

Akram Salehi



Date of Birth: 17 March 1988

Marital status: Married

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RESERCH INTEREST

- Nanocomposite materials
- Porous materials
- Additive manufacturing
- Biomaterials

EDUCATION

- 2011 - 2013
M.Sc. Of Materials Engineering, Ferdowsi University of Mashhad, Iran.
Topic of thesis: "Production of Aluminum Foam with SiO₂ Nanoparticles using Ultrasonic Technique and Evaluation of Structure and Properties of Produced Nanocomposite Foam"
GPA: 17.80/20
- 2007 - 2011
Bachelor Degree Of Materials Engineering, Ferdowsi University of Mashhad, Iran.
Topic of thesis: "Structural study of spherical graphites in unbreakable cast iron"
GPA: 15.78/20

HONORS And AWARDS

- Third rank of Kharazmi International Festival** 2021
"Localization of internal silencer for gas pressure reduction lines"
- "Grade 3 Invention" in the National Elite Foundation** 2016
In the Festival of Regional Inventions and Initiatives
- Admission as brilliant talents in the master's degree** 2011
Ferdowsi University of Mashhad, Iran.
- Top researcher** 2010
Ferdowsi University of Mashhad, Iran.

RESEARCH SKILLS

- Manufacturing composite and nanocomposite foams by different methods of powder metallurgy, additive manufacturing, casting and electrodeposition
- Manufacturing porous dental implants by SLM technique
- Nanocomposite production and evaluation
- Surface coating by dip-coating method

BOOK

- Engineering and application of biomaterials in medicine (In Persian) 2018

PATENTS

- Production of porous dental implants by 3D printing method (In Persian) 2021
- Production of open porosity metal foam as an internal silencer for use in gas pressure reducing stations (In Persian) 2021
- Production of porous implants with irregular structure by SLM method (In Persian) 2021
- Production of open porosity foam by two layers of nickel / aluminum by electrochemical technique on the aluminum foam substrate (In Persian) 2017

RESEARCH PAPERS

- Production of nickel open porosity foam using electrochemical deposition and welding in liquid phase (In Persian) 2017
 - Production of porous titanium implants coated with fluoride hydroxyapatite for medical applications (In Persian) 2015
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1. Evaluation of fluorohydroxyapatite/strontium coating on titanium implants fabricated by hydrothermal treatment (Progress in Biomaterials, 10, 185-194, 2021)
A. Moloodi, H. Toraby, S. Kahrobaee, M. Kafaie Razavi, **A. Salehi (Corresponding Author)**
 2. Y-TZP Al₂O₃ SiO₂ nanocomposites for restorative dentistry applications (International Journal of Materials Engineering and Technology, 19, 17-33, 2020)
H. Nojehdehian, H. Amini Mashhadi, H.R. Rahimi, **A. Salehi (Corresponding Author)**
 3. An Investigation of the Effect of Sintering Conditions on the Mechanical Behavior of Electroplated Nickel Foams (Metallurgical and Materials Transactions B, 50, 1988-1996, 2019)
F. Barzegar, **A. Salehi (Corresponding Author)**, A. Moloodi
 4. The effect of sintering condition on microstructural and mechanical properties of porous Nickel (International Journal of Materials Science Forum, 933, 11-16, 2018)
A. Salehi, A. moloodi, F. Barzegar, J. Mirabbasi
 5. Mechanical Evaluation of Titanium Scaffolds for Orthopedic Implants (International Journal of Materials Science Forum, 933, 277-281, 2018)
A. Salehi, H. AminiMashhadi, M.S. Abravi, F. Barzegar, S. Nokhasteh, M. Mahdavi
 6. An investigation of the effect of sintering condition on the strength of Ni foam produced by electroplating method (Journal of Advanced Processing in Materials Engineering, 12, 91-102, 2018) (In Persian)
A. Salehi, F. Barzegar, A. Moloodi
 7. Effects of Milling and Heat Treatment on the Synthesis of NiTi Powders (Journal of Wuhan University of Technology-Materials Science Edition, 32, 1156-1161, 2017)
A.R. Sadeghi, H. Mostajabodaveh, M.S. Abravi, A. Babakhani, S.M. Zebarjad, **A. Salehi (Corresponding Author)**
 8. Influence of pore characteristics on electrochemical and biological behavior of Ti foams (Journal of Materials Engineering and Performance, 26, 3756-3766, 2017)
A. Salehi, F. Barzegar, H. AminiMashhadi, S. Nokasteh, M.S. Abravi
 9. Influence of mechanical alloying and preheating on fabrication of NiTi alloy by combustion synthesis (the Journal of Iranian Metallurgical Engineering Society, 9, 85-91, 2016) (In Persian)
A.R SadegiAvalShahr, H. Mostajab o daveh, A. Babakhani, M. Zebarjad, **A. Salehi (Corresponding Author)**
 10. Production of Al-SiO₂ nanocomposites using ultrasonic waves and stir casting techniques (Journal of Advanced Processing in Materials Engineering, 2, 59-68, 2016) (In Persian)
A. Salehi, A. Babakhani, S.M. Zebarjad
 11. Microstructural and mechanical properties of Al-SiO₂ nanocomposite foams produced by ultrasonic technique (Journal of Materials Science and Engineering A, 638, 54-59, 2015)
A. Salehi, A. Babakhani, S. Mojtaba Zebarjad
 12. An ultrasound-assisted method on the formation of nanocrystalline fluorohydroxyapatite coatings on titanium scaffold by dip coating process (Procedia Materials Science, 11, 137-141, 2015)
A. Salehi, H. Amini Mashhadi, M.S. Abravi, H. R. Jafarian
 13. Investigation of the effect of welding time on the structural and mechanical properties of NiTi alloy (the Journal of Iranian Metallurgical Engineering Society, 59, 23-33, 2015) (In Persian)
A.R SadegiAvalShahr, **A. Salehi (Corresponding Author)**, H. Mostajab o daveh, M.S. Abravi, A. Babakhani, M. Zebarjad
 14. Investigation of the structural properties, compressive properties and energy absorption in aluminum nanocomposite foams reinforced with silicon oxide nanoparticles (Journal of Advanced Processing in Materials Engineering, 1, 113-123, 2015) (In Persian)
A. Salehi, A. Babakhani, S.M. Zebarjad

CONFERENCE PAPERS

15. Microstructural study of aluminum nanocomposite foam reinforced with silicon oxide nanoparticles produced using ultrasonic waves (Journal of New Materials, 4, 1-12, 2014) (In Persian)
[A. Salehi](#), S.M. Zebarjad, A. Babakhani, M.S. Abravi
 16. Investigation of internal structure of spherical graphites in ductile iron with ferrite background by electron microscopy and probe (Journal of New Materials, 2, 55-60, 2010) (In Persian)
[A. Salehi](#), A.R. KianiRashid, S. Sefidmoo
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1. Investigation of the effect of adding surface porosity on the mechanical properties of dental implants (4th International Engineering Materials and Metallurgy Conference (iMat2021), 2021) (In Persian)
[A. Moloodi](#), F. Barzegar, H. AminiMashhad, [A. Salehi \(Corresponding Author\)](#)
 2. Investigation of the effect of surface porosity on the cell adhesion of dental implants (10th International Engineering Materials and Metallurgy Conference, iMat2021) (In Persian)
[A. Moloodi](#), F. Barzegar, H. AminiMashhad, [A. Salehi \(Corresponding Author\)](#)
 3. Investigation of the effect of density on the compressive properties of the nickel foams produced by electrochemical technique (First National Conference on New Materials, 2021) (In Persian)
[M. Jafari](#), F. Barzegar, [A. Moloodi](#), [A. Salehi \(Corresponding Author\)](#), H. AminiMashhadi
 4. Fabrication and evaluation of porous Ti6Al4V implants produced by 3D printer method for medical applications (9th International Engineering Materials and Metallurgy Conference, iMat2020) (In Persian)
[A. Salehi](#), [A. Moloodi](#), H. AminiMashhad, F. Barzegar
 5. Characterization of porous titanium implants produced by 3D printer technique (6th Cellular Materials – CellMAT 2020)
[A. Salehi](#), [A. Moloodi](#), H. Amini Mashhadi, F. Barzegar
 6. The microhardness and microstructure studies on the sintered open-cell nickel foam (6th Cellular Materials – CellMAT 2020)
[A. Salehi](#), [A. Moloodi](#), H. AminiMashhadi, F. Barzegar
 7. Investigation of hydrothermal treatment conditions in the fabrication of fluorohydroxyapatite coatings synthesized by sol-gel method (6th International Engineering Materials and Metallurgy Conference, iMat2017) (In Persian)
[A. Salehi](#), H. Torabimand, S. Kahrobaee, M. Kafeae, [A. Moloodi](#)
 8. Comparison of microstructure of nickel foam produced by electrochemical deposition method on the polyurethane foam substrate and aluminum foam substrate (6th International Engineering Materials and Metallurgy Conference, iMat2017) (In Persian)
[A. Salehi](#), [A. Moloodi](#), F. Barzegar, J. Mirabbasi
 9. Effect of the temperature on the production of nickel open cell foam by electrochemical deposition on polymer substrates (5th International Engineering Materials and Metallurgy Conference, iMat2016) (In Persian)
[A. Moloodi](#), [A. Salehi \(Corresponding Author\)](#), F. Barzegar, J. Mirabbasi
 10. Investigation of morphological and biocompatibility of titanium scaffolds produced by powder metallurgy technique (5th International Engineering Materials and Metallurgy Conference, iMat2016) (In Persian)
[A. Salehi](#), S. Nokhasteh, H. Amini Mashhadi, F. Barzegar, M. S. Abravi
 11. The response of osteoblasts to nanocrystalline coated fluorohydroxyapatite thin films on Ti scaffolds (Proceedings of the 6th International Conference on Nanostructures (ICNS6), 2016)
[A. Salehi](#), S. Nokhasteh, M.S. Abravi, H. AminiMashhadi, F. Barzegar
 12. Using powder metallurgy technique on the manufacturing Ti scaffolds with different cell sizes and evaluation of their properties (4th International Engineering Materials and Metallurgy Conference, iMat2015) (In Persian)
[A. Salehi](#), M. S. Abravi, H. Amini Mashhadi
 13. Mechanochemical synthesis of TiN(Al) nanostructured solid solution (5th International Biennial Conference on Ultrafine Grained and Nanostructured Materials, UFGNSM15, 2015)

14. An ultrasound-assisted method on the formation of nanocrystalline fluorohydroxyapatite coatings on titanium scaffold by dip coating process (5th International Biennial Conference on Ultrafine Grained and Nanostructured Materials, UFGNSM15, 2015)
A. Salehi, H. Amini Mashhadi, M.S. Abravi, H.R. Jafarian
15. Fabrication and inspection of titanium scaffolds coated with nano fluorohydroxyapatite (12th General-Student Conference on Materials and Metallurgy Engineering of Iran, 2015) (In Persian)
A. Salehi, M.S. Abravi, H. Amini Mashhadi
16. Investigation of the effect of powder metallurgy process on the synthesis of NiTi alloy powder (12th General-Student Conference on Materials and Metallurgy Engineering of Iran, 2015) (In Persian)
A.R. SadegiAvalShahr, H. Mostajab O Daveh, **A. Salehi (Corresponding Author)**, M.S. Abravi, A. Babakhani, S.M. Zebarjad
17. Investigation of the microstructure and morphology of spherical graphites in ductile iron with ferrite background by light and electron microscopy (4th International Engineering Materials and Metallurgy Conference, iMat2015) (In Persian)
A.R. KianiRashid, **A. Salehi (Corresponding Author)**, S. Sefidmoo
18. On the manufacturing of porous titanium scaffolds used in orthopedic implants and evaluation of their mechanical properties (3rd International Engineering Materials and Metallurgy Conference, iMat2014) (In Persian)
A. Salehi, M. S. Abravi, H. Amini Mashhadi
19. Investigation on mechanical properties of Al-SiO₂ nanocomposites fabricated by ultrasonic and stir casting techniques (Proceedings of Iran International Aluminum Conference, 2014) (In Persian)
A. Salehi, A. Babakhani, S. Mojtaba Zebarjad
20. Al-SiO₂ nanocomposite foam Production by ultrasonic technique using pure and heat treated TiH₂ foaming agent (3th International Engineering Materials and Metallurgy Conference, iMat2014) (In Persian)
A. Salehi, A. Babakhani, S. Mojtaba Zebarjad
21. Fabrication of Al-SiO₂ nanocomposite foams using ultrasonic waves and stir castings methods and investigation of structural defects created in the process (Nanoscience and Technology Conference, 2014) (In Persian)
A. Salehi, A. Babakhani, S.M. Zebarjad

WORK EXPERIENCE

- Researcher of Materials Research Group in ACECR Since 2014

COURSES and CERTIFICATIONS

- Preliminary Photoshop
 - MIP
 - Mendeley
 - ISO9001 quality management system requirements
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