan; Jamshed Ahmad; Kashif Ali Kalhor, Nickel-substituted manganese spinel ferrite nanoparticles for high-frequency applications Journal of Materials Science: Materials in Electronics, January 2020, Volume 31, Issue 2, pp 1661–1671
36. Kiran Shahzadi, **Ali Dad Chandio**, Ghulam Mustafa, Muhammad Khalid, Junaid Kareem Khan, Muhammad Saeed Akhtar, Zaheer Abbas Gilani & H. M. Noor ul Huda Khan Asgar, Impact of aluminum substitution on the structural and dielectric properties of Ni–Cu spinel ferrite nanoparticles synthesized via sol–gel route, Optical and Quantum Electronics **52**, 190 (2020)
37. Abdul Sattar Chang, Nusrat Naeem Memon, Sidra Amin, Fouzia Chang, Umair Aftab, Muhammad Ishaq Abro, **Ali dad Chandio**, Aqeel Ahmed Shah, Mazhar Hussain Ibupoto, Dr. Muhammad Akram Ansari and Zafar Hussain Ibupoto, Electroanalysis, 05 April 2019.
38. Zafar Hussain Ibupoto Muhammad Ali Bhatti, Aqeel Ahmed Shah, Khalida Faryal Almani, Aneela Tahira, Seyed Ebrahim Chalanger, **Ali dad Chandio**, Omer Nur, Magnus, Willander, Efficient photo catalysts based on silver doped ZnO nanorods for the photo degradation of methyl orange, Ceramics International, Volume 45, Issue 11, 2019
39. Shahid Hussain Abro, **A.D. Chandio** Effect of Al, Ni, Mo, Ti, Nb and temperature on grain size number in low carbon high alloyed steel, Sindh University Research Journal Vol. 51 (01), 2019.
40. Shahid Hussain Abro, **A.D. Chandio**, **Abdul Aziz S. Alaboodi and Iftikhar Ahmed Channa**, On the effect of global warming and role of automotive industry, PCSIR Journal, 2019 62A(3) 197 – 201.
41. **Ali Dad Chandio**, Muhammad Basit Ansari, Shahid Hussain, Muhammad Ali Siddiqui, Silicon Carbide Effect as Reinforcement on Aluminium Metal Matrix Composite J. Chem. Soc. Pak, Vol 41, issue 4, august 2019.
42. Madani Shifa, Fawad **A.D. Chandio**, Mechanical and electrical properties of hybrid honeycomb sandwich structure for spacecraft structural applications" in the Journal of Sandwich Structure and Materials, Sage Publication

43. Mukesh Kumar, Muhammad Moazam Baloch, Muhammad Ishaque Abro, Sikandard Ali Memon and **Ali Dad Chandio**, "Effect of Artificial Aging Temperature on Mechanical Properties of 6061 Aluminum Alloy", Mehran University Research Journal of Engineering & Technology, Vol 38, issue 1, pp 31 – 36, January 2019.
44. Abdul Rauf Jamali, **Ali Dad Chandio**, Waseem Khan, Zubia Anwer and Muhammad Hayat Jokhio, "Effect of Cryogenic Heat Treatment on Mechanical Properties of AISI 4340 Steel" Mehran University Research Journal of Engineering & Technology, 2018
45. Muhammad Khalid, J. Kareem, **A. D. Chandio**, H. M. N. Ul Huda K. Asghar, Z. A. Gilani, S. Riaz and S. Naseem "A Simulation Model Approach To Analysis of High Breakdown Voltage in Normall-Off 4H-SiC Vertical Junction Field Effect Transistor" Journal of Ovonic Research, Vol. 14, No. 6, November – December 2018, p. 459 - 465 2018.
46. Shahid Hussain Abro, **A.D. Chandio** Influence of austenite phase transformation on existing microstructure of low C-Mn steel, Engineering, Technology & Applied Science Research, Vol 8, issue 6, pp 3525 – 3529, December 2018
47. Murtuza Mehdi, **Alidad Chandio**, Maaz Akhtar, Zaibullah Khan, Ahsan Zaman, Adeel Muhammad, (2019) "Silver nano platelet films on soft micro grating surface", Microelectronics International, Vol. 36 Issue: 1, pp.1-7, <https://doi.org/10.1108/MI-07-2018-0044>
48. M. A. Khan Z. A. Gilan M. S. Shifa, **A. D. Chandio**, M. N. Usmani, H. M. N. Ul Huda K. Asghar, S. Aslam, M. Khalid, A. Perveen, J. Ur Rehman, M. Mustaq EE Thermogravimetric Analysis, Optical and Dielectric Properties of Newly Developed LiNi_{0.5}PrxFe_{2-x} Nanocrystalline Ferrites, Digest Journal of Nanomaterials and Biostructures, Vol 13, issue 3, pp. 809 – 816, 2018.
49. MS Hanif, **A.D. Chandio** High-Temperature Effectiveness of Ginger Extract as Green Inhibitor, for Corrosion in Mild Steel, NUST Journal of Engineering Sciences (NJES) (**accepted manuscript**)
50. Shahid Hussain Abro, **A.D. Chandio** and Umair Aftab, "Effect of Heating Rate on Microstructural Developments in Cold Heading Quality Steel Used for Automotive Applications" Mehran University Research Journal of Engineering & Technology, Vol. 37, issue 3, p 461-466, July 2018
51. Kashif Abro, **Ali Dad Chandio**, Ilyas Khan and Irfan Abro, Dual Thermal Analysis of Magneto hydrodynamic Flow of Nanofluids Via Modern Approaches of Caputo-Fabrizio and Atanagana-Baleanu Fractional Derivatives Embedded in Porous Medium
Journal of Thermal Analysis and Calorimetry
52. Muhammad Yasir Khan, **Ali Dad Chandio**, Muhammad Sohail, Muhammad Arsalan, Muhammad Wasim Akhtar, SYED Zeeshan Abbas and ZEESHAN Akhtar, Low Temperature Synthesis of Anatase TiO₂ Nanoparticles and its Application in Nanocrystalline Thin Films, Journal of Key Engineering Materials, Trans Tech Publications, Switzerland Vol. 778, pp 86-90, 2018.
53. **Ali Dad Chandio**, Nabeel A. Khan, Rameez Jawaid and S. Naqi Mohsin "Failure Study of Two Dissimilar Steels Joined by Spot Welding Technique" Journal of Key Engineering Materials, Trans Tech Publications, Switzerland Vol. 778, pp 262-267, 2018.
54. Muhammad Yasir Khan, **Ali Dad Chandio**, Muhammad Sohail, SYED Zeeshan Abbas, RAO Shakeel Ahmed, SHAHID Bhutto and SYED Junaid Mehmood "Removal of Heavy Metals (Lead, Cadmium and Iron) from Low-Grade Nanoscale Zinc Oxide using Ammonium Carbonate Solution as a Leaching Agent" Journal of Key Engineering Materials, Trans Tech Publications, Switzerland Vol. 778, pp 132-136, 2018
55. Umair Aftab, Muhammad Ishaque Abro, **Ali Dad Chandio**, Waseem Akhtar and Shafique Ahmed "Effect of Nano-ceria on Physiognomies of Aluminum-5% Zinc Sacrificial Anode" Mehran University Research Journal of Engineering & Technology, Vol 37, issue 2, April 2018.
56. M. A. Kalhor, Z. H. Ibupoto, **A. D. Chandio**, K. A. Kalhor, Q.U.A Baloch, Effect of bi-solvents on the Morphology of CuO Nanostructures Using Soft Template, Research Journal-Science Series, Vol 49, issue (4), 2017.
57. **A.D. Chandio**, M.A. Kalhor, S.T. Iqbal and K.A. Kalhor, Analysis of the β NiAl Coating Conditions using an In-situ Chemical Vapour Deposition Technique, Sindh University Research Journal-Science Series, Vol 49, issue (2), 2017.
58. K.A. Kalhor, M. Khalid, **A.D. Chandio**, M.A. Kalhor and N. Channa, Impedance Spectroscopy of Copper Substituted Nickel Ferrite Nanoparticles, Sindh University Research Journal-Science Series, Vol 49, issue (3) September 2017
59. Subhan Ali Jogi, Moazam Baloch, **Ali Dad Chandio**, Ifthikhar Ahmed Memon, and Ghulam Sarwar Chandio, "Evaluation of Impact Strength of Epoxy Based Hybrid Composites Reinforced with EGlass/ Kevlar 49" Mehran University Research Journal of Engineering & Technology, Vol 36, issue 4, 2017.
60. **Ali Dad Chandio** and Shahid Hussain Abro "Effect of Temperature and Time on Nickel Aluminide Deposition" Mehran University Research Journal of Engineering & Technology, Vol 37, issue 4, pp 491 – 496, 2018
61. Abdul Rauf Jamali, **Ali Dad Chandio**, Waseem Khan, Zubia Anwer and Imtiaz Ali Soomro, Plasmonic Effect of Gold Nanoparticles Surrounded by Multidielectric Matrix, Mehran University Research Journal of Engineering & Technology, Vol 36, issue 3, 2017.
62. **Chandio, A. D.** and P. Xiao (2017). Study of Effect of Hafnium Addition on Oxidation Resistance of β NiAl Coatings Prepared by an In-Situ Chemical Vapour Deposition Method. Developments in Strategic Ceramic Materials II, John Wiley & Sons, Inc.: 247-259.
63. **Chandio A.D.** and Xiao P., Effect of Pack Aluminising Conditions on β NiAl Coatings, International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering Vol:10, No:6, 2016
64. **Chandio A.D.**, Zhao X., Chen Y. Bai M. and Xiao P., A Study of a β NiAl Bondcoat Deposited Onto CMSX-4 Superalloy for Thermal Barrier Applications, in Developments in Strategic Ceramic Materials. 2015, John Wiley & Sons, Inc. p. 203-218.
65. Mingwen Bai, Eleni Sarakinou, Ying Chen, **Ali Daad Chandio**, Xiaofeng Zhao, Michael Preuss, Ping Xiao, Microtexture Analysis of the Alumina Scale in Thermal Barrier Coatings. Journal of the American Ceramic Society, 2015. 98(12): p. 3639-3642.
66. Chen, Y., Zhao, X., Bai, M., **Chandio, A.**, Wu, R., Xiao, P. "Effect of platinum addition on oxidation behaviour of γ/γ' nickel aluminide", Acta Materialia, 2015. 86(0): p. 319-330.
67. Aqeel Ahmed Shah, Zhongyi Guo, **Ali Dad Chandio**, Yanjun Xiao, Sangwon Jee, Syed Abdul Moiz, Qurban A. Shah and Jung-Ho Lee, Fabrication of Si-Ge Nanowires, NUST Journal of Engineering Sciences (NJES) 12/2010; 3(1):35.

Research Grants

S#	Project Title	Date	Status	Amount (Rs. Million)
1	Bioactive and Antibacterial Microcar	November 17, 2021	In progress	7.31
	Processing, Characterization and Surface Modifications of Dental Implants for Biomedical Applications	June 2019	In progress	5.40
2	Synthesis of ZnO, TiO ₂ and Their Composites Using Non-Precious Metal Nanoparticles for Renewable Energy Applications	May 20, 2019	Completed in May 2021	1.00
2	Processing, Characterization and Surface Modifications of Dental Implants	June 26, 2019	Completed in September 2021	1.00
3	Processing and Characterization of Ballistic Materials	March 6, 2020	In Progress	1.00
4	High Temperature Materials for Aeroengine and Conventional Applications	March 6, 2020	In Progress	1.00
5	Synthesis and Characterization of Ti-Sn Alloy for Biomedical Applications	March 6, 2020	In Progress	1.00
6	Processing & Characterization of Biodegradable Thin films Derived from Organic Polymers for Food Packaging Applications	October 15, 2021	In Progress	1.00
7	Iron Ore Beneficiation; Dilband Case, Balochistan	2017	Completed in 2018	2.30

Invited/Keynote Speeches

1. Member Think Tank for Revival of Pakistan Steel Mills – Oxygen plant 2021.
1. Keynote Speech in 10th iMat 2021 conference, Iran, November 16-17, 2021
2. Keynote Speech in International Symposium on Advance Materials 2021 – TBC (October 2021)
3. Keynote Speech in 1st International Conference on Advanced Materials and Emerging Technologies (ISAMET 2021), Jamshoro, Pakistan (July 27 – 28, 2021)
4. Co-Convenor, 1st International Conference on Advances in Material Science and Environmental Engineering (ICAMSEE - 2021), June 25 – 26, 2021 at NED UET, Karachi, Pakistan.
5. Keynote Speech in 9th iMat 2020 conference, Iran, November 10-11, 2020
6. Keynote Speech in International Symposium on Advance Materials 2019 – TBC: residual stresses.
7. Keynote Speech in iMat 2019, Mosalla, Tehran Iran on Thermal barrier coatings.
8. Keynote Speech in “1st International Conference Sustainable Mineral Resources Development & Utilization (SMRDU’19)” title as Strategies to Iron Ore Beneficiation: Revival of Steel Sector of Pakistan, PCSIR Karachi Feb 2019
9. Invited Speech in International Symposium on Advanced Metallurgy and Materials 2018, PIEAS Islamabad – TBC (October 16 – 18 2018)
10. Invited Speech in International Symposium on Advanced Metallurgy and Materials 2017, PIEAS Islamabad – TBC (October 28 – 31 2017)
11. Invited Speech in International Symposium on Advance Materials 2017 – TBC (September 2018)

Editor/Reviewer

1. Frontiers in Materials – Review Editor 2020 to date
2. Surface Coating Technology – Reviewer
3. Key Engineering Materials – Reviewer
4. Mehran University Research Journal – Reviewer
5. Engineering, Technology and Applied Science – Reviewer
6. SURJ – Reviewer

Consultancy / Investigations

2. Revival of Pakistan Steel Mills – Oxygen plant 2021.
3. General Consultant on Engineering Materials – case to case basis (Karachi)
4. Consultant on Sindh Barrages Rehabilitation Project, PMO, Government of Sindh – on going.
5. Expert / Consultant, Home Ministry for Strategic Materials, Government of Sindh 2017 to 2018
6. Development of Copper – Beryllium Alloy – AuVitronics Limited – on going
7. Failure Investigations of Jet Engines – Pakistan Airforce – case to case basis

Job Experience

1. Professor, Department of Metallurgical Engineering January 2022 to date
2. Chairman, Department of Metallurgical Engineering Jan 2020 to date
3. Consultant PMO, SBIP, Sindh Government July 2018 to date.
4. Associate Professor, July 2017 to date
5. Acting Chairman Metallurgical Engineering (June 2018 to July 2018)
6. Acting Chairman Materials Engineering (June 2018 to July 2018)
7. Associate Professor, **July 2017 to date**
8. Assisting **CMM & CMY 2016 to 2020.**
9. Asst. Professor, NED University (2010 to 2017).
10. PG Data Analyst 2015, (Assisting in Development of Labs in School of Materials, The University of Manchester, UK)
11. Demonstrator/GTA, 2014, School of Materials, The University of Manchester, UK
12. Asst. Professor 2010 to 2011, Department of Materials/Metallurgical Engineering NED UET, Pakistan
13. Lecturer 2006 – 2010, Department of Materials/Metallurgical Engineering, NED UET, Pakistan

14. Lecturer 2006 – 2006 (3 months), Department of Metallurgy and Materials Engineering, DCET, Karachi, Pakistan
15. Trainee Engineer 2006 – 2006 (2 months), Bolan Castings Ltd, Pakistan
16. Service Engineer, Chem Link International, Dec 2005 till April 2006

Memberships/Committees

1. Member BOR ORIC, BOF-CPE, Academic Council, NED University (2020 to date)
2. **Member Procurement Committee** Dawood University, Karachi (2020 to date)
3. **Member Senate**, NED University of Engineering & Technology, Karachi, Sindh, Pakistan (June 2019 to date)
4. **Member Technical Evaluation Committee** Home Office, Government of Sindh for Chief Minister Secretariat (2017 to 2018)
5. **Member Technical Evaluation Committee** for MYD and MMD, NED University, Karachi
6. **Member Technical Evaluation Committee** for Metallurgy and Materials Engineering Department, MUET, Jamshoro, Sindh, Pakistan
7. **Expert Member, BOS**, Metallurgy and Materials Engineering Department, MUET, Jamshoro, Sindh, Pakistan
8. **PhD Proposal Reviewer**, Metallurgy and Materials Engineering Department, MUET, Jamshoro, Sindh, Pakistan
9. **Reviewer**, Surface Coating and Technology (USA) Journal
10. **Member PSQCA** on various standards related to Materials and Metallurgical Engineering which includes, Material Testing, Welding and Material Selection
11. **Member National Curriculum committee (NCRC)** of “Materials and Metallurgical Engineering”, HEC Islamabad, Pakistan
12. **Member Engineering Practice Examination (EPE)**, Pakistan Engineering Council,
13. Others (American Ceramic Society, ASM, USA)
14. **Member for Assessment Teams (AT)** for both M. Engg. and Ph.D, NED University

Projects / Research Activities

1. Hydrogen Production through water splitting – renewable energy applications
2. Design and Development of Dental Implants – HEC Funding (Rs. 5.4 million)
3. Failure Investigation of Aircrafts, Sub-marines, power plants etc. – case to case basis
4. Beneficiation of Dilband Iron Ore – until 2018. (Rs. 2.8 million)
5. Synthesis and Characterisations of Nanomaterials
6. Dental composites and Implants
7. X-ray doses
8. High Temperature Materials
9. Corrosion
10. Battery Materials
11. X-rays for Medical Applications
12. Reverse Engineering of Castings to be used in Automotive Applications
13. Biomaterials – Pakistan Perspective

Awards

1. Nominated for Speaker Award, Beatele, (USA) (2015)
2. Manchester Postgraduate Award (UK) (2011 – 2014)
3. Quaid e Azam Scholarship during undergraduate studies (2003 to 2005)

Teaching Interests

1. Materials Science/Engineering Materials
2. Advanced Materials Characterisation Techniques
3. Corrosion Science and Engineering
4. High Temperature Materials and Superalloys
5. Surface Engineering
6. Biomaterials

PhD / Masters Students – ongoing

8. **Five** (04) PhD Students
9. **Seven** Masters (07) Students
10. **2 Research** Assistants

PhD / Masters Students – produced

- 1. Two** (02) PhD Students – as being supervisor at NED UET
- 2. Over Twenty Five** Masters (25) Students

Countries Visited

UK, Switzerland, Austria, Malaysia, Spain, China, Italy, Germany, USA, France, Belgium, Netherlands, Iran, Turkey, Norway, Vatican City etc.