

Majid Al-Maharbi
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Education

B.E. Mechanical Engineering <i>Sultan Qaboos University, Al-Khod, Oman.</i>	2000
MS. Materials Science <i>Arizona State University, Tempe, AZ, USA</i> Macrohardness of Copper and Nickel-Aluminum Single Crystals	2003
PhD. Materials Science and Engineering Mechanical Flow Response and Anisotropy in Ultra-fine Grained Magnesium and Zinc Alloys <i>Texas A&M University, College Station, TX, USA</i>	2009

Career History & Accomplishments

Demonstrator , <i>Sultan Qaboos University, Department of Mechanical and Industrial Engineering</i> <ul style="list-style-type: none">Teaching assistant	2000-2001
Lecturer , <i>Sultan Qaboos University, Department of Mechanical and Industrial Engineering</i> <ul style="list-style-type: none">Teaching assistant	2003-2005
Assistant Professor , Sultan Qaboos University, Department of Mechanical and Industrial Engine	2010-Present

Research Interests

Continuing
Education

Workshops

- “Program Assessment”, February 11-15, 2012, Sultan Qaboos University.
 - “Acceleration of Technological Progress through Key Engineering Materials”, March 22 2014, Bali, Indonesia
 - “How to Teach Engineering Students Process Skills” by Nikos J. Mourtos, San Jose State University, 26-28 May 2015, Sultan Qaboos University
 - “Introduction to CDIO (conceive, design, implement, operate) initiative” by Juha Kontio, Turku University of Applied Sciences, 17-19 May 2016, Sultan Qaboos University.
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Teaching and
Students
Supervising

Courses Taught

- Materials Science (MEIE3161)
- Materials Science and Engineering (MEIE3262)
- Engineering Materials (MEIE4161)
- Corrosion Engineering (MEIE5162)
- Basics Mechanics (MEIE2129)
- Basics Mechanics (PNGE2102)
- Statics (MEIE2102)
- Dynamics (MEIE3121)
- Introduction to Engineering (ENGR1500)

Courses Development

- Engineering Materials (MEIE4161)
- Corrosion Engineering (MEIE5162)

Final Year Projects

- Design and Fabrication of Equal Channel Angular Extrusion Die, (4 students), Spring 2011
- Solid-State Recycling of Aluminum using Conventional Extrusion, (1 student) Fall 2011
- Solid-State Recycling of Magnesium Alloy using ECAP, (3 students), Spring 2012
- Design and Manufacturing Single Crystal Growth Setup, (4 students), Fall 2012
- Solid-State Recycling of Magnesium Alloy Chips using ECAP (4 students), Spring 2013
- Design and Testing of Conventional Extrusion Die for Solid-State Recycling of Aluminum and Magnesium Alloys, (3 students), Fall 2013
- Design and Fabrication of Flow Loop Experimental Setup, (4 students), Fall 2014
- Solid-State Recycling of Magnesium Chips using Equal Channel Angular Pressing, (3 students), Spring 2015
- Design of Solid-State Recycling Process for Magnesium Alloys Using Equal Channel Angular Pressing, (2 students), Spring 2016
- Design of Blowout Preventer Using Shape Memory Alloys, (4 students), Fall 2016
- Shape Memory Alloy Heat Engine Using Solar Energy, (4 students), Fall 2017

Postgraduate Supervision

Co-supervision

Master Thesis

- Safiya Said Al-Hatmi, "Synthesis and Characterization of Ceramic Membranes for the Separation of Carbon Dioxide from CO₂/N₂ Gas Mixture" December 2015
- Joshiah
- Ibrahim Al-Fori

PhD Thesis

- Rashid Khan, " Modeling and Simulation of Transformation and Twinning Induced Plasticity Phenomena in Austenite Based Steels Using Finite Element Method", 2014
 - Omar Al-Abri, "Computational Modeling and Experimental Analysis of Martensitic Transformation,
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Research Projects

Research Title	Principal Investigator	Budget (RO)	Funded By	Year
Chemical and Mechanical Analysis of Polished and Sucker Rods	Majid Al-Maharbi	1,870	Sino Gulf Enterprises	2010
Mechanical and Materials Investigation of Fracture of Wooden Electric Poles	Majid Al-Maharbi	1,050	Majan Electricity	2012
Multiscale Modeling of expandable tubular steels	Tasneem Pervez	322,500	TRC	
Preparation and Characterization of Gas Separation and Purification Membrane	Majid Al-Maharbi	126,400	TRC	2012
Design and development of a bottom tapping stir casting facility for production of nano metal matrix composites	Ramanathan Arunachalam	5,500	IG	2013
Advanced Multivariate Statistical Modeling and Model Analysis of the Elastic Behavior in Random Composite Materials	Khalid Alzebeleh		IG	2014
Mechanical Properties of Omani Wood Used for Crafting Khanjar Handles	Majid Al-Maharbi	10,000	PACI	2015
Pipe Defect Interaction	Abdullah Al-Shabibi	83,500	PDO	2015
Solid-state recycling of Magnesium alloys through consolidation of Magnesium chips using Equal Channel Angular Extrusion	Majid Al-Maharbi	4,700	SQU	2015
Sucker Rods Failure	Majid Al-Maharbi	13,946	PDO	2015

Publications

Journal Papers

1. Gencaga Purcek, Ibrahim Karaman, Guney Guvan Yapici, **Majid Al-Maharbi**, Tevfik Kucukomeroglu, Onur Saray, “*Enhancement in mechanical behavior and wear resistance of severe plastically deformed two-phase zinc-aluminum alloys*”, Int. J. Mat. Res. (formerly, Z. Metallkd.), 98 (2007) 4
2. **Majid Al-Maharbi**, Ibrahim Karaman, Gencaga Purcek, “*Flow response of a severe plastically deformed zinc-aluminum alloy*”, Materials Science and Engineering A, 527 (2010) 518-525.
3. D.C. Foley, **M. Al-Maharbi**, K.T. Hartwig, I. Karaman, L. Kezkes, S. Mathaudhu, “*Grain Refinement vs. Crystallographic Texture: Mechanical Anisotropy in a Magnesium Alloy*”, Scripta Materialia, 64 (2011), 193-196.
4. **Majid Al-Maharbi**, Ibrahim Karaman, Irene J. Beyerlein, David Foley, K. Ted Hartwig, Laszlo J. Kecskes, Suveen N. Mathaudhu, “*Microstructure, crystallographic texture, and plastic anisotropy evolution in an Mg alloy during equal channel angular extrusion processing*”, Materials Science and Engineering: A, 825 (2011), 7616-7627.
5. **M. Al-Maharbi** and I. Karaman, “*Prediction of Flow Stress Anisotropy and Tension Compression Asymmetry of Hot Rolled AZ31B Mg Alloy*”, Advanced Materials Research, 911 (2014) 178-184
6. Ramanathan Arunachalam, **Majid Al-Maharbi**, Yahya Al Kiyumi, Elyas Aal-Thani and Mohammed Al_Mafraji, “*Production of Metal Matrix Composite Using a Bottom Tapping Stir Casting Furnace*”, Applied Mechanics and Materials Vol 772 (2015) pp 263-267.
7. Omar S. Al-Abri, Tasneem Pervez, **Majid H. Al-Maharbi**, Rashid Khan, “*Microstructure evolution of ultra-fine grain low-carbon steel tubular undergoing radial expansion process*”, Materials Science & Engineering A, 654 (2016), 94-106

Conferences

1. **Al-Maharbi, M.**, Foley, D.C., Karaman, I., Hartwig, K.T., Kecskes, L.J., and Mathaudhu, S.N. "Microstructure and Properties of AZ31B Mg Alloy Processed by Equal Channel Angular Extrusion" in: Magnesium - 8th International Conference on Magnesium Alloys and their Applications, ed. Kainer, K.U., Wiley-VCH, Darmstadt, Germany, 2010, pp. 321-325.
 2. **M. Al-Maharbi**, D. Foley, I. Karaman, I. Beyerlein, K.T. Hartwig, L.J. Kecskes, S. Mathaudhu, “*Importance of crystallographic texture of AZ31B on flow stress anisotropy and tension-compression asymmetry*”, in: Magnesium Technology 2010, p. 445-450, Seattle, 2010.
 3. D. Foley, **M. Al-Maharbi**, I. Karaman, K.T. Hartwig, L.J. Kecskes, S. Mathaudhu, “*Mechanical behavior of AZ31 due to texture and microstructure*”, in: Magnesium Technology 2010, p. 451-454, Seattle, 2010
 4. Arunachalam Ramanathan, **Majid Al Maharbi**, Salim Al Jahwari, Mohammed Al Omairi, Mohammed Al Zidi and Sultan Al Hashmi. *Design Process for a New Bottom Tapping Mechanism for a Stir Casting Furnace*. The International IIE (Institute of Industrial Engineers) Conference, June 26 – 28, 2013, Istanbul, Turkey, pp. 1-5.
 5. Rashid Khan, Tasneem Pervez, **Majid Al-Maharbi** and Sayyad Zahid Qamar, “*Grain size and texture measurement in tubular expansion*”, in proceedings of the 24th Canadian Congress of Applied Mechanics, At Saskatoon, Saskatchewan, Canada, 2013
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6. Rashid Khan, Tasneem Pervez, Omar Al-Abri and **Majid Al-Maharbi** “*Modeling of Twinning Based Plasticity Phenomenon in Austenite Dominated Steels Under Combined Loading*”, in proceedings of the ASME International Mechanical Engineering Congress and Exposition, Montreal, Canada, 2014
- 7.

Technical Reports

1. **Majid Al-Maharbi**, Rafiq Siddiqui and Nasser Al-Azri, “Chemical and Mechanical Analysis of Polished and Sucker Rods”, Sino Gulf Energy Enterprises, Sultanate of Oman, 2010
2. **Majid Al-Maharbi**, “Mechanical and Materials Investigation of Fracture of Wooden Electric Poles”, Majan Electricity, Sultanate of Oman, 2012
3. Abdullah Al-Shabibi, **Majid Al-Maharbi** and Tasneem Pervez, “Defects Interaction”, Petroleum Development of Oman (PDO), 2015
4. **Majid Al-Maharbi**, Abdullah Al-Shabibi, Ashraf Al-Hinai, “Mechanical and Chemical Investigation of Sucker Rod’s Failures”, Petroleum Development of Oman (PDO), 2016.
5. **Majid Al-Maharbi**, “Failure Analysis of uPVC pipes in Salalah treated water network”, The Administrative Court, 2016.
6. **Majid Al-Maharbi**, Rashid Al-Yahiyai, “Mechanical and Physical Properties of Omani Wood for Crafting Khanjar”, Public Authority of Craft Industries (PACI), 2016.

Short Courses

1. Structures and Mechanical Behaviors of Engineering Metallic Materials

Services

Community Services

- Al-Roya Awards for Young Omani Initiatives, Judgement Committee, November 2015
- Inspire Awards, Judgment Committee, April 2016
- Oman Chamber Innovation Award, Judgement Committee, October 2017.

University’s Committees

- Scanning Electron Microscope Committee, Role: Member

College’s Committees

- Industrial Training Committee, Role: Member
- Publication Committee, Role: Chair
- Postgraduate Studies and Research Committee, Role: Member

Department’s Committees

- Timetabling Committee, Role: Chair
- Postgraduate and Research Committee, Role: Chair

Continuing Education

1. Program Assessment by ABET, Sultan Qaboos University, February 2012
2. Acceleration of Technological Progress Through Key Engineering Materials, Bali, Indonesia, March 2014
3. Preparing Engineers for Globalized Economy: How to Teach Engineering Students Process Skills by Prof. Nikos J. Mourtos, Sultan Qaboos University, May 2015
4. Introduction to CDIO Initiative by Dr. Juha Kontio, Sultan Qaboos University, May 2016

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