

CURRICULUM VITAE

PERSONAL PROFILE:

- Name Dr. Muhammad Rizwan (HEC approved PhD supervisor)
- Father's Name Mukhtar Ahmed
- Address Department of Metallurgical Engineering NEDUET
- Researcher ID <https://orcid.org/0000-0003-1127-8801> ,(h-index =7)
- Cumulative impact factor >60
- Email materialist.riz@gmail.com
- Tel# +923351221508

Education	Year	Board
PhD Biomaterials (Hydroxyapatite based bioceramic composites)	2019 4 years Post PhD Experience	University of Malaya, Kuala Lumpur, Malaysia.
M.E (MATERIALS ENGINEERING)	2013	N.E.D University of Engineering & Technology
B.E (MATERIALS ENGINEERING)	2010	N.E.D University of Engineering & Technology

Funding Body	Level of Research grant	Funding amount	Status
NED University of Engineering and Technology 2019	Local Seed Fund as PI	PKR 0.85 Million	Completed
Sindh Higher Education Commission Research Support Program (SRSP)2022	Provincial HEC as PI	PKR 4.3 Million	Ongoing
Higher Education Commission Pakistan National Research Program of Universities (NRPU) 2021	Federal HEC as PI	PKR 6.7 Million	Ongoing
Fundamental Research Grant Scheme (FRGS) Malaysia 2020	International (As Member)	USD 35300	Completed

Publication	Numbers	Cumulative Impact factor
Technical Papers in Impact factor journals	15	>45
Review articles	4	>18
International Book Chapters	2	N.A (Book chapters published by Elsevier)
Conference Papers	2	N.A

EXPERIENCE:

- **Assistant Professor at Department of Metallurgical Engineering, NED University of Engineering and Technology, Karachi Pakistan.** [June 2019 – Present]
 - ME supervision (3 students graduated & 2 enrolled)
 - PhD Co-supervision (Currently 3 students enrolled)
 - Delivering Postgraduate (PhD and M. E.) and undergraduate lectures
 - Departmental OBE coordinator
 - FYDP coordinator
 - Supervisory of FYDPs

- **Lecturer Department of Metallurgical Engineering, NED University of Engineering and Technology, Karachi Pakistan.** [April 2011 – June 2019]

RESEARCH AREA

- Hydroxyapatite based composite
- Sintering and crystallization behavior of Bioglass®
- Advanced materials processing technique
- Plasma electrolytic oxidation coatings for biomedical applications
- Antibacterial coatings
- Physical vapor deposition magnetron sputtering
- Coatings for biomedical applications

ACHIEVEMENTS/ CERTIFICATIONS

- Secured **Sindh HEC research support (SRSP) grant worth 4.3 Million PKR for 2022 (Grant related to the development of biomedical implants) as Principal investigator**
- Secured **HEC NRP 2021 grant as Principal investigator (Grant related to the development of biomedical implants) worth 6.7 Million PKR**
- Secured **Best Published Research Award (BPRA) from NED Alumni Association of Southern California (NEDAASC) for the year 2021**
- **Best Researcher Award for 2021 and 2022 by NEDUET**
- Journal reviewer for **Colloids and Surfaces A: Physicochemical and Engineering Aspects and Processing and applications of ceramics**
- Secured **FRGS research grant Malaysia (Grant related to the development of antibacterial surgical tools) as member in 2020.**
- Secured **NED seed fund related to the development of bioactive coating for 2020**

PUBLICATIONS LIST

1. **Rizwan, M., Hamdi, M., Basirun, W. J., Kondoh, K., & Umeda, J. (2018).** Low pressure spark plasma sintered hydroxyapatite and Bioglass® composite scaffolds for bone tissue repair. *Ceramics International*. (**IF=4.52**)
2. **Rizwan, M., Alias, R., Zaidi, U. Z., Mahmoodian, R., & Hamdi, M. (2018).** Surface modification of valve metals using plasma electrolytic oxidation for antibacterial applications: A review. *Journal of Biomedical Materials Research Part A*, 106(2), 590-605. (**IF=4.39**)
3. **Rizwan, M., Hamdi, M., & Basirun, W. J. (2017).** Bioglass® 45S5-based composites for bone tissue engineering and functional applications. *Journal of Biomedical Materials Research Part A*, 105(11), 3197-3223. (**IF=4.39**)
4. **Rizwan, M., Genasan, K., Murali, M. R., Raghavendran, H. R. B., Alias, R., Cheok, Y. Y., ... & Kamarul, T. (2020).** In vitro evaluation of novel low-pressure spark plasma sintered HA–BG composite scaffolds for bone tissue engineering. *RSC Advances*, 10(40), 23813-23828. (**IF=3.36**)
5. **Rizwan, M., Yousuf, S., Sohail, M., Bashir, M. N., Alias, R., Hamdi, M., & Basirun, W. J. (2020).** Synthesis, Characterization, and In Vitro Biochemical Analysis of Hydroxyapatite–Bioglass® Composite Scaffolds for Bone Tissue Repair. *JOM*, 72(10), 3683-3692. (**IF=2.47**)
6. **Rizwan, M., Chandio, A. D., Sohail, M., Bashir, N. M., Yousuf, S., Alias, R. & Basirun, J. W. (2021).** Bioglass-fibre reinforced hydroxyapatite composites synthesized using spark plasma sintering for bone tissue engineering. *Processing and Application of Ceramics*, 15(3), 270-278. (**IF=1.80**)
7. **Rizwan, M., Basirun, W. J., Abd Razak, B., & Alias, R. (2022).** Bioinspired ceramics for bone tissue applications. In *Ceramic Science and Engineering* (pp. 111-143). Elsevier.

8. Alias, R., **Rizwan, M.**, Mahmoodian, R., Vellasamy, K. M., & Hamdi, M. (2021). Physico-chemical and antimicrobial properties of Ag/Ta₂O₅ nanocomposite coatings. *Ceramics International*. (I.F=4.52)
9. Sukrey NA, **Rizwan M**, Bushroa AR, Salleh SZ and Basirun WJ. Development and characterization of bioglass incorporated plasma electrolytic oxidation layer on titanium substrate for biomedical application. *REVIEWS ON ADVANCED MATERIALS SCIENCE*. 2021; 60: 678-90. (I.F=3.36)
10. Bashir, M. N., Saad, H. M., **Rizwan, M.**, Quazi, M. M., Ali, M. M., Ahmed, A., & Naher, S. (2022). Effects of tin particles addition on structural and mechanical properties of eutectic Sn–58Bi solder joint. *Journal of Materials Science: Materials in Electronics*, 33(28), 22499-22507. (I.F=2.80)
11. Nasir Bashir, M., Saad, H. M., **Rizwan, M.**, Bingöl, S., Channa, I. A., Gul, M., & Naher, S. (2022). Effect of cobalt nanoparticles on mechanical properties of Sn–58Bi solder joint. *Journal of Materials Science: Materials in Electronics*, 33(28), 22573-22579. (I.F=2.80)
12. Channa, I. A., Shah, A. A., **Rizwan, M.**, Makhdoom, M. A., Chandio, A. D., Shar, M. A., & Mahmood, A. (2021). Process Parameter Optimization of a Polymer Derived Ceramic Coatings for Producing Ultra-High Gas Barrier. *Materials*, 14(22), 7000. (I.F=3.62)
13. Channa, I. A., Chandio, A. D., **Rizwan, M.**, Shah, A. A., Bhatti, J., Shah, A. K., & Al Hazaa, A. (2021). Solution Coated PVB/Mica Flake Coatings for the Encapsulation of Organic Solar Cells. *Materials*, 14(10), 2496. (I.F=3.62)
14. Akhtar, M., Uzair, S. A., **Rizwan, M.**, & Ur Rehman, M. A. (2022). The Improvement in Surface Properties of Metallic Implant via Magnetron Sputtering: Recent Progress and Remaining Challenges. *Frontiers in Materials*, 8. doi:10.3389/fmats.2021.747169 (I. F=3.5).
15. Chandio, A. D., Channa, I. A., **Rizwan, M.**, Akram, S., Javed, M. S., Siyal, S. H., & Alotabi, R. G. (2021). Polyvinyl Alcohol and Nano-Clay Based Solution Processed Packaging Coatings. *Coatings*, 11(8), 942. (I.F=2.88)
16. Ali, S.I., Lalji, S.M., **Rizwan, M.** et al. Factorial Analysis of Experimental Parameters Effecting Asphaltene Precipitation in Dead Crude Oils. *Arab J Sci Eng* (2023). (I.F=2.8).
17. Alias, R., Mahmoodian, R., **Rizwan, M.**, & Abd Shukor, M. H. (2019). Study the effect of thermal annealing on adhesion strength of Silver-Tantalum Oxide thin film deposited by reactive magnetron sputtering. *Journal of Adhesion Science and Technology*, 1-18. (I.F=2.07)
18. Sukrey, N. A., A. R. Bushroa, and **M. Rizwan**. "Dopant incorporation into TiO₂ semiconductor materials for optical, electronic, and physical property enhancement: doping strategy and trend analysis." *Journal of the Australian Ceramic Society* (2023): 1-27. (I.F=1.9)
19. Zac CH, Bushroa AR, Sarraf M, **Rizwan M** and Jamaludin MF. Electrophoretic deposition of bioglass reinforced zirconia for biomedical application. *Materialwissenschaft und Werkstofftechnik*. 2021; 52: 952-64. (I.F=0.85)
20. Alias, R., Ali Akhbar, M. F., Alshammari, Y., Siddiqui, H. A., **Rizwan, M.**, Hamdi, M., & Todoh, M. (2023). 1 - Characterization methods and characterization of the coatings. In R. K. Gupta, A. Motallebzadeh, S. Kakooei, T. A. Nguyen, & A. Behera (Eds.), *Advanced Ceramic Coatings* (pp. 1-25): Elsevier.
21. Sumra, Y., Payam, S., Iftikhar, A. C., **Rizwan, M.**, Tanveer, A. K., Belal, A., & Mustabshirha, G. (2023). Chemical and Thermal Characterization of Cement Mortar Containing Ground Palm Oil Fuel Ash as a Partial Cement Replacement. *Journal of Wuhan University of Technology-Mater. Sci. Ed.*, 38(3), 575-581. (I.F=1.6)