

Yazan Al-Zain

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Education

03/2011

Ph.D. in Materials Science and Engineering, University of Tsukuba, Japan.

03/2008

M.Sc. in Materials Science and Engineering, University of Tsukuba, Japan.

02/2003

B.Sc. in Materials and Metallurgical Engineering, Al-Balqa' Applied University, Jordan.

Research Experience

8/2018 – Now

Investigation of the Biocompatibility of Ti-based Shape Memory Alloys *In Vivo* and *in Vitro*, Team Leader of a Collaborative Research Team at The National Institute for Materials Science (Japan-Materials Engineering Lab), The University of Tsukuba (Japan-Bioengineering Lab), and The University of Jordan (Jordan-Faculty of Medicine).

07/2017 – 10/2017

Zr-based Shape Memory Alloys. University of Tsukuba, Department of Materials Science and Engineering, Japan.

07/2014 – 10/2014

Development and Characterization of Ti-based Ni-free Biomedical Shape Memory Alloys. University of Tsukuba, Department of Materials Science and Engineering, Japan.

09/2011 – 08/2012

Fabricating and Designing New Thin Film Materials Utilizing the Science of Nanotechnology. Faculty of Mechanical Engineering, Ruhr-University Bochum, Germany.

2006 – 2011

Development and Characterization of Ti-based Ni-free Biomedical Shape Memory Alloys. University of Tsukuba, Department of Materials Science and Engineering, Japan.

2002 – 2003

A Study on the Erosive Wear in a Cu-Al 2024 Alloy Used in Aircrafts. Al-Balqa' Applied University, Department of Materials and Metallurgical engineering, Jordan.

Languages

Arabic: Mother tongue.

English: Spoken and written.

Japanese: Spoken and written.

Work Experience

8/2018 – Now

Associate professor at the University of Jordan, School of Engineering, Department of Industrial Engineering, Amman, Jordan.

9/2016 – 8/2018

Assistant professor at the University of Jordan, School of Engineering, Department of Industrial Engineering, Amman, Jordan.

6/2017 – 9/2019

Part-time researcher at the University of Tsukuba, Faculty of Materials Engineering, Tsukuba, Japan.

9/2015 – 9/2016 (Being under unpaid leave from the University of Jordan)

Assistant professor at the American University of the Middle East, Faculty of Engineering and Technology, Department of Industrial Engineering, Egaila, Kuwait.

2/2013 – 9/2015

Full-time lecturer at the University of Jordan, School of Engineering, Department of Industrial Engineering, Amman, Jordan.

6/2013 – 6/2014

Part-time lecturer at Al-Balqa' Applied University, Faculty of Engineering, Department of Materials and Metallurgical Engineering, Al-Salt, Jordan.

8/2012 – 1/2013

Materials specialist at Arab Center for Engineering Studies, Amman, Jordan.

9/2011 – 8/2012

Postdoctoral research scientist at Ruhr-University Bochum, Bochum, Germany.

9/2003 – 3/2005

Metallography, Heat Treatment and Polymers laboratories supervisor. Al-Balqa' Applied University, Faculty of Engineering, Department of Materials and Metallurgical Engineering, Al-Salt, Jordan.

Training

Subject	Held by	Country	From	Until
Advanced Biocompatibility Testing of Zr and Ti alloys	T s u k u b a University	Japan	20/08/2019	20/09/2019
Biocompatibility Testing of Ti-Based Alloys	The National Institute for Materials Science	Japan	30/08/2018	13/09/2018
Introduction to Transmission Electron Microscopy	T s u k u b a University	Japan	01/05/2006	01/06/2006
Advanced Transmission Electron Microscopy	Ruhr-University Bochum	Germany	02/11/2011	08/11/2011
CNC (Computerized-Numerically Controlled) Mills	EXCEL Machine Tools	England	07/09/2004	28/09/2004
Internal Quality Auditing	United Group Consulting and Management	Jordan	18/08/2003	19/08/2003

Technical Aspects of Accreditation and Introduction to Quality Management	United Group Consulting and Management	Jordan	20/07/2003	24/07/2003
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Publication List

a. Academic Journals:

- [1] Shape Memory Properties of Ti-Nb-Mo Biomedical Alloys. Al-Zain Y, Kim HY, Hosoda H, Nam TH, Miyazaki S. Acta Mater 2010;58:4212-4223.
- [2] Anomalous Temperature Dependence of the Superelastic Behavior of Ti-Nb-Mo alloys. Al-Zain Y, Kim HY, Koyano T, Hosoda H, Nam TH, Miyazaki S. Acta Mater 2011;59:1464-1473.
- [3] Room Temperature Aging Behavior of Ti-Nb-Mo-Based Superelastic Alloys. Al-Zain Y, Kim HY, Hosoda H, Nam TH, Miyazaki S. Acta Mater 2012;59:2437-2447.
- [4] Miniaturized Shape Memory Alloy Pumps for Stepping Microfluidic Transport. Sassa F, Al-Zain Y, Ginoza T, Miyazaki S, Suzuki H. Sensors and Actuators B: Chemical 2012;165:157-163.
- [5] A Comparative Study on the Effects of the ω and α Phases on the Temperature Dependence of Shape Memory Behavior of a Ti-27Nb Alloy. Al-Zain Y, Kim HY, Koyano T, Hosoda H, Miyazaki S. Scripta Mater 2015;103:37-40.
- [6] Effect of B Addition on the Microstructure and Superelastic Properties of a Ti-26Nb Alloy. Al-Zain Y, Kim HY, Miyazaki S. Mater Sci and Eng A 2015; 644:85-9.
- [7] The Effect of Rolling Direction on the Weld structure and Mechanical Properties of DP 1000 Steel. Khraisat W, Abu Jadayil W, Al-Zain Y, Musmar S. Cogent Engineering (2018), 5: 1491019.
- [8] Implementing Lean Six Sigma in a Kuwaiti Private Hospital. Al-Zain Y, Alfandi L, Arafeh M, Salim S, Al-Quraini S; Al- Yaseen A, Abu Taleb D. International Journal of Health Care Quality Assurance 2019. Vol. 32 Issue: 2, pp.431-446.
- [9] Corrosion behavior, in vitro and in vivo biocompatibility of a newly developed Ti-16Nb-3Mo-1Sn superelastic alloy. Al-Zain Y, Yamamoto A, AlAjlouni JM, Al-Abbadi MA, Al-Sayyed MR, Aloweidi SA, Kim HY, Miyazaki S. Mater Sci and Eng C 2019;104:109906.

b. International Conferences:

- [1] Effect of Omega Phase on Shape Memory Properties of Ti-base Alloys. Kim HY, AL-Zain Y, Inamura T, Hosoda H, Miyazaki S. 2012; 12th World Conference on Titanium, 1110-1113.
- [2] Programable Microfluidic Processor with Pumping and Coulometric Detecting Functions. Sassa F, Al-Zain Y, Ginoza T, Fukuda J, Miyazaki S, Suzuki H. Transducers 2011; 16th International Solid-State Sensors, Actuators and Microsystems Conference:2287-2290.
- [3] The Amorphous Range in Sputtered Combinatorial Thin-Film Libraries. Motemani Y, Savan A, Thienhaus S, Al-Zain Y, Ludwig A. 2012; Materials Science and Engineering Conference.

Patent

Title: Micropump of liquid feeding control apparatus, has control section that impresses voltage to electrode and controls electric current, where tube-shaped elastic segment is inserted and fixed to through hole of shape-memory-alloy sheet.

Patent Number(s): JP2011226358-A

Inventor(s): AL-ZAIN Y, SUZUKI H, MIYAZAKI S, SASA F

Patent Assignee Name(s) and Code(s):UNIV TSUKUBA (UYTS-Non-standard)

References

- [1] Prof. Shuichi Miyazaki. Department of Materials Science and Engineering, Tsukuba University, Tsukuba, Ibaraki 305-8573, Japan. Email: miyazaki@ims.tsukuba.ac.jp
- [2] Prof. Jafar Al-Haidary. Department of Production and Metallurgical Engineering, University of Technology, Baghdad. Email: jalhaidary@yahoo.com
- [3] Prof. Alfred Ludwig, Chair of MEMS Materials, Institute of Materials, Faculty of Mechanical Engineering, Ruhr-University Bochum, Universitätsstr. 150, D-44801 Bochum, Germany. Tel.: 0234-32-27492. Email: Alfred.ludwig@ruhr-uni-bochum.de
- [4] Prof. Mohammad Al-Tahat. Head of the Department of Industrial Engineering, School of Engineering, The University of Jordan. Tel.: +962-6-5355000, Ext.: 22933. Email: altahat@ju.edu.jo