

CURRICULUM VITAE

REZA MAHMUDI

Professor in Materials Engineering

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CURRENT GOOGLE SCHOLAR CITATION INDICES:

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EDUCATION:

Ph.D., Metallurgy and Materials Engineering (July 1987)

University of Birmingham, England.

M.Sc., Mechanical Engineering (Manufacturing) (July 1979)

University of Wisconsin-Madison, USA.

B.Sc., Metallurgical Engineering (July 1977)

Sharif University of Technology, Tehran, Iran.

ACADEMIC EXPERIENCE:

VISITING PROFESSOR

Department of Metals and Materials Engineering

University of British Columbia (UBC), Vancouver-Canada (January 2005–September 2005).

PROFESSOR

Department of Metallurgical and Materials Engineering

Tehran University, Tehran-Iran (May 2001-Present).

ASSOCIATE PROFESSOR

Department of Metallurgical and Materials Engineering

Tehran University, Tehran-Iran (June 1996-May 2001).

ASSISTANT PROFESSOR

Department of Metallurgical and Materials Engineering

Tehran University, Tehran-Iran (September 1989 - June 1996).

INSTRUCTOR

Department of Metallurgical Engineering, Isfahan University of Technology, Isfahan, Iran (September 1979 - September 1983).

TEACHING EXPERIENCE:

Undergraduate Courses:

- Structure and Properties of Metallic Materials
- Mechanical Properties of Materials
- Mechanical Behavior of Materials (at UBC, Canada)
- Metal Forming
- Manufacturing Processes
- Powder Metallurgy

Graduate Courses:

- Materials Selection for Engineering Design
- Formability and Workability of Metals
- Advanced Metal Forming

HONORS & AWARDS:

- 1- Winner of the Allameh Tabatabaei Prize (2025), assessed by the National Foundation of Elites.
- 2- Top 2% Scientist of the World (2023), assessed by the Stanford University.
- 3- Top 2% Scientist of the World (2022), assessed by the Stanford University.
- 4- Top 1% Scientist of the World (2020), assessed by the Stanford University.
- 5- Distinguished Researcher of Iran (2018)
- 6- Top 1% Researcher of the World (2015), assessed by the Stanford University.
- 7- Distinguished International Author of Tehran University (2013).
- 8- Distinguished Lecturer of Tehran University (2013).
- 9- Distinguished Research Scholar of Tehran University (2012).
- 10- Excellent Research Project Award of Tehran University (2002).
- 11- Selected Academic Staff of Tehran University (2002).
- 12- Selected Research Scholar of Tehran University (2000).
- 13- Recognized Research Scholar of Tehran University (1998).
- 14- Excellent Applied Research Project Award of Tehran University (1998).
- 15- Selected Academic Staff of the Faculty of Engineering (1994).
- 16- PhD scholarship from the Ministry of Higher Education, Iran (1983).
- 17- MSc scholarship from the Ministry of Higher Education, Iran (1977).

RESEARCH INTERESTS:

Mechanical Behavior of Structural Materials with specific interest in:

Microstructure-mechanical properties relationships; Mechanical properties and deformation behavior of fine-grained materials; Severe Plastic Deformation (SPD); Superplasticity; Strain-rate sensitivity; Creep; Small-scale testing techniques such as: Indentation and impression creep, and small shear punch testing of alloys and composites.

CURRENT RESEARCH PROJECTS:

- 1- Severe plastic deformation (ECAP, SSE, and MDF) of Mg alloys.
- 2- Indentation and impression creep of engineering materials.
- 3- Shear punch testing of engineering materials.
- 4- Superplasticity and hot deformation of Mg alloys.

ADVISING:

COMPLETED THESES

<u>Ph.D.:</u>	Advisor: 9	Co-Advisor: 5
<u>M.Sc.:</u>	Advisor: 85	Co-Advisor: 10
<u>B.Sc.:</u>	Advisor: 40	

Advisor for completed PhD (14):

- 1- Mehrdad Aghaie-Khafri, 1997
 - Dissertation: Forming behavior of AA8xxx aluminum sheets.
 - Publications: 7 Journal papers and 2 Conference presentations.
 - Current position: Professor, Khaje Nasireddin Toosi University of Technology, Tehran, Iran.
- 2- Abolfazl Rezaee-Bazzaz, 2005.
 - Dissertation: Creep behavior of engineering materials using indentation and impression techniques.
 - Publications: 6 Journal papers and 2 Conference presentations.
 - Current position: Associate Professor, Ferdowsi University of Mashhad, Mashhad, Iran.
- 3- Siamak Hossein Nedjad (Co-advisor with Professor Nili), 2005.
 - Dissertation: Control of microstructure and mechanical properties in cobalt-free maraging steels using melt processing and alloying elements.
 - Publications: 2 Journal papers and 1 Conference presentations.
 - Current position: Associate Professor, Sahand University of Technology, Tabriz, Iran.
- 4- Farshad Akbaripanah (Co-advisor with Dr. Fereshteh Saniee), 2012.
 - Dissertation: Effects of equal channel angular pressing on mechanical properties and microstructure of AZ80 and AM60 magnesium alloys.
 - Publications: 3 Journal papers and 1 Conference presentation.
 - Current position: Assistant Professor, Malayer University, Malayer, Iran.
- 5- Gholam Heydar Hasani, 2013.
 - Dissertation: An investigation on the formability of magnesium-tin-calcium sheets.
 - Publications: 3 Journal papers.
 - Current position: Consultant, Afghanistan Ministry of Industry, Kabul, Afghanistan.

6- Abdol Reza Geranmayeh, 2013.

- Dissertation: Mechanical properties, creep behavior, and microstructure of Mg-Al-Zn-Si magnesium alloys containing different alloying elements.
- Publications: 2 Journal papers.
- Current position: Assistant Professor, Islamic Azad University, Tehran, Iran.

7- Fariba Naghdi, 2015.

- Dissertation: Microstructure mechanical properties, and localized creep behavior of the Mg-Zn-Ca based alloy in the as-cast and extruded conditions.
- Publications: 6 Journal papers.
- Current position: Research Scientist, Power Research Center, Tehran, Iran.

8- Reza Alizadeh, 2015.

- Dissertation: Investigating superplasticity in wrought Mg-Gd alloys after severe plastic deformation processes.
- Publications: 8 Journal papers.
- Current position: Associate Professor, Sharif University of Technology, Tehran, Iran.

9- Naeimeh Fakhar (Co-advisor with Dr. Fereshteh Saniee), 2016.

- Dissertation: Superplastic forming of magnesium and aluminum alloys.
- Publications: 4 Journal papers.
- Current position: Assistant Professor, Hamadan University of Technology, Hamadan, Iran.

10- Nazanin Bayat-Tork (Co-advisor with Dr. Saghafian and Dr. Razavizadeh) , 2016.

- Dissertation: Effect of Aluminum and Gadolinium additions on the microstructure and mechanical behavior of magnesium using the simple shear extrusion (SSE) method.
- Publications: 4 Journal papers.
- Current position: Speira Aluminium Rolling and Recycling Company, Germany.

11- Reyhaneh Khorshidi (Co-advisor with Dr. Honarbakhsh-Raouf), 2017.

- Dissertation: Evaluation of microstructure, mechanical properties, and creep behavior of the Al-Mg₂Si in situ composites containing Gd and Se elements.
- Publications: 3 Journal papers and 1 Conference presentation.
- Current position: Research Scientist, Nanotechnology Research Center, Tehran, Iran.

12- Mohammad Mehdi Hoseini-Athar, 2019.

- Dissertation: Microstructure and mechanical properties of Mg-Gd-Zn sheets processed by constrained groove pressing.
- Publications: 6 Journal papers.
- Current position: Research Scientist, KTH, Stockholm, Sweden.

13- Mehdi Sabbaghian, 2020.

- Dissertation: Microstructure, mechanical properties, and biodegradability of Mg-Zn alloys containing Gd and Mn.
- Publications: 6 Journal papers.
- Current position: Assistant professor of Materials Engineering, University of Tehran, and Research Scientist, IMDEA Materials Institute, Madrid, Spain.

14- Alireza Rezaei, 2021.

- Dissertation: Microstructure, mechanical properties, and superplasticity of Mg-Gd-Y-Ag alloys after simple shear extrusion
- Publications: 7 Journal papers.
- Current position: Research Scientist, IMDEA Materials Institute, Madrid, Spain.

Advisor for selected completed MSc (9):

1- Reza Mohammadi, 1999.

- Dissertation: Ductile tearing energy of sheet metals determined by multiple tensile testing (MTT) method.
- Publications: 3 Journal papers.
- Current position: Associate Professor, Virginia Commonwealth University, USA.

2- Panthea Sepehrband, 2003.

- Dissertation: Effects of Zr addition on the aging behavior of A319 aluminum cast alloy.
- Publications: 2 Journal papers.
- Current position: Associate Professor, Santa Clara University, USA.

3- Hadi Noori, 2005.

- Dissertation: Prediction of forming limit diagrams for sheet metals.
- Publications: 2 Journal papers.
- Current position: Assistant Professor, Oklahoma State University, USA.

4- Seyyed Morteza Masoudpanah, 2007.

- Dissertation: Effect of rare earth and calcium additions on the microstructure and mechanical properties of AZ31 magnesium alloy processed by ECAP.
- Publications: 4 Journal papers.
- Current position: Assistant Professor, Iran University of Science and Technology, Iran.

5- Farhoud Kabirian, 2008.

- Dissertation: The effect of rare earth elements and zirconium on the creep behavior of magnesium alloy AZ91.
- Publications: 5 Journal papers and 1 Conference paper.
- Current position: Material Scientist, Simpson Gumpertz and Heger Inc., USA.

6- Mahdi Habibnejad-Korayem, 2008.

- Dissertation: Characterization of physical and mechanical properties of Mg-based nano-composites produced via casting method.
- Publications: 3 Journal papers.
- Current position: Research Scientist, General Electric, Canada.

7- Babak Kondori, 2009.

- Dissertation: Investigation of the effect of Ca and Sb additions on creep behavior of AM60 magnesium alloy.
- Publications: 3 Journal papers.
- Current position: Research Associate, Texas A&M University, USA.

8- Ghazal Nayyeri, 2009.

- Dissertation: Investigation of the effect of Ca and Sb additions on creep behavior of Mg-5Sn magnesium alloy
- Publications: 7 Journal papers and 3 Conference presentations.
- Current position: Research Associate, University of British Columbia, Vancouver, Canada.

9- Mostafa Karami, 2012.

- Dissertation: The microstructure, anisotropy, and mechanical properties of the extruded and ECAPed Mg-Li alloys.
- Publications: 6 Journal papers.
- Current position: Assistant Professor, Sharif University of Technology, Iran.

CURRENT STUDENTS:

<u>Ph.D.:</u> Advisor: 1	Co-Advisor: 1
<u>M.Sc.:</u> Advisor: 4	Co-Advisor: 4

ACADEMIC & EXECUTIVE SERVICES:

Major University Services:

- 1- Head, School of Metallurgical and Materials Engineering, Tehran University (1992-1994).
- 2- Research Deputy, School of Metallurgical and Materials Engineering, Tehran University (1990-1992) and (1999-2004).
- 3- Teaching Deputy, School of Metallurgical and Materials Engineering, Tehran University (1994-1996).
- 4- Member of the Promotion Committee of Tehran University (2003-present).
- 5- Head, Graduate School of Materials Engineering, Azad University (1994-2018).

Membership in Academic Societies:

- 1- Member of the Iran Academy of Sciences (2008-present).
- 2- Member of the Engineering Committee of Iran National Science Foundation, INSF (2007-2011).
- 3- Member of the board, Iranian Society of Metallurgical Engineers (1996-2002).

Membership in Editorial Boards of Journals:

- 1- "Materials Science and Engineering A" Elsevier.
- 2- "Journal of Magnesium and Alloys" Elsevier.
- 3- "Current Nanomaterials" Bentham Science.
- 4- "Journal of Innovations in Materials and Manufacturing Engineering" Scilight Press.
- 5- "Iranian Journal of Materials Science and Engineering" IUST, Iran.
- 6- "Iranian Journal of Materials Forming" Shiraz University, Iran
- 7- "Metallurgical Engineering", Iranian Metallurgical Society, Iran.

Journal Reviews:

Materials Science and Engineering A, Metallurgical and Materials Transactions A, Scripta Materialia, Journal of Alloys and Compounds, Materials & Design, Materials Characterization, Journal of Materials Science, Journal of Materials Science: Materials in Electronics, Journal of Electronic Materials, Materials Science and Technology, Journal of Materials Science and Technology, Journal of Materials Engineering and Performance, Philosophical Magazine &

Philosophical Magazine Letters, Tribology International, Advanced Engineering Materials, Materials Letters, Transactions of Nonferrous Metals Society of China, Soldering & Surface Mount Technology, Journal of Materials Research, Acta Metallurgica Sinica, Metals and Materials International, International Journal of Materials Research, Composites Science and Technology, Chinese Journal of Aeronautics, Materials Chemistry and Physics, Journal of Materials Processing Technology.

INDUSTRIAL EXPERIENCE:

Scientific Advisor - Supervising selection and testing of different materials used in the construction of mechanical systems. Materials Lab., Ministry of Commerce, Iran (1995-2004).

Research Scientist : Conducting analysis and testing of strip-cast aluminum alloy sheets for applications in sheet and foil gages. Aluminum Pars Company, Iran (1992- 2002).

Head of Research & Development: Supervising different research projects for the production of new 8xxx series aluminum alloy sheets. Aluminum-Pars Company, Iran (March 1988 – September 1990).

RESEARCH GRANTS:

- 1- "Microstructure, mechanical properties and superplastic behavior of fine- and ultra-fine-grained Mg-Gd Alloys", *Iran National Science Foundation, (INSF), Tehran, Iran.*
- 2- "Microstructural inhomogeneity and anisotropic mechanical properties of ZK60 Mg alloy after severe plastic deformation of multi-directional forging", *Iran National Science Foundation, (INSF), Tehran, Iran.*
- 3- "Ultra-high Strength Mg-Gd-Y-Zr magnesium alloys", *Iran National Science Foundation, (INSF), Tehran, Iran.*
- 4- "Development, Processing, and Characterization of Fine-Grained Superlight Magnesium-Lithium Alloys", *Iran National Science Foundation, (INSF), Tehran, Iran.*
- 5- "Development and creep-resistance magnesium alloys", *Iran National Science Foundation, (INSF), Tehran, Iran.*
- 6- "Creep Behavior of Lead-Free Solders for Microelectronic Packaging", *Iran National Science Foundation, (INSF), Tehran, Iran.*
- 7- "Manufacturing of Grooved Contact Wire", *National Railway Company, Tehran, Iran.*
- 8- "Optimization of Manufacturing Processes for the Production of High Strength Aluminum Rivets", *Parch-Saz Company, Tehran, Iran.*
- 9- "Processing of Roll-Cast AA3004 for Can-Stock", *Aluminum-Pars Company, Saveh, Iran.*
- 10- "Mechanical Properties and Forming Behavior of 8xxx Series Aluminum Alloys", *Aluminum-Pars Company, Saveh, Iran.*
- 11- "An Investigation on the Cu-0.1%Fe Radiator-fin Alloy", *Shahid Bahonar Copper Company, Kerman, Iran.*
- 12- "Effects of Iron and Sulfur Impurities on Mechanical Properties and Formability of Copper and Brass Sheets", *Shahid Bahonar Copper Company, Kerman, Iran.*
- 13- "An Investigation of Defects in Rolled Brass Products", *Shahid Bahonar Copper Company, Kerman, Iran.*
- 14- "Effect of Plastic Deformation on Surface Roughness of Copper and Brass Sheets", *Shahid*

- Bahonar Copper Company, Kerman, Iran.*
- 15- "Optimization of mechanical properties of AISI 4130 steel by gas quenching", *Ministry of Heavy Industries, Tehran, Iran.*
 - 16- "Aluminum Seamless Tubes for Pressurized Irrigation Systems", *Ministry of Agriculture, Tehran, Iran.*
 - 17- "Optimization of Casting, Heat Treatment and Forging Processes for Tube and Profile Forming Dies", *Sadid Industrial Group, Tehran, Iran.*

RESEARCH GRANTS FROM UNIVERSITY:

- 1- Creep behavior of AZ61 magnesium alloy.
- 2- Structure and formability of Mg-Sn sheets.
- 3- Strain inhomogeneity in the cold drawn wires.
- 4- Effects of Zr additions on the aging behavior of cast Al-Si alloys.
- 5- Indentation and impression creep of engineering materials.
- 6- Investigation of plastic strain ratio in sheet metals.
- 7- Effects of homogenization on formability of aluminum sheets.
- 8- Indentation creep of lead-base alloys.
- 9- Deformation behavior of Pb-Sn-Sb alloys.
- 10- Tearing energy of sheet metals during uniaxial tensile deformation.
- 11- Effect of cryogenic treatments on the wear of M2 high-speed steel.
- 12- Wear behavior of self-lubricating bearings.
- 13- Plastic instability during tensile deformation of aluminum alloy sheets.
- 14- Control of earing in deep drawing of AA3003 aluminum alloy sheet.

PUBLICATIONS:

BOOK:

R. Mahmudi and A. Tahmasbi, Translation of "**Light Alloys, by: I.J. Polmear**", *Arkan Publications* (2001) Isfahan-Iran.

PEER REVIEWED JOURNAL PAPERS:

- 1- M. Sabbaghian, N. Fakhar, J. Mola, R. Mahmudi, J.J. Sidor, K. Mukhtarova, and J. Gubicza, "**Serrated shear flow in AA5083 alloy refined by dual equal channel lateral extrusion process**", *Metals and Materials International*, In press.
- 2- Z. Savaedi, H. Mirzadeh, R. Mehdiavaz Aghdam, and R. Mahmudi, "**Enhancing stress corrosion cracking resistance of biodegradable Mg-Zn-Zr alloy by rare-earth element addition**", *Materials Science and Technology*, In press.

- 3- P. Mahmoud-Kalayeh, M. Malekan, H. Mirzadeh, M. Roostaei, I. Weißensteiner, A. Bahmani, M. Emamy, and R. Mahmudi, **“Improved mechanical properties of Mg-Ni-Y alloys via thermomechanical processing”**, *Metals and Materials International*, In press.
- 4- A. Eftetahi and R. Mahmudi, **“Enhancing stretch formability of an AZ31 magnesium alloy sheet via differential heating of the punch and die”**, *Journal of Materials Research and Technology*, **42** (2025) 591–597.
- 5- M.J. Sohrabi, S. Sadeghpour, M.S. Mehranpour, A. Kalhor, M. Zolfipour Aghdam, F. Hasanabadi, H. Mirzadeh, K. Rodak, R. Mahmudi, H.S. Kim, **“Coupling metastability engineering and martensite strengthening in Si-alloyed AISI 304L stainless steel toward enhanced strength-ductility synergy”**, *Materials and Design*, **263** (2026) 115623.
- 6- A. Kalhor, M.J. Sohrabi, S. Sadeghpour, M. Mobasheri, H. Mirzadeh, K. Rodak, and R. Mahmudi, **“Evaluation of the work-hardening behavior of austenitic stainless steels by miniature testing techniques”**, *Journal of Materials Engineering and Performance*, **35** (2026) 5091–5099.
- 7- M.S. Mehranpour, M.J. Sohrabi, A. Kalhor, A. Heydarinia, S. Sadeghpour, H. Mirzadeh, K. Rodak, K. Radwański, R. Mahmudi, and H.S. Kim, **“Extraordinary strength-ductility synergy in a novel high-entropy alloy via coupling multiple strengthening mechanisms”**, *Intermetallics*, **189** (2026) 109094.
- 8- M. Ramezani, H. Mirzadeh, F. Khodabakhshi, R. Mahmudi, and P. Oslanec, **“Constitutive modeling of flow stress during hot shear deformation of additively manufactured AlSi10Mg aluminum alloy”**, *Progress in Additive Manufacturing*, **11** (2026) 391–409.
- 9- Sh. Arbabi, M. Sabbaghian, and R. Mahmudi, **“Stress corrosion cracking and bio-corrosion behavior of the extruded Mg–TiO₂ composites”**, *Materials Today Communications*, **49** (2025) 113922.
- 10- A. Rezaei, R. Mahmudi, and R. Loge, **“Dynamic recrystallization and strengthening mechanisms in a magnesium alloy processed by severe plastic deformation”**, *Journal of Magnesium and Alloys*, **13** (2025) 5600–5623.
- 11- N. Pourhasan, M. Sabbaghian, F. Pishbin, and R. Mahmudi, **“Enhanced corrosion behavior and SCC resistance of a cast Mg–0.4Zr alloy after hot extrusion”**, *Journal of Materials Research and Technology*, **39** (2025) 585–596.
- 12- A. Rezaee-Bazzaz and R. Mahmudi, **“Estimating creep behavior of a superplastic alloy using the phenomenological continuum damage theory”**, *Journal of Materials Engineering and Performance*, **34** (2025) 22807–22812.
- 13- R. Mahmudi, P. Seraji, and A.R. Geranmayeh **“Enhancing high-temperature mechanical properties and creep resistance of a cast Mg-6Zn-3Cu alloy by minor Cr addition”**, *Journal of Materials Research and Technology*, **38** (2025) 6191–6197.

- 14- S. Aghajani, R. Alizadeh, and R. Mahmudi, “**Enhancing room-temperature mechanical properties and creep resistance of pure zinc through magnesium alloying**”, *Journal of Materials Research and Technology*, **38** (2025) 3159–3163.
- 15- Sh. Arbabi, H.M. Ghasemi, and R. Mahmudi, “**Tribological behavior of Mg–3.5 vol% TiO₂ composite at room and elevated temperatures tress**”, *Journal of Materials Research and Technology*, **38** (2025) 1879–1889.
- 16- M. Roostaei, M.J. Sohrabi, S. Wurster, O. Renk, A. Kalhor, M. Mobasheri, H. Mirzadeh, F. Spieckermann, K. Rodak, R. Mahmudi, R. Pippan, “**Achieving strength-ductility synergy in AISI 904L superaustenitic alloy through severe plastic deformation and post-deformation annealing**”, *Materials Science and Engineering A*, **935** (2025) 148382.
- 17- S. Mirzamohammadi, H. Mirzadeh, and R. Mahmudi, “**Effect of intercritical annealing time and processing route on the tensile and shear mechanical properties of dual-phase (DP) steel**”, *Journal of Materials Research and Technology*, **37** (2025) 4372–4381.
- 18- M. Maghzi, H. Mirzadeh, and R. Mahmudi, “**Temperature-dependent mechanical properties of as-cast Mg-Gd-Zr alloys evaluated by shear punch testing**”, *Journal of Materials Research and Technology*, **36** (2025) 417–423.
- 19- M. Sabbaghian, R. Mahmudi, and K.S. Shin, “**Correlation between microstructural features and corrosion resistance in a fine-grained severely deformed biodegradable Mg–4Zn alloy**”, *Metals and Materials International*, **31** (2025) 1025–1039.
- 20- A.R. Geranmayeh, S.M. Ashrafizadeh, and R. Mahmudi, “**Microstructural stability and softening resistance of cast AZ81 and AZ81+1RE magnesium alloys**”, *Journal of Materials Research and Technology*, **35** (2025) 3937–3944.
- 21- M. Maghzi, H. Mirzadeh, and R. Mahmudi, “**Grain refinement and improved mechanical properties of as-cast Mg-3Gd alloy by Zr addition**”, *Journal of Materials Research and Technology*, **35** (2025) 2346–2353.
- 22- M.J. Sohrabi, S. Sadeghpour, M.S. Mehranpour, A. Kalhor, M. Roostaei, H. Mirzadeh, K. Rodak, Ch. Dehghanian, R. Mahmudi, H.S. Kim, “**Mitigating the adverse effect of grain refinement on the ductility of a metastable high-entropy alloy**”, *Applied Materials Today*, **42** (2005) 102605.
- 23- A. Aallami, A.R. Geranmayeh, and R. Mahmudi, “**Impression creep of a cast Ag-doped AZ91 magnesium alloy**”, *Materials Science and Engineering A*, **921** (2025) 147599.
- 24- Sh. Arbabi, H. Noori, and R. Mahmudi, “**Impression creep of extruded Mg-TiO₂ composites prepared by powder metallurgy**”, *Materials Today Communications*, **41** (2024) 110896.
- 25- A. Mansouri, H.M. Ghasemi, M. Heydarzadeh-Sohi, and R. Mahmudi, “**A comparative study on tribological and mechanical behavior of as-cast and aged Mg-6Gd-2Ag-**

- 0.6Zr alloy at elevated temperatures”, *Journal of Materials Research and Technology*, 33 (2024) 9415–9425.**
- 26- M.J. Sohrabi, H. Mirzadeh, S. Sadeghpour, R. Mahmudi, A. Kalhor, K. Rodak, H.S. Kim, **“Remarkable cryogenic strength and ductility of AISI 904L superaustenitic stainless steel”**, *Metallurgical and Materials Transactions A*, **55** (2024) 4310–4317.
 - 27- M.J. Sohrabi, S. Sadeghpour, M.S. Mehranpour, A. Kalhor, H. Mirzadeh, K. Rodak, R. Mahmudi, H.S. Kim, **“Remarkable mechanical properties at room and cryogenic temperatures in a metastable high-entropy system through BCC and HCP martensitic transformations”**, *Materials Science and Engineering A*, **915** (2024) 147245.
 - 28- M.S. Mehranpour, M.J. Sohrabi, J.H. Lee, A. Heydarinia, A. Kalhor, H. Mirzadeh, S. Sadeghpour, K. Rodak, M. Nili-Ahmadabadi, R. Mahmudi, H.S. Kim, **“Exceptional strength-ductility synergy in the novel metastable FeCoCrNiVSi high-entropy alloys via tuning the grain size dependency of the transformation-induced plasticity effect”**, *International Journal of Plasticity*, **182** (2024) 104115.
 - 29- M.J. Sohrabi, M.S. Mehranpour, A. Heydarinia, A. Kalhor, J.H. Lee, H. Mirzadeh, R. Mahmudi, M.H. Parsa, K. Rodak, and H.S. Kim, **“Deformation-induced martensitic transformation kinetics in in TRIP-assisted steels and high-entropy alloys”**, *Acta Materialia*, **280** (2024) 120354.
 - 30- S. Mohammadzahi, H. Mirzadeh, and R. Mahmudi, **“Shear mechanical properties of AISI 316L stainless steel processed by unidirectional/cross rolling and annealing treatment”**, *Materials Chemistry and Physics*, **327** (2024) 129928.
 - 31- M. Sohrabi, H. Mirzadeh, S. Sadeghpour, M.Z. Aghdam, A.R. Geranmayeh, and R. Mahmudi, **“Interplay between temperature-dependent strengthening mechanisms and mechanical stability in high-performance austenitic stainless steels”**, *International Journal of Minerals, Metallurgy and Materials*, **31** (2024) 2182–2188.
 - 32- M. Sohrabi, H. Mirzadeh, S. Sadeghpour, A.R. Geranmayeh, and R. Mahmudi, **“Temperature-jump tensile tests to induce optimized TRIP/TWIP effect in a metastable austenitic stainless steel”**, *International Journal of Minerals, Metallurgy and Materials*, **31** (2024) 2025–2036.
 - 33- S. Mohammadzahi, M. Roostaei, H. Mirzadeh, and R. Mahmudi, I. Weißensteiner, **“Effect of cold rolling route and reversion annealing on the microstructure and mechanical properties of AISI 316L stainless steel”**, *Materials Characterization*, **214** (2024) 114072.
 - 34- A. Zergani, H. Mirzadeh, and R. Mahmudi, **“Annealing of an austenitic stainless steel deformed under shear loading”** *Metallography, Microstructure and Analysis*, **13** (2024) 436–442.
 - 35- M. Asadollahi, R. Alizadeh, R. Mahmudi, S. Labbaf, S.K. Sadrnezhad, and M. Attari, **“Using solution heat treatment and severe plastic deformation to improve the mechanical, corrosion, and biological properties of an Mg–2Zn–0.2Ag alloy”**, *Metals*

and Materials International, **30** (2024) 1538–1555.

- 36- A.R. Geranmayeh and R. Mahmudi, “**Strain rate sensitivity measured from different continuous macro-indentation methods**”, *JOM*, **76** (2024) 2929–2935.
- 37- P. Mahmoud Kalayeh, H. Mirzadeh, M. Malekan, M. Emamy, and R. Mahmudi, “**Improved hardness of Mg-0.5Ni-xY alloys via grain refinement and formation of LPSO structures**”, *Journal of Materials Research and Technology*, **30** (2024) 6829–6835.
- 38- M. Sabbaghian, and R. Mahmudi, “**MicroArt: Grain boundary Pinning**”, *Metallography, Microstructure, and Analysis*, **13** (2024) 191.
- 39- M.J. Sohrabi, H. Mirzadeh, M. Roostaei, F. Spieckermann, A.R. Geranmayeh, and R. Mahmudi, “**Effect of sigma (σ) phase precipitation on the recrystallization kinetics of AISI 904L superaustenitic stainless steel**”, *Vacuum*, **220** (2024) 112830.
- 40- P. Mahmoud Kalayeh, A.H. Asadi, H. Mirzadeh, M. Malekan, M. Emamy, and R. Mahmudi, “**Tailoring the microstructure and mechanical properties of LPSO-containing Mg-Ni cast alloy by yttrium addition**”, *Journal of Materials Research and Technology*, **28** (2024) 744–751.
- 41- M.J. Sohrabi, H. Mirzadeh, S. Sadeghpour, and R. Mahmudi, “**Johnson–Mehl–Avrami–Kolmogorov (JMAK) analysis of deformation-induced martensitic transformation in AISI 304L stainless steel**”, *Iranian Journal of Materials Science and Engineering*, **20** (2023) 1–9.
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