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[ahmad.bahmani@gmail.com](mailto:ahmad.bahmani@gmail.com)**EDUCATION**

Degree	University	Uni. Rank	Major	Country	Start	End
Post-Doc	Tehran University	-	Alloy Design for Improving Strength and Corrosion Resistance	IRAN	July.2018	March. 2020
Post-Doc	Seoul National University	35	Alloy Design for Improving Strength and Corrosion Resistance	KOREA	Feb.2018	Jun. 2018
Ph.D.	Seoul National University	35	Materials Science and Engineering	KOREA	Mar.2013	Mar.2018
M.Sc.	Sharif University of Technology	551	Materials Science and Engineering	IRAN	Sep.2006	Mar.2009
B.Sc.	Iran University of Science and Technology	N/A	Materials Science and Engineering	IRAN	Sep.2002	Sep.2006

**WORK EXPERIENCE**

Title	Company	Job Description	Country	Start	End
Assistant Professor	Iranian Research Organization for Science and Tech.	Research/Teaching	IRAN	Nov.2021	Present
CEO/Founder	ARTA-Mag (Start-Up)	Developing and Designing New Ultra-	IRAN	June 2020	Present

**Ahmad Bahmani (PhD) Materials Science and Engineering**

		light Magnesium Alloys			
Inspector	IS Industrie/IGS/ Payesh Gostar	Oil and Gas Projects Products	Korea/Ir an	Sep.2014	Sep.2019
<b>CEO</b>	<b>Arta Research Co.</b>	Engineering Design and Education	Iran	Sep.2010	Sep.2013
Materials Expert	<b>Razi Metallurgical Research Center</b>	Casting Simulation and Design	Iran	Sep.2008	Sep.2013

**LANGUAGE**

1. Farsi: Native
2. English: Excellent
3. Korean: Beginner

**PUBLICATION****Journal paper:**

1. A Bahmani, S Arthanari, KS Shin, Achieving a High Corrosion Resistant and High Strength Magnesium Alloy Using Multi Directional Forging, Journal of Alloys and Compounds, 158077 1, 2021
2. M Lotfpour, A Bahmani, "Effect of microalloying by Ca on the microstructure and mechanical properties of as-cast and wrought Mg–Mg<sub>2</sub>Si composites", MSEA, 2021
3. M Lotfpour, C Dehghanian, M Emamy, A Bahmani\*, M Malekan, A Saadati, In-vitro corrosion behavior of the cast and extruded biodegradable Mg-Zn-Cu alloys in simulated body fluid (SBF), Journal of Magnesium and Alloys, 2021.
4. A Baghani, A Kheirabi, A Bahmani, Reducing Melt Surface Turbulence By Employing Surge And Filter In A Conventional Non-Pressurizing Gating System: Simulation And Experiment, Archives of Metallurgy and Materials 66, 2021.
5. M Malekan, A Bahmani, Determination of dendrite coherency point characteristics in Al-Si-Mg alloy, International Journal of Cast Metals Research, 2020.
6. A Bahmani, WJ Kim, Effect of Grain Refinement and Dispersion of Particles and Reinforcements on Mechanical Properties of Metals and Metal Matrix Composites through High-Ratio Differential Speed, Materials 13, 4159, 2020.

7. A Bahmani, KS Shin, Controlling the Microstructure and Texture Using Multidirectional Forging (MDF) to Develop a Low Corrosion Rate Mg Alloy, *Corrosion* 76 (8), 750-765, 2020.
8. A Bahmani, B Nayebi, SB Zonoozi, L Wang, M Shokouhimehr, Mechanochemical characteristics of Ca-added Mg-based alloys: A multimodality approach, *Materials Characterization*, 110475, 2020.
9. KS Shin, A Bahmani, Magnesium alloy having excellent strength and corrosion resistance and manufacturing method for the same, KR Patent KR20,190,098,307 A, 2020.
10. KS Shin, A Bahmani, Magnesium-alloy and manufacturing method thereof, KR Patent KR102078910B1, 2020.
11. Z Zareian, M Emamy, M Malekan, H Mirzadeh, WJ Kim, A Bahmani Tailoring the mechanical properties of Mg–Zn magnesium alloy by calcium addition and hot extrusion process, *Materials Science and Engineering: A* 774, 138929, 2020.
12. A Bahmani, S Arthanari, KS Shin, Formulation of corrosion rate of magnesium alloys using microstructural parameters, *Journal of Magnesium and Alloys*, 2020.
13. A Bahmani, S Arthanari, KS Shin, Improvement of corrosion resistance and mechanical properties of a magnesium alloy using screw rolling, *Journal of Alloys and Compounds*, 2020.
14. A Saadati, A Minagar, G Naseri, A Bahmani, M Malekan, Synthesis of NiAl-TiC composites from elemental powders by volume combustion method *Materials Science and Technology* 35 (7), 831-838, 2019.
15. A Bahmani, S Arthanari, KS Shin, Corrosion behavior of Mg–Mn–Ca alloy: Influences of Al, Sn and Zn, *Journal of Magnesium and Alloys* 7 (1), 38-46, 2019.
16. M Mehrabian, B Nayebi, A Bahmani, D Dietrich, T Lampke, E Ahounbar, Deformation, Cracking and Fracture Behavior of Dynamically-Formed Oxide Layers on Molten Metals, *Metals and Materials International* , 2019.
17. A Bahmani, S Arthanari, KS Shin, Improved Corrosion Resistant and Strength of a Magnesium Alloy Using Multi-Directional Forging (MDF), *The International Journal of Advanced Manufacturing Technology*, 2019.
18. A Sadeghi, E Hasanpur, A Bahmani, KS Shin, Corrosion behaviour of AZ31 magnesium alloy containing various levels of strontium, *Corrosion Science* 141, 117-126.
19. A. Bahmani, KS Shin, “Effects of Severe Plastic Deformation on Mechanical Properties and Corrosion Behavior of Magnesium Alloys”, *Mg Technology* 2018.
20. B. Nayebi, A. Bahmani, “Characteristics of dynamically formed oxide films in Aluminum-Calcium foamable alloys”, *Journal of Alloys and Compounds*, 2016.

**Ahmad Bahmani (PhD) Materials Science and Engineering**

21. A. **Bahmani**, N. Hatami, "A Mathematical Model for Prediction of Microporosity Formation in Aluminum Alloy A356", *International Journal of Advanced Manufacturing Technology*, 2013.
22. A. Kheirabi, A. Baghani, A. **Bahmani**, Understanding the occurrence of the surface turbulence in a nonpressurized bottom gating system: Numerical simulation of the melt flow pattern, *Journal of Materials Design and Applications*, 2015.
23. A. **Bahmani**, Gh. Eisaabadi, Effects of Hydrogen Level and Cooling Rate on Ultimate Tensile Strength of Al A319 Alloy, *Russian Journal of Non-Ferrous Metals*, 2014.
24. A. H. Faraji, A. **Bahmani**, "An Investigation to importance of Heat Conductivity in Numerical Simulation of stationary GTA Welding Pool for Pure Aluminum", *Journal of Central South University of Technology*, 2014.
25. A. Baghani, A. **Bahmani**, Numerical Investigation of the Effect of Sprue Base Design on the Flow Pattern of Aluminum Gravity Casting, *Defect and Diffusion Forum*, 2013.
26. A. Baghani, A. **Bahmani**, Application of Computational Fluid Dynamics to study the effects of Sprue Base Geometry on the Surface and Internal Turbulence in gravity casting, *Journal of Materials Design and Applications*, 2013.
27. M. O. Shabani, A. **Bahmani**, "Prediction of Microstructure Parameters in Aluminum Alloy A356", *Kovove Materialy*, November 2012.

**Patents**

1. KS Shin, A Bahmani, Magnesium alloy having excellent strength and corrosion resistance and manufacturing method for the same, KR Patent KR20,190,098,307 A, 2020.
2. KS Shin, A Bahmani, Magnesium-alloy and manufacturing method thereof, KR Patent KR102078910B1, 2020.

**Some of International Conference:**

1. Mechanical Properties and Corrosion Behavior of Mg Alloy Process by Multi Directional Forging, UFGNSM, Kish, Iran, 2017.
2. Effects of Severe Plastic Deformation on Mechanical Properties and Corrosion Behavior of Magnesium Alloys, TMS, USA, 2018.
3. Development of Biodegradable Magnesium Alloys, TMS, USA 2017. Mechanical Properties and Corrosion Behavior of Mg Alloy Process by Screw Rolling Process, KIM (Korean Institute of Materials), 2016.

4. Effect of Al, Sn, and Zn on Corrosion and Mechanical Behavior of the Ma-Ca Alloy, KIM (Korean Institute of Materials), 2015.
5. More than 10 Iranian Conferences

### **Books**

1. A. **Bahmani**, A. Baghani, SMH Mirbagheri. P. Davami. "Simulation of Casting Processes", Amir Kabir Pub,. 2017.
2. B. Nayebi, A. **Bahmani**, "10 Rules of Casting", Translation, 2013.
- 3.M. Shahedi, A. **Bahmani**, "Materials Science", 2013.
- 4.F. Anooshehpour, A. **Bahmani**, " Dilect of Pashand (A Village in Alborz Province)", Under Publication

### **REFERENCES**

Prof. Kwang Seon Shin, Seoul National University, [ksshin@snu.ac.kr](mailto:ksshin@snu.ac.kr)

Prof. Eun Soo Park, Seoul National University, [espark@snu.ac.kr](mailto:espark@snu.ac.kr)

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# Ahmad Bahmani

*Ph.D. Materials Science and Engineering*

## **Industrial Experience:**

- **Razi Metallurgical Research Center** (2007 - 2013)
  - Casting Design
  - Simulation Senior Expert (SUTCAST Simulation Development, Software Training)
  - Inspection of Various Scale Casting Parts
  - Test Documents Preparation
  - SUTCAST Tutorial Manual, Casting Design, Inspection

## **-Inspection**

- IS Industrie, Pipeline Products Inspection in South Korea ([www.isindustrie.com](http://www.isindustrie.com)) (2014~Present)
- IRICO, Products Inspection in South Korea (2015~Present)
- International Good Inspection Company ([igico.com](http://igico.com)) (2015~Present)
- Payesh Gostaran Pishro Co. ([www.pgpc.org](http://www.pgpc.org)) (2017)
- Iran Standard and Quality Inspection Company ([www.isqi.co.ir](http://www.isqi.co.ir)) (2016~Present)

## **Skills:**

- Good Knowledge about Metals and Materials (Steel, Cast Irons, Magnesium and Aluminum Alloys) Properties, and Processing
- Academic Fields: Casting, Deformation, Corrosion, Mechanical Properties, Texture Analysis, Casting Simulation, Surface Studies
- Techniques: SEM, XRD, EBSD, AFM, SKPFM, TEM,
- Simulation Software, Fluid Flow and Solidification, First Principle Calculations