



Bilal Mansoor, PhD

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EDUCATION

- 09/2006 – 12/2010 : PhD in Materials Science and Engineering
Dissertation: “Microstructural evolution and mechanical properties of high strength magnesium alloys fabricated by deformation processing.”
Materials Science and Engineering Dept., University of Michigan, Ann Arbor, USA.
- 09/2004 – 04/2007 : MS in Mechanical Engineering
Individual research project: “Ultrafast laser drilling of composites.”
Mechanical Engineering Dept., University of Michigan, Ann Arbor, USA.
- 04/1998 – 06/2002 : BSE in Mechanical Engineering
Mechanical Engineering Dept., Uni of Engineering and Tech Lahore, Pakistan

PROFESSIONAL EXPERIENCE

- 08/2019 – current : Associate Professor, Mechanical Engineering Program, Texas A&M University at Qatar
- 08/2015 – current : Associate Professor, Materials Science & Engineering Program, Texas A&M University (joint appointment)
- 05/2017 – 12/2019 : Qatar Shell Fellow, Qatar Shell Research & Technology Center, QSTP, Doha, Qatar
- 07/2013 – 07/2019 : Assistant Professor, Mechanical Engineering Program, Texas A&M University at Qatar
- 09/2015 – 05/2016 : Assistant Professor, Mechanical Engineering Department, Texas A&M University, College Station
- 10/2010 – 06/2013 : Postdoctoral Research Fellow, Masdar Institute of Science and Tech., Abu Dhabi, UAE
- 01/2006 – 12/2006 : Research Engineer, Thixomat Inc., Ann Arbor, USA

RESEARCH INTERESTS

- Materials for Extreme Environments
- Mechanical Behavior and Corrosion
- Engineering Education

PUBLICATIONS

- Peer reviewed journal papers : 35
- Peer reviewed conference papers : 23
- Google scholar citations : 1096

FUNDED PROJECTS

- Qatar Foundation : 14
- Others : 05
- TOTAL Value : > \$4.5M

HONORS & AWARDS

- 2020 : Faculty of the Year in Mechanical Engineering, Aggie Achievement Awards by Graduating Seniors
- 2018 : Early Career Faculty, Research Excellence Award, Texas A&M University at Qatar
- 2018 : 2nd place, Best Rep. Image of an Outcome (BRIO) Competition, Qatar National Research Fund
- 2017 : Best poster award for the research team, Annual Mat. Sci. & Eng. Symposium, Qatar
- 2017 : 2nd place, 3D Visualization Challenge, Texas A&M University at Qatar
- 2016 : Best poster award for the research team, Qatar-UK Research Networking Forum, Qatar
- 2015 : Paper in Desalination: among most highly downloaded for 12 months, most cited since 2012 (Scopus)
- 2015 : Best poster award for the research team, Annual Mat. Sci. & Eng. Symposium, Qatar
- 2014 : Best paper award for the research team, Annual Aluminum Symposium, Qatalum, Qatar
- 2014 : Winner, Student-Faculty debate, Council of Debating Engineers, Texas A&M University at Qatar
- 2014 : Ranked among top 10% of peer-reviewers, Materials and Metallurgical Transactions, 2014
- 2013 : Runners up, Teaching innovation with technology competition, Texas A&M University at Qatar
- 2013 : Best Professor of Mechanical Engineering, Student Engineer’s Council, Texas AM University at Qatar
- 2013 : Best Speaker, Student-Faculty debate, Council of Debating Engineers, Texas A&M University at Qatar

FUNDING

Developed and participated in the following external/ internal scientific research projects:

1. 4D+ Printing – Form and Function Design in Shape Memory Alloys
Qatar National Research Fund – National Priorities Research Program 12th Cycle
LPI: B. Mansoor, Pls: I Karaman, A. Alwanay
April-2020 to April-2023, US\$599,422 (Pre-fund)
2. Additive Manufacturing of Concrete for Sustainable Construction using Locally Developed Materials
Qatar National Research Fund – Joint program with Turkey 2nd Cycle
LPI: E. Masad, Pls: B Mansoor and others
April-2020 to April-2023, US\$750,000 (Pre-fund)
3. Design and Manufacturing of an Ultra Energy-Efficient Gas To Liquid Car for Shell Eco-Marathon
Qatar National Research Fund – UREP 24th Cycle
LPI: M. Schuller, Pls: B Mansoor and others
Oct-2019 to Oct-2020, US\$28,200 (Pre-fund)
4. Trash to Treasure: A Novel Solid-State Technology for Metal Recycling and Corrosion Repair
Texas A&M at Qatar – Responsive Research Seed Grants
LPI: B. Mansoor, PI: Polycarpou and Bohali, Jan-2020 to Dec-2021. 2-year graduate student support plus US\$ 25,000
5. Additive Manufacturing for Innovative Concrete Applications
Texas A&M at Qatar – Responsive Research Seed Grants
LPI: E. Masad, PI: B. Mansoor, T. Seers, Jan-2019 to Dec-2020. 2-year graduate student support plus US\$ 30,000
6. Development of novel test methods to evaluate compatibility of materials for oxygen service under extreme conditions
Qatar National Research Fund – National Priorities Research Program 11th Cycle
LPI: B. Mansoor, Pls: T Seers, G. Chiffolleau, Abhita Ramesh; in collaboration with Qatar Shell and WHA Inc.
Aug-2019 to Aug-2021, US\$699,999, (Pre-fund)
7. Robust Field Capable Assessment of Surface Modified Nickel Superalloys
Qatar National Research Fund – National Priorities Research Program 11th Cycle, **LPI: M. Schuller**, Pls: B. Mansoor, M. Demkowicz; in collaboration with TAMU College Station. Aug-2019 to Aug-2021, US\$599,999, (Pre-fund)
8. In-situ remote monitoring of novel biodegradable cardiovascular stents – design & validation
Sidra Medical and Research Center – Proof of Concept Program
LPI: Y. Boudjemline, Pls: **B. Mansoor**, K. Qaraq, Q. Abbasi; in collaboration with Sidra and University of Glasgow
Apr 2018 to Mar 2019, TAMU-Q budget: US\$ 68,000
9. Additive Manufacturing for Innovative Concrete Applications
Texas A&M at Qatar – Responsive Research Seed Grants
LPI: E. Masad, PI: B. Mansoor, T. Seers, Jan-2019 to Dec-2020. 2-year graduate student support plus US\$ 30,000
10. Use of 3d virtual reality to enhance student learning experience in STEM courses
Texas A&M at Qatar – Transformative Educational Experience
LPI: B. Mansoor, Sep-2016 to June-2017, US\$12,000
11. Development of test methods to evaluate materials compatibility for oxygen service under extreme operating conditions
Qatar Shell Research and Technology Centre – Faculty Internship Program
LPI: B. Mansoor, May-2017 to Dec-2018, US\$41,430
12. Microstructure design of biocompatible magnesium alloys for biodegradable implants – in vitro and in vivo validation
Qatar National Research Fund – National Priorities Research Program 8th Cycle
LPI: B. Mansoor, Pls: I. Karaman, T. Hartwig, T. Ibarahim; in collaboration with TAMU and Hammad Medical Corporation Aug-2016 to Aug-2019, US\$809,210 (TAMU-Q budget: US\$ 311,639) One graduate student in TAMU-Q and two in TAMU-CS are being supported
13. Forming of aluminum foam sandwich panels - potential applications in sustainable energy systems
Qatar National Research Fund – Postdoc Research Award 2nd Cycle
Mentor: B. Mansoor, Mentee: Dr. V.C. Shunmugasamy; Feb-2016 to Feb-2018, US\$295,559
14. Multiscale modeling and characterization of advanced interface materials for high energy and corrosive environments
Qatar National Research Fund – National Priorities Research Program 7th Cycle
15. **LPI: B. Mansoor**, Pls: H. Zbib, D.P. Field, G.A. Ayoub; in collaboration with Washington State University
Feb-2015 to May-2018, US\$899,930 (TAMU-Q budget: US\$ 585,871) One postdoc, Dr. W. Yang is being supported at TAMU-Q
16. Design and fabrication of novel metal cellular material from additive manufacturing

Qatar National Research Fund – Undergrad Research Experience Program 17th Cycle
 Primary Mentor: F. Tarlochan, Mentor: **B. Mansoor**; in collaboration with Qatar University, May 2015 to May 2016, US\$28,800 (TAMU-Q budget: US\$ 10,600), Three undergraduate students conducted research at Qatar University

INHERITED PROJECTS

Participated in the following external scientific research projects:

- Novel aluminum alloys for very high temperature applications
 Qatar National Research Fund – National Priorities Research Program 7th Cycle
 LPI: I. Karaman, **Co-LPI: B. Mansoor**, Pls: G.A. Ayoub, David Dunan; in collaboration with TAMU & Northwestern University
 Feb-2015 to July-2018, US\$885,306 (TAMU-Q budget: US\$ 529,633)
 One graduate student in TAMU-Q and one in TAMU-CS are being supported
- Durability of Semicrystalline Polymers under Extreme Environments: Characterization and modeling
 LPI: A. Benzergera, **Co-LPI: B. Mansoor**, Pls: G.A. Ayoub, M.N. AbdelAziz, X. Colin, M. Fehmi; In collaboration with TAMU and Arts et Métiers ParisTech, Feb-2015 to May-2018, US\$880,803 (TAMU-Q budget: US\$ 555,745)
 One graduate student in TAMU-Q and one in TAMU-CS are being supported
- Characterizing the impact loading response of friction-stir welded (FSW) bimetallic joints
 Qatar National Research Fund – National Priorities Research Program 4th Cycle
LPI: B. Mansoor, Pls: G. Kridli, G.A. Ayoub, R. Hamade; in collaboration with American University in Beirut
 This project was under Dr. Mansoor’s purview from Sep-2014 to Jan-2016, TAMU-Q budget: US\$225,000
- Toward Low Temperature Formability of Damage-Tolerant High Strength Magnesium Alloys: Experiments and Modeling
 Qatar National Research Fund – National Priorities Research Program 4th Cycle
 LPI: A. Benzergera, **Co-LPI: B. Mansoor**, Pls: I Karaman, G.A. Ayoub, G. Kridli; in collaboration with TAMU
 This project was under Dr. Mansoor’s purview from Sep-2014 to Mar-2015, TAMU-Q budget: US\$110,000
 One graduate student in TAMU-Q was supported

TEACHING & MENTORING EXPERIENCE*

Undergraduate Courses Taught:

2013 – current : MEEN 222 Materials Science (TAMU-Q, TAMU-CS)
 2013 – current : MEEN 360 Materials and Manufacturing Selection in Design (TAMU-Q)
 2014 – current : MEEN 475 Materials in Design (TAMU-Q)
 2016 : MEEN 467 Mechanical Behavior of Materials (TAMU-CS)

- Undergrad student research advising: > **15**
- Ph.D. students = **04**, Master’s students: **01**
- Serving/Served on thesis committees of TAMU graduate students: **10** (5 PhD, 5 Master’s)

Masters	Name/Thesis Title/ Institute	[In Qatar]
09/2017– 12/2019	: Moustafa Raslan, Interdisciplinary Engineering, Texas A&M Uni., College Station Design of Micro Shape Memory Alloy Actuated Electric Switch	Co-Chair [60%]
09/2015– 05/2017	: Parker West, Mechanical Engineering, Texas A&M Uni., College Station Friction stir welding of dissimilar high temperature materials for structural applications Conference presentation: 01	Chair [60%]
External		
09/2017 – 12/2018	: Adnan Khan, Environmental Engineering, Qatar University Development and performance evaluation of smart polymeric coatings for corrosion protection of steel	External Member [100%]
09/2017 – 12/2018	: Moza Ghorab AlMarri, Environmental Engineering, Qatar University Development of natural fiber composite with reduced thermal conductivity and improved mechanical properties	External Member [100%]
09/2012 – 04/2014	: Adesola Ajay, Mechanical Engineering, Masdar Institute, Abu Dhabi Friction Stir Technology for Advanced Metallic Alloy Structural Applications Conference presentation: 01	External Member N/A

* Texas A&M at Qatar, does not offer a local Master’s or PhD degree in Mechanical Engineering

PhD [†]	Name/Thesis Title/ Institute	[In Qatar]
09/2019– current	: Hamza Hamid, Materials Science and Engineering, TAMU-CS Hydrogen Embrittlement Studies in nickel based super alloys	Chair [0%]
09/2017– current	: Marwa Abdelgawad, Mechanical Engineering, TAMU-CS Microstructure design of magnesium alloys for structural applications Conference paper: 03	Chair [100%]
05/2015– current	: Ana Rodriguez, Materials Science and Engineering, TAMU-CS, Impact of UV degradation on mechanical response of semi-crystalline polymers Journal paper: 01, Conference paper: 01	Co-Chair [50%]
05/2015– 05/2019	: Jahanzaib Malik, Materials Science and Engineering, TAMU-CS, High temp. mechanical response of Scandium containing Aluminum alloys Journal paper: 01, Conference paper: 01	Chair [65%]
09/2017– current	: Bilkis Banire, Materials Science and Engineering, TAMU-CS, Use of virtual reality tools to improve learning in students with autism Conference paper: 02	External Member [100%]
01/2015– 12/2018	: Tarang Mungole, Materials Science and Engineering, Washington State Uni., Deformation mechanism in multilayer materials at small length scales, Journal paper: 02, Conference paper: 02	External Member [20%]

Post-Doctoral Researchers (full-time)

- 09/2017– current : V.C. Shunmugasamy, Post-Doctoral Researcher
Forming of aluminum foam sandwich panels -potential applications in sustainable energy systems
Funding: QNRF-PDRA, QNRF-NPRP
Journal articles: 04, Conference papers: 02
PhD : New York University, USA, 2014
- 01/2017– 07/2018 : Chaudhry Ali Usman, Post-Doctoral Researcher
Nano-mechanical and corrosion response of PVD deposited nano-scale ceramic metal thin films for protecting various substrates
Funding: QNRF-NPRP
Journal articles: 01, Conference papers: 02
PhD : Colorado school of mines, USA, 2016
- 01/2015– 02/2018 : Wei Yang, Post-Doctoral Researcher
Multiscale modeling and characterization of advanced interface materials for high energy and corrosive environments
Funding: QNRF-NPRP
Journal articles: 03, Conference papers: 04
PhD : Ecole Polytech'Lille, France, 2014

PUBLICATIONS

PATENT & INVENTION DISCLOSURES

2. AK Ghosh, RF Decker, S Kulkarni, B. Mansoor, "Apparatus and method of producing a fine-grained metal sheet for forming net-shape components," Feb 2008, US Application No: 11/679,239, International Application No: PCT/US2008/055151.
1. Invention disclosure (University of Michigan), May 2008: AK Ghosh and B. Mansoor, "Roll bending and reverse roll-bending method and apparatus for large plastic deformation."

JOURNAL PUBLICATIONS (peer reviewed)

Publications lead by members of my research group (past or present) are in bold, while work involving undergrad or graduate students (past or present) are identified by an asterisk (*)

35. **Shunmugasamy, V.C.**, Mansoor, B., *Flexural Response of an Aluminum Foam Core/Stainless Steel Facesheet Sandwich Composite*. JOM 71, 4024–4033 (2019). <https://doi.org/10.1007/s11837-019-03488-7>

[†] Texas A&M at Qatar, does not offer a local Master's or PhD degree in Mechanical Engineering

34. Shiqi Zhou, Yu-An Shen, **Tiffani Uresti, V.C. Shunmugasamy**, B. Mansoor, Hiroshi Nishikawa, Improved mechanical properties induced by In and In & Zn double additions to eutectic Sn58Bi alloy, *Journal of Materials Science: Materials in Electronics* 30 (2019), <https://doi.org/10.1007/s10854-019-01056-y>
33. W. Nasim, S. Yazdi, R. Santamarta, **J. Malik**, D. Erdeniz, **B. Mansoor**, D.N. Seidman, D.C. Dunand and I. Karaman, Structure and Growth of Core-Shell Nanoprecipitates in Al-Er-Sc-Zr-V-Si High-Temperature Alloys, *Journal of Materials Science*. 54 (2019), doi.org/10.1007/s10853-018-2941-9
32. L. Aljihmani, , L. Alic, Y. Boudjemline, **B. Mansoor** et al., Magnesium-Based Bioresorbable Stent Materials: Review of Reviews, , *Journal of Bio- and Tribo-Corrosion*. 5 (2019). doi.org/10.1007/s40735-019-0216-x
31. **T Mungole**, **B Mansoor**, G Ayoub, DP Field, Bifurcation in deformation mechanism to overcome strength-ductility paradox in metal-ceramic multilayer thin-films, *Applied Physics Letters*. 113 (2018), doi.org/10.1063/1.5041344
30. **W. Yang**, G. Ayoub, I. Salehinia, **B. Mansoor**, H. Zbib, The effect of layer thickness ratio on the plastic deformation mechanisms of nonindented Ti/TiN nanolayered composite, *Computational Materials Science*. 154 (2018), doi.org/10.1016/j.commatsci.2018.08.021
29. S. Zhou, Omid Mokhtari, **M.G. Rafique, V.C. Shunmugasamy, B. Mansoor** and H. Nishikawaa, Improvement in the mechanical properties of eutectic Sn58Bi alloy by 0.5 and 1 wt.% Zn addition before and after thermal aging, *Journal of Alloys and Compounds*. 765 (2018). doi.org/10.1016/j.jallcom.2018.06.121
28. **V.C. Shunmugasamy, B. Mansoor**, Aluminum foam sandwich with density-graded open-cell core: compressive and flexural response, *Materials Science and Engineering A*. 731 (2018). doi.org/10.1016/j.msea.2018.06.048
27. **V.C. Shunmugasamy, B. Mansoor**, G. Ayoub, R. Hamade, Friction Stir Welding of Low-Carbon AISI 1006 Steel: Room and High-Temperature Mechanical Properties, *Journal of Materials Engineering and Performance*. 27 (2018). doi.org/10.1007/s11665-018-3280-3
26. **A.U. Chaudhry, B. Mansoor**, T. Mungole, G. Ayoub, D.P. Field, Corrosion mechanism in PVD deposited nano-scale titanium nitride thin film with intercalated titanium for protecting the surface of silicon, *Electrochimica Acta*. 264 (2018). [doi:10.1016/j.electacta.2018.01.042](https://doi.org/10.1016/j.electacta.2018.01.042).
25. **V.C. Shunmugasamy, B. Mansoor**, Compressive behavior of a rolled open-cell aluminum foam, *Materials Science and Engineering A*. 715 (2018). [doi:10.1016/j.msea.2018.01.015](https://doi.org/10.1016/j.msea.2018.01.015).
24. **M. Makki**, G. Ayoub, H. Abdul-Hameed, F. Zaïri, B. Mansoor, M. Naït-Abdelaziz, M. Ouederni, Mullins effect in polyethylene and its dependency on crystal content: A network alteration model, *Journal of the Mechanical Behavior of Biomedical Materials*. 75 (2017). [doi:10.1016/j.jmbbm.2017.04.022](https://doi.org/10.1016/j.jmbbm.2017.04.022).
23. **W. Yang**, G. Ayoub, I. Salehinia, **B. Mansoor**, H. Zbib, Deformation mechanisms in Ti/TiN multilayer under compressive loading, *Acta Materialia*. 122 (2017). [doi:10.1016/j.actamat.2016.09.039](https://doi.org/10.1016/j.actamat.2016.09.039).
22. **A. Dorbane**, G. Ayoub, **B. Mansoor**, R.F. Hamade, A. Imad, Effect of Temperature on Microstructure and Fracture Mechanisms in Friction Stir Welded Al6061 Joints, *Journal of Materials Engineering and Performance*. 26 (2017). [doi:10.1007/s11665-017-2704-9](https://doi.org/10.1007/s11665-017-2704-9).
21. **W. Yang**, G. Ayoub, I. Salehinia, **B. Mansoor**, H. Zbib, Multiaxial tension/compression asymmetry of Ti/TiN nano laminates: MD investigation, *Acta Materialia*. 135 (2017). [doi:10.1016/j.actamat.2017.06.034](https://doi.org/10.1016/j.actamat.2017.06.034).
20. **T. Mungole, B. Mansoor**, G. Ayoub, D.P. Field, Bifurcation in deformation behavior of Cu and Ta by accumulative roll-bonding at high temperature, *Scripta Materialia*. 136 (2017). [doi:10.1016/j.scriptamat.2017.04.012](https://doi.org/10.1016/j.scriptamat.2017.04.012).
19. D. Erdeniz, W. Nasim, J. Malik*, A.R. Yost, S. Park, A. De Luca, N.Q. Vo, I. Karaman, **B. Mansoor**, D.N. Seidman, D.C. Dunand, Effect of vanadium micro-alloying on the microstructural evolution and creep behavior of Al-Er-Sc-Zr-Si alloys, *Acta Materialia*. 124 (2017) 501–512. [doi:10.1016/j.actamat.2016.11.033](https://doi.org/10.1016/j.actamat.2016.11.033).

18. **A. Dorbane**, G. Ayoub, **B. Mansoor**, R.F. Hamade, G. Kridli, R. Shabadi, A. Imad, Microstructural observations and tensile fracture behavior of FSW twin roll cast AZ31 Mg sheets, *Materials Science and Engineering A*. 649 (2016). doi:10.1016/j.msea.2015.09.097.
17. **A. Dorbane**, **B. Mansoor**, G. Ayoub, V.C. Shunmugasamy, A. Imad, Mechanical, microstructural and fracture properties of dissimilar welds produced by friction stir welding of AZ31B and Al6061, *Materials Science and Engineering A*. 651 (2016). doi:10.1016/j.msea.2015.11.019.
16. F.A. AlMarzooqi, M.R. Bilad, **B. Mansoor**, H.A. Arafat, A comparative study of image analysis and porometry techniques for characterization of porous membranes, *Journal of Materials Science*. 51 (2016). doi:10.1007/s10853-015-9512-0.
15. A.-M. Wan, **B. Mansoor**, F. Ahmad, Magnesium recovery from brines using exopolymeric substances of sulfate-reducing bacteria, *Desalination and Water Treatment*. 57 (2016). doi:10.1080/19443994.2016.1155179.
14. **A.K. Rodriguez**, G.A. Ayoub, B. Mansoor, A.A. Benzerga, Effect of strain rate and temperature on fracture of magnesium alloy AZ31B, *Acta Materialia*. 112 (2016). doi:10.1016/j.actamat.2016.03.061.
13. **J. Sarwar**, **B. Mansoor**, Characterization of thermophysical properties of phase change materials for non-membrane based indirect solar desalination application, *Energy Conversion and Management*. 120 (2016). doi:10.1016/j.enconman.2016.05.002.
12. **V.C. Shunmugasamy**, B. Mansoor, N. Gupta, Cellular Magnesium Matrix Foam Composites for Mechanical Damping Applications, *JOM*. 68 (2016) 279–287.
11. **A. Dorbane**, G. Ayoub, **B. Mansoor**, R. Hamade, G. Kridli, A. Imad, Observations of the mechanical response and evolution of damage of AA 6061-T6 under different strain rates and temperatures, *Materials Science and Engineering A*. 624 (2015). doi:10.1016/j.msea.2014.11.074.
10. K.A. Mahmoud, **B. Mansoor**, A. Mansour*, M. Khraisheh, Functional graphene nanosheets: The next generation membranes for water desalination, *Desalination*. 356 (2015). doi:10.1016/j.desal.2014.10.022.
9. **B. Mansoor**, H. Nassar, V.C. Shunmugasamy, M.K. Khraisheh, Three dimensional forming of compressed open-cell metallic foams at elevated temperatures, *Materials Science and Engineering A*. 628 (2015). doi:10.1016/j.msea.2015.01.071.
8. **J.P. Young**, G. Ayoub, **B. Mansoor**, D.P. Field, The effect of hot rolling on the microstructure, texture and mechanical properties of twin roll cast AZ31Mg, *Journal of Materials Processing Technology*. 216 (2015). doi:10.1016/j.jmatprotec.2014.09.023.
7. M. Khan, J. Li, W. Cao, **B. Mansoor**, F. Rehman, Effect of oxygen vacancy on the improved photocatalytic activity of Cr-doped TiO₂, *International Journal of Modern Physics B*. 28 (2014). doi:10.1142/S0217979214501707.

-----**Prior to joining TAMU-Q**-----

6. E. Guillen-Burrieza, R. Thomas, **B. Mansoor**, D. Johnson, N. Hilal, H. Arafat, Effect of dry-out on the fouling of PVDF and PTFE membranes under conditions simulating intermittent seawater membrane distillation (SWMD), *Journal of Membrane Science*. 438 (2013). doi:10.1016/j.memsci.2013.03.014.
5. Q. Zaib, **B. Mansoor**, F. Ahmad, Photo-regenerable multi-walled carbon nanotube membranes for the removal of pharmaceutical micropollutants from water, *Environmental Sciences: Processes and Impacts*. 15 (2013). doi:10.1039/c3em00150d.
4. R.B. Saffarini, **B. Mansoor**, R. Thomas, H.A. Arafat, Effect of temperature-dependent microstructure evolution on pore wetting in PTFE membranes under membrane distillation conditions, *Journal of Membrane Science*. 429 (2013). doi:10.1016/j.memsci.2012.11.049.
3. A.N. Albakri, **B. Mansoor**, H. Nassar, M.K. Khraisheh, Thermo-mechanical and metallurgical aspects in friction stir processing of AZ31 Mg alloy - A numerical and experimental investigation, *Journal of Materials Processing Technology*. 213 (2013). doi:10.1016/j.jmatprotec.2012.09.015.

2. B. Mansoor, A.K. Ghosh, Microstructure and tensile behavior of a friction stir processed magnesium alloy, *Acta Materialia*. 60 (2012). doi:10.1016/j.actamat.2012.06.029.
1. B. Mansoor, S. Mukherjee, A. Ghosh, Microstructure and porosity in thixomolded Mg alloys and minimizing adverse effects on formability, *Materials Science and Engineering A*. 512 (2009). doi:10.1016/j.msea.2009.01.070.

CONFERENCE PAPERS (peer reviewed)[†]

Publications lead by members of my research group (past or present) are in bold, while work involving undergrad or graduate students (past or present) are identified by an asterisk (*)

23. **AbdelGawad M.**, Mansoor B., Vaughan M.W., Karaman I. (2020) Effect of 2 wt% Ag Addition on Corrosion Properties of ZK40 for Biodegradable Applications. In: Jordon J., Miller V., Joshi V., Neelameggham N. (eds) *Magnesium Technology 2020*. The Minerals, Metals & Materials Series. Springer, Cham
22. H. T. Abbas et al., "Remote Monitoring of Absorbable Cardiovascular Stents using Millimetre Waves," 2019 16th International Symposium on Wireless Communication Systems (ISWCS), Oulu, Finland, 2019, pp. 450-451. doi: 10.1109/ISWCS.2019.8877268
21. S. Zhou, Y. Shen, **T. Uresti**, **V. Shunmugasamy**, B. Mansoor and H. Nishikawa, "Effects of In and Zn Double Addition on Eutectic Sn-58Bi Alloy," 2019 IEEE 69th Electronic Components and Technology Conference (ECTC), Las Vegas, NV, USA, 2019, pp. 1081-1086. doi: 10.1109/ECTC.2019.00169
20. **M. AbdelGawad***, B. Mansoor, and A. U. Chaudhry, (2019). The Influence of Temperature and Medium on Corrosion Response of ZE41 and EZ33. *Magnesium Technology 2019*, 159-167.
19. **T. Mungole***, J Zhang, B. Mansoor, G Ayoub and D.P. Field, (2018). Transmission Kikuchi diffraction from nano-crystalline Ti and TiN thin-films. *IOP Conference Series: Materials Science and Engineering*. 375 (2018).
18. **H. Lamni***, M. Nait-Abdelaziz, G. Ayoub, and B. Mansoor (2018). Effect of UV Ageing on the fatigue life of bulk polyethylene. *MATEC Web of Conferences*. 165 (2018).
17. **M. AbdelGawad***, B. Mansoor, and A. U. Chaudhry, (2018). Corrosion Characteristics of Two Rare Earth Containing Magnesium Alloys. *Magnesium Technology 2018*, 43-53.
16. **J. Malik***, W. Nasim, B. Mansoor, Karaman, I., Erdeniz, D., Dunand, D. C., & Seidman, D. N. (2018). Equal Channel Angular Pressing of a Newly Developed Precipitation Hardenable Scandium Containing Aluminum Alloy. *Light Metals 2018*, 423-429.
15. **V.C. Shunmugasamy**, and B. Mansoor. Friction Stir Welding on Lightweight Metal - Aluminum Alloy Al6061. in *Materials Science Forum*. 2017. 879: p.1233-1238.
14. **V.C. Shunmugasamy**, and B. Mansoor. Lightweight Aluminum Foams – Tailoring Compressive Property through Relative Density Variation. in *Contributed Papers from Materials Science and Technology 2017 (MS&T17)*, p.61-67.
13. **T. Mungole**, J. Zhang, B. Mansoor, G. Ayoub and D.P. Field, "Attempt to Design a Strong and Ductile Porous Ceramic" 18th International Conference on Textures of Materials (ICOTOM-18), November 6-10, 2017, St George, Utah, USA. In-press.
12. **T. Mungole**, B. Mansoor, G Ayoub, DP Field, Evolution of microstructure and microtexture in a Cu/Ta multilayer during accumulative roll-bonding at high temperature, in: *Interfaces, Grain Boundaries, and Surfaces from Atomistic and Macroscopic Approaches 2015*, pp. 1503-1510.
11. B. Mansoor, **A. Dorbane**, G. Ayoub, A. Imad, Friction Stir Welding of AZ31B Magnesium Alloy with 6061-T6 Aluminum Alloy: Influence of Processing Parameters on Microstructure and Mechanical Properties, in: *Friction Stir Welding and Processing VIII*, 2015, pp. 259-266.
10. B. Mansoor, R.F. Decker, S.E. LeBeau, Strengthening in Thermomechanically Processed Magnesium Alloys, in: *Magnesium Technology 2015*, John Wiley & Sons, Inc., 2015, pp. 225-230.

[†] Pedagogy-related publications are listed separately

9. M. Khan, W. Cao, B. Mansoor, Cationic (V, Y)-codoped TiO₂ with Enhanced Visible Light Induced Photocatalytic Activity for Photoelectrochemical Applications, in: TMS Middle East - Mediterranean Materials Congress on Energy and Infrastructure Systems (MEMA 2015), John Wiley & Sons, Inc., 2015, pp. 325-333.
8. **A. Dorbane**, G. Ayoub, B. Mansoor, R. Hamade, G. Kridli, A. Imad, Mechanical Response and Evolution of Damage of Al6061-T6 Under Different Strain Rates and Temperatures, in: TMS Middle East - Mediterranean Materials Congress on Energy and Infrastructure Systems (MEMA 2015), John Wiley & Sons, Inc., 2015, pp. 259-265.

-----**Prior to joining TAMUQ**-----

7. Albakri, B. Mansoor, H. Nassar, M. Khraisheh, Simulation of friction stir processing with the internally cooled tool, *Advanced Materials Research*, 445 (2012) 560-565.
6. M. Albakri, B. Mansoor, A. Albakri, M. Khraisheh, Superplastic Forming Response of a Friction Stir Processed Mg Alloy Sheet—A Numerical Approach, *Materials Science Forum*, 735 (2012) 192-197.
5. B. Mansoor, R. Decker, S. Kulkarni, S. LeBeau, M. Khraisheh, The effect of friction stir processing on microstructure and tensile behavior of thixomolded AZ91 magnesium alloy, in: *Magnesium Technology 2012*, 2012, pp. 391-396.
4. B. Mansoor, M. Albakri, A. Albakri, M. Khraisheh, Microstructure and Superplasticity in a Friction Stir Processed Magnesium Alloy, in: *9th Int. Conference on Mg Alloys and their Applications*, Vancouver, Canada, 2012.
3. H Nassar, H Pan, B. Mansoor, MK Khraisheh, 2011, "The effect of temperature on tensile behaviour of aluminium foams ", BY Hur (Editor), *Proceedings of 7th International Conference on Porous Metal and Metallic Foams*, September 2011, Busan, Korea, p 327- 332.
2. B. Mansoor, S. Mukherjee, A. Ghosh, High Strength ZK 60 Mg plate produced by Grain Refinement and Precipitation during Alternate Biaxial Reverse Corrugation(ABRC) Process and Friction Stir Process(FSP), in, *Minerals, Metals and Materials Society/AIME*, 420 Commonwealth Dr., P. O. Box 430 Warrendale PA 15086 USA, 2010.
1. S. LeBeau, R. Decker, S. Kulkarni, A. Ghosh, B. Mansoor, New process for high strength/weight net-shape auto and aero components from Mg sheet, in: *Advanced Materials & Processes*, 2008, pp. 29-29.

CONFERENCE PAPERS (peer reviewed)

PEDAGOGY-RELATED

6. Banire B. et al. (2019) Attention Assessment: Evaluation of Facial Expressions of Children with Autism Spectrum Disorder. In: Antona M., Stephanidis C. (eds) *Universal Access in Human-Computer Interaction. Multimodality and Assistive Environments. HCI 2019. Lecture Notes in Computer Science*, vol 11573. Springer, Cham
5. Banire B., Khowaja K., Mansoor B., Qaraq M., Al Thani D. (2020) Virtual Reality-Based Technologies for Children with Autism Spectrum Disorder: A Recommendation for Food Intake Intervention. In: Essa M., Qoronfleh M. (eds) *Personalized Food Intervention and Therapy for Autism Spectrum Disorder Management. Advances in Neurobiology*, vol 24. Springer, Cham
4. B. Mansoor, **M. Maki**, D. Al-Thani, Use of mixed reality tools in introductory materials science courses. *ASEE Annual Conference & Exposition*, June 23 - 27, 2018.
3. B. Banire, D. Al-Thani, M Qaraq and B. Mansoor, A systematic review: attention assessment of virtual reality based intervention for learning in children with autism spectrum disorder, in: *Proceedings of the 7th IEEE International Conference on Control System, Computing and Engineering (ICCSC 2017)*, Penang, Malaysia, 2018, pp 97-103.
2. N. Alaeddine, H. Parsaei, K. Kakosimos, B. Guo, B. Mansoor, Teaching Innovation with Technology to Accelerate Engineering Students' Learning, in: *2015 ASEE Annual Conference and Exposition*, Seattle, Washington, 2015, pp. 15.
1. N. Alaeddine, K. Kakosimos, B. Guo, B. Mansoor, Leading educational innovation through implementation, in: *Leading educational innovation through implementation*, Spain, 2014, pp. 7322-7328.

RECENT ORAL PAPERS (selected, past two years)[§]

Abstract based oral publications lead by members of my research group (past or present) are in bold, while work involving undergrad or graduate students (past or present) are identified by an asterisk (*). The list also includes selected posters.

22. **B. Mansoor, J. Malik***, V.C. Shunmugasamy, , W. Nasim, I. Karaman, D. Erdeniz, D.C. Dunand, D.N. Seidman, "Tensile and compressive response of equal channel angular processed Al-Sc-V-Er-Zr-Si alloy," International Conference on Processing & Manufacturing of Advanced Materials Processing, Fabrication, Properties, Applications – Thermec, July 8-13, 2018, Paris, France.
21. **V.C. Shunmugasamy, P. West** and **B. Mansoor**, "Friction stir welding of Ni 718 alloy" 7th international symposium on aircraft materials," April 24-26, 2018, Compiègne, France.
20. **A. Srivastava***, M.W. Vaughan, **B. Mansoor**, I. Karaman, K.T. Hartwig, "Deformation Processing of AZ31 and ZK60 Using a Novel Tube-equal Channel Angular Pressing (t-ECAP) Technique". TMS annual meeting, March 14-19, 2018, Phoenix, AZ, CA, USA. (poster)
19. **B. Mansoor** and A. U. Chaudhry, Corrosion response of advanced interface material based on Ti-TiN nano-layers, (2017), Materials Science and Technology, October 8-12, 2017, Pittsburg, PA, USA.
18. **B. Mansoor** and **J. Malik***, "Design of microstructure for enhanced mechanical and corrosion response in Magnesium Alloys" Frontiers in Materials Processing Applications, Research and Technology, FimPart, July 9-12, 2017, Bordeaux, France.
17. **V.C. Shunmugasamy** and **B. Mansoor**, "Lightweight aluminum foams –tailoring compressive property through relative density variation" Materials Science and Technology, October 8-12, 2017, Pittsburg, PA, USA.
16. **V.C. Shunmugasamy** and **B. Mansoor**, "Flexural response of carbon fiber/ functionally graded syntactic foam core sandwich composite" The 25th Annual International Conference on Composites/Nano Engineering, July 16-22, 2017, Rome, Italy.
15. **T. Mungole**, J. Zhang, **B. Mansoor**, G. Ayoub and D.P. Field, "Attempt to Design a Strong and Ductile Porous Ceramic" Materials Science and Tech, October 8-12, 2017, Pittsburg, PA, USA.
14. **T. Mungole**, **B. Mansoor**, G. Ayoub and D.P. Field, Bifurcation in deformation behavior of Cu and Ta by accumulative roll-bonding at high temperature. TMS annual meeting, Feb 26- March 02, 2017, San Diego, CA, USA.
13. A.I. Karayan, M.W. Vaughan*, **B. Mansoor**, I Karaman, J.M. Seitz, R. Eifler, H.J. Maier, H. Castaneda, "Effects of Grain Size Refinement and Dynamic Precipitation on Corrosion Resistance and Mechanical Properties of a New Magnesium Alloy" Corrosion2017, NACE Conference & Expo, March 26-30, 2017, New Orleans, LA, USA.
12. **W. Yang**, G. Ayoub, **B. Mansoor**, I. Salehinia, "Deformation mechanisms in Ti/TiN multilayer under compressive loading and nanoindentation" Materials Science and Technology, October 8-12, 2017, Pittsburg, PA, USA.
11. **W. Yang**, G. Ayoub, I. Salehinia, **B. Mansoor** and H. Zbib, "Multiaxial tension/compression asymmetry of Ti/TiN nano laminates: MD investigation" Materials Science and Technology, October 8-12, 2017, Pittsburg, PA, USA.
10. **J. Malik***, **V.C. Shunmugasamy** and **B. Mansoor**, "Novel Aluminum Alloys – Microstructural Design and Structural Foams", Materials Science and Engineering Symposium, Qatar, Mar 16th, 2017. (poster)
9. **A. K. Rodriguez***, Georges Ayoub, Amine Benzerga, **Bilal Mansoor**, "Effects of UV irradiation on service life of polyethylene films and plates", Materials Science and Engineering Symposium, Qatar, Mar 16th, 2017. (poster)
8. **T. Mungole**, **B. Mansoor**, G. Ayoub, D. Field "Deformation Mechanisms in Ti/TiN Multi-layered Thin Films," TMS Annual Meeting & Exhibition, Feb 2017, San Diego, CA, USA.

[§] Pedagogy-related oral papers are listed separately

7. **W. Yang**, G. Ayoub, **B. Mansoor**, "Asymmetry in deformation characteristics of Ti/TiN nano laminates" Qatar-UK research networking program, Sustainable Materials and materials for Sustainability, May 2016, Doha, Qatar. (poster)
6. **A Rodriguez***, G. Ayoub, **B. Mansoor**, A. Benzerga, "Degradation of Mechanical Properties of Low Density Polyethylene under UV Radiation" presented at the Materials Science and Technology Conference, October, 2016, Salt Lake City, UT, USA.
5. D. Erdeniz, W. Nasim, J. Malik*, **B. Mansoor**, G. Ayoub, I. Karaman, D. Seidman, D. Dunand, "Effect of Vanadium on Microstructural Evolution and Creep Properties of Dilute Al-Er-Sc-Zr-Si Alloys," presented at the Materials Science and Technology Conference, October, 2016, Salt Lake City, UT, USA.
4. **V.C. Shunmugasamy**, **B. Mansoor**, "Hybrid epoxy matrix syntactic foams: an additive manufacturing approach," presented at the Materials Science and Technology Conference, October, 2016, Salt Lake City, UT, USA.
3. Erdeniz, W., Nasim, J. Malik*, S. Baik, **B. Mansoor**; G. Ayoub, I. Karaman, D. Seidman, D. Dunand, "Processing and Characterization of High-Temperature Resistant Aluminum Alloys Microalloyed with Sc, Er and Zr," TMS Annual Meeting & Exhibition, Feb 2016, Nashville, Tennessee, USA.
2. **V.C. Shunmugasamy**, **B. Mansoor**, "Forming of Open Cell Aluminum Foams at High Temperatures," TMS Annual Meeting & Exhibition, Feb 2016, Nashville, Tennessee, USA.
1. **T. Mungole**, **B. Mansoor**, G. Ayoub, D. Field "Effect of Shear Strain on the Evolution of Microstructure and Microtexture in Cu/Ta multilayer during Accumulative Roll-Bonding at High Temperature," TMS Annual Meeting & Exhibition, Feb 2016, Nashville, Tennessee, USA.

ORAL PAPERS

PEDAGOGY-RELATED

5. **M. Makki**, M. AbdelGawad*, Mohammad Hasiri*, Ali Sheharyar and **B. Mansoor**, Use of 3D virtual reality to enhance student learning experience in STEM courses. Poster in: Transformative Educational Experience Showcase - Texas A&M University at Qatar, Nov 7, 2017, Doha, Qatar.
4. **B. Mansoor**, **M. Maki**, A. Sheharyar, T Ozkan, Exploring the potential of immersive virtual reality to promote active learning in materials science and engineering. International Conference on Human Factors in Training, Education, and Learning Sciences, July 17-21, 2017, Los Angeles, California, USA.
3. **B. Mansoor**, D. Al-Thani, M. Qaraqe, J Dwyer, Potential of 3D printing to support STEM education in remote areas: Gaza as a case study. International Conference on Human Factors in Training, Education, and Learning Sciences, July 17-21, 2017, Los Angeles, California, USA.
2. **B. Mansoor**, **M. Makki**, Mohammad Hasiri*, M. Abdelgawad*, A. Sheharyar, T. Ozkan, Development of immersive virtual reality tools to enhance student learning experiences. 3D Challenge – organized by Texas A&M University at Qatar, May 21, 2017, Doha, Qatar.
1. **B. Mansoor**, A. Sheharyar, T. Ozkan, M. AbdelGawad*, Mohammad Hasiri*, Use of 3D virtual reality to enhance student learning experiences in materials science courses. Teaching with Technology Conference – organized by Instructional Technology Services, Texas A&M University, March 1-2, 2017, College Station, TX, USA.

INVITED TALKS

5. Tensile and compressive response of equal channel angular processed microalloyed aluminum alloy," International Conference on Processing & Manufacturing of Advanced Materials Processing, Fabrication, Properties, Applications – Thermec, July 8-13, 2018, Paris, France.
4. Deformation Characteristics of Magnesium Alloys, Center for Intelligent Multifunctional Materials and Structures, TAMU-CS, May 18, 2016. College Station, USA.

3. The role of twinning and dynamic recrystallization in texture formation of HCP materials , November 17, 2014, Masdar Institute, Abu Dhabi, UAE.
2. Microstructure Design of Advanced Aluminum Alloys, Aluminum week at Center for Advanced Materials, December 15, 2013, Qatar University, Doha, Qatar.
1. Superplastic forming of magnesium alloys, Materials Science and Engineering Program, Oct 12, 2013, Qatar University, Doha, Qatar.

PROFESSIONAL SERVICE ACTIVITIES

COMMITTEES & OUTREACH

- 03/2018 – current : Member of the work-group on Corrosion, CNAQ-TAMU-QU Initiative, Doha
 03/2018 – current : Member of the work-group on VR/AR Education Research, TAMUQ CTL Initiative, Doha
 03/2018 – current : Member of the work-group on Smart Manufacturing, Qatar Foundation R&D, Doha
 09/2017 – current : Faculty advisor of Beta Zeta Chapter, Pi Tau Sigma Intl. Honor Society for Mechanical Engineers, TAMU-Q
 03/2017 – 07/2017 : Member of the scientific advisory board, TELS-AHFE, LA, USA
 09/2014 – current : Chair of the Speakers Series, Mechanical Engineering Program, TAMU-Q
 09/2017 – current : Chair of the Workshop committee, Mechanical Engineering Program, TAMU-Q
 09/2014 – current : Member of the Industry Relations committee, Mechanical Engineering Program, TAMU-Q
 09/2014 – current : Member of the Curriculum Redesign Committee, Mechanical Engineering Department, TAMU-CS
 09/2014 – 05/2015 : Member of the Commencement Committee, TAMU-Q
 02/2014 – 05/2014 : Mentor, Stars of Science Competition, Qatar Foundation
 05/2014 : Mentor & Judge, Science Challenge, Supreme Education Council and Qatar Foundation

ORGANIZATION OF CONFERENCES AND MEETINGS

- 2019 : Member of the Organizing Committee, Annual Mat. Sci. and Eng. Symp., Qatar
 2018 : Organizer & Chair, Intl. workshop on Materials Selection, Reliability and Corrosion, Doha, Qatar
 2018 : Organizing Committee Member, Intl. workshop on Manufacturing for the Future: Towards Competitive Demand-Driven Qatar Industry, Doha, Qatar
 2018 : Organizing Committee Member & Session-Chair, Eng. Undergrad. Research Symposium, Doha, Qatar
 2018 : Organizing Committee Member, Industry Showcase, Texas A&M University at Qatar
 2018 : Co-Chair of the Annual Mat. Sci. and Eng. Symp., Qatar
 2017 : Organizing Committee Member, Theory, Manufacturing, and Applications of Ceramic/Metal Nano-Laminates Session, MS&T annual meeting, Pittsburg, PA USA
 2017 : Organizing Committee Member & Chair K-12 Poster Session, Annual Mat. Sci. and Eng. Symp., Qatar
 2016 : Session-Chair, Add. Mfg. of Composites & Complex Mats., MS&T annual meeting, Salt Lake City, UT USA
 2015 : Session-Chair, Intl. Computational Science and Engineering Conference, Doha, Qatar
 2015 : Session-Chair, Deformation Processing session, Magnesium Tech., TMS Annual Meeting, Orlando, FL USA
 2015 : Organizing Committee Member, & Session-Chair, TMS Middle East - Mediterranean Materials on Energy and Infrastructure Systems (MEMA 2015), Doha, Qatar
 2014, 2015 : Member of the Organizing Committee & Poster Session Chair, Annual Mat. Sci. and Eng. Symp., Qatar

PROFESSIONAL ORGANIZATIONS

Current member of the following professional organizations:

- ✓ TMS – The Minerals, Metals & Materials Society
- ✓ ASM – The Society for Materials Engineers and Scientists
- ✓ ASME – The American Society of Mechanical Engineers
- ✓ MRS – The Materials Research Society
- ✓ ASEE – The American Society for Engineering Education

REVIEWER FOR FUNDING AGENCIES

- ✓ Ministry of Science and Technology, Pakistan
- ✓ American University of Sharjah, Sharjah, UAE

REVIEWER OF INTERNATIONAL JOURNALS

Regular reviewer for intl. scientific journals and conferences (selected list):

- Materials and Metallurgical Transactions A – Springer ● Materials Science and Engineering A – Elsevier ● Journal of Materials and Design – Elsevier ● Materials Letters – Elsevier ● Journal of Engineering Materials and Technology – ASME ● Science and Technology of Welding and Joining – Taylor & Francis ● Rare Metals – Springer ● Journal of Materials Science – Springer ● Corrosion Science – Elsevier ● Desalination – Elsevier ● Advanced Engineering Materials – Wiley ● International Journal of Advanced Manufacturing Technology – Springer ● Journal of Alloys and Compounds – Elsevier ● Metals – MDPI ● Journal of Membrane

REFERENCES

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I acknowledge that this CV being submitted is the most current and correct as of June 2019.



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