Curriculum Vitae

Anousheh Zargar Kharazi

Associated Professor

Isfahan University of Medical Sciences (MUI)

School of Advanced Technologies in Medicine Department of biomaterials, tissue engineering and nano technology, Isfahan University of Medical Sciences

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Education

- **PhD in Biomedical Engineering- biomaterials 2012**

School of Materials engineering, Isfahan University of technology,

PhD Thesis Title: "Design and fabrication a partially resorbable composite bone plate for orthopedic applications"

Supervisor: Dr. M.H. Fathi

- **M.Sc. in Biomedical Engineering – Biomechanics 1998**

M.Sc. Thesis Title: "Design of an intervertebral disc prosthesis"

Supervisor: Dr. M. Haghpanahi

- **B.Sc. in mechanical Engineering –Heat and Fluids 1994**

Academic Employment

- **Associated Professor, Administrator on Technology Development at MUI** *Isfahan University of Medical Sciences, Isfahan, Iran***,** (2018-2021),

- **Assistant Professor, deputy in Administrative and Financial Affairs**, *Department of Advanced Medical Technologies, Isfahan University of Medical Sciences, Isfahan, Iran***,** (2013-2017)

Research Interests

- Drug Delivery and Control Released Systems
- Tissue Engineering (vascular graft & skin TE)
- Smart Biomaterials

- Composite Biomaterials
- Finite Element Modeling
- Biomechanical Optimization

Publications_____

Journal Papers:

- Gorji M, **Zargar A**, Setayeshmehr M, Ghasemi N, Soleimani M, Kazemi M, Hashemibeni B. Releasing and structural/mechanical properties of nano-particle/Punica granatum (Pomegranate) in poly (lactic-co-glycolic) acid/fibrin as nano-composite scaffold. Bratislavske Lekarske Listy. **2021**
- Varshosaz J, Choopannejad Z, Minaiyan M, Kharazi AZ. Rapid hemostasis by nanofibers of polyhydroxyethyl methacrylate/polyglycerol sebacic acid: An in vitro/in vivo study. Journal of Applied Polymer Science. **2021**
- Parham S, **Kharazi AZ**, Nur H. Breathable nonwoven hygienic products. InAntimicrobial Textiles from Natural Resources 2021 Jan 1 (pp. 397-420). Woodhead Publishing.(book chapter)
- Mokhtari N, **Zargar Kharazi A**. Blood compatibility and cell response improvement of poly glycerol sebacate/poly lactic acid scaffold for vascular graft applications. Journal of Biomedical Materials Research Part A. **2021**.
- Tayebi M, Parham S, Abbastabbar Ahangar H, **Zargar Kharazi A**. Preparation and evaluation of bioactive bilayer composite membrane PHB/β-TCP with ciprofloxacin and vitamin D3 delivery for regenerative damaged tissue in periodontal disease. Journal of Applied Polymer Science. **2021**.
- Parham S, **Kharazi AZ**, Bakhsheshi-Rad HR, Ghayour H, Ismail AF, Nur H, Berto F. Electrospun nano-fibers for biomedical and tissue engineering applications: A comprehensive review. Materials. **2020**.
- Gorji M, Ghasemi N, Setayeshmehr M, **Zargar A**, Kazemi M, Soleimani M, Hashemibeni B. The effects of fibrin–icariin nanoparticle loaded in poly (lactic-co-glycolic) acid scaffold as a localized delivery system on chondrogenesis of human adipose-derived stem cells. Advanced biomedical research. **2020.**
- **Kharazi AZ**, Fathi MH, Manshaei M, Razavi SM. In-vivo evaluation of a partially resorbable poly l-lactic acid/braided bioactive glass fibers reinforced composite for load bearing fracture fixation. Journal of Materials Science: Materials in Medicine. **2020**.
- Gorgani S, **Zargar Kharazi A**, Haghjooy Javanmard S, Rafiinia M. Improvement of Endothelial Cell Performance in an Optimized Electrospun Pre-polyglycerol Sebacate-Poly Lactic Acid Scaffold for Reconstruction of Intima in Coronary Arteries. Journal of Polymers and the Environment. **2020**.
- Najafabadi SA, Mohammadi A, **Kharazi AZ**. Polyurethane nanocomposite impregnated with chitosan-modified graphene oxide as a potential antibacterial wound dressing. Materials Science and Engineering: C. **2020**

- Kheradmandfard M, Mahdavi K, **Kharazi AZ**, Kashani-Bozorg SF, Kim DE. In vitro study of a novel multi-substituted hydroxyapatite nanopowder synthesized by an ultra-fast, efficient and green microwave-assisted method. Materials Science and Engineering: C. **2020**
- Parham S, **Kharazi AZ**, Bakhsheshi-Rad HR, Nur H, Ismail AF, Sharif S, RamaKrishna S, Berto F. Antioxidant, antimicrobial and antiviral properties of herbal materials. Antioxidants. **2020**.
- Saudi A, Amini S, Amirpour N, Kazemi M, **Kharazi AZ**, Salehi H, Rafienia M. Promoting neural cell proliferation and differentiation by incorporating lignin into electrospun poly (vinyl alcohol) and poly (glycerol sebacate) fibers. Materials Science and Engineering: C. **2019**.
- Zargar SM, Hafshejani DK, Eskandarinia A, Rafienia M, **Kharazi AZ**. A review of controlled drug delivery systems based on cells and cell membranes. Journal of medical signals and sensors. **2019** Jul;9(3):181.
- P Heydari, **A Zargar-Kharazi**, J Varshosaz, A Novel Wound Dressing Nanofiber with Anti-inflammatory and Anti-bacterial Drugs Release for Skin Wound Healing Journal of Isfahan Medical School., **2019**
- A Saudi, M Rafienia, **A Zargar Kharazi**, H Salehi, A Zarrabi, M Karevan, Design and fabrication of poly (glycerol sebacate)‐based fibers for neural tissue engineering: Synthesis, electrospinning, and characterization, Polymers for Advanced Technologies, **2019**
- **A.Zargar Kharazi**, M Atari, E Vatankhah, SH Javanmard, A nanofibrous bilayered scaffold for tissue engineering of small‐diameter blood vessels, Polymers for Advanced Technologies 29 (12), 3151-3158, **2018**
- SA Ayati Najafabadi, P Shirazaki, **A Zargar Kharazi**, J Varshosaz, Evaluation of sustained ciprofloxacin release of biodegradable electrospun gelatin/poly (glycerol sebacate) mat membranes for wound dressing applicationsm Asia‐Pacific Journal of Chemical Engineering 13 (6), e2255,**2018**
- M Kheradmandfard, SF Kashani-Bozorg, AH Noori-Alfesharaki , **A. Zargar Kharazi** , Ultra-fast, highly efficient and green synthesis of bioactive forsterite nanopowder via microwave irradiation, Materials Science and Engineering: C 92, 236-244, **2018**
- M Kheradmandfard, AH Noori-Alfesharaki, **A Zargar-Kharazi**, Ultra-fast microwave-assisted synthesis of diopside nanopowder for biomedical applications, Ceramics International 44 (15), 18752-18758, **2018**
- S Ghafaralahi, M Ebrahimian-Hosseinabadi, **A Zargar Kharazi**, Poly (glycerolsebacate) /poly (caprolactone)/Graphene nanocomposites for nerve tissue engineering, Journal of Bioactive and Compatible Polymers 33 (5), 529542,**2018**
- **A Zargar Kharazi**, G Dini, R Naser, Fabrication and evaluation of a nerve guidance conduit capable of Ca2+ ion release to accelerate axon extension in peripheral nerve regeneration, Journal of Biomedical Materials Research Part A 106 (8), 2181-2189, **2018**

- P Heydari, J Varshosaz, **A Zargar Kharazi**, S Karbasi, Preparation and evaluation of poly glycerol sebacate/poly hydroxy butyrate core ـ shell electrospun nanofibers with sequentially release of ciprofloxacin and simvastatin in wound dressing, Polymers for Advanced Technologies 29 (6), 1795-1803 , **2018**
- MH Mirmusavi, S Karbasi, D Semnani**,** M Rafienia**, A. Zargar Kharazi**, Assessing the physical and mechanical properties of poly 3-hydroxybutyratechitosan-multi-walled carbon nanotube/silk nano–micro composite scaffold for long-term healing tissue engineering, Micro & Nano Letters 13 (6), 829-834**, 2018**
- M Mehdikhani-Nahrkhalaji, E Tavakoli, **A Zargar-Kharazi** ,A novel nanocomposite scaffold for cartilage tissue engineering, Scientia Iranica 25 (3), 18151823, **2018**
- S Asgary, **A Zargar Kharazin**, Clinical Outcome and Benefits with Bio Absorbable Coronary Stent, Biomed J Sci & Tech Res 4 (1), 1-9, **2018**
- MH Mirmusavi, S Karbasi, D Semnani, **A.Zargar Kharazi**, Characterization of Silk/Poly 3-Hydroxybutyrate-chitosan-multi-walled Carbon Nanotube Micronano Scaffold: A New Hybrid Scaffold for Tissue Engineering Applications, Journal of medical signals and sensors 8 (1), 46, **2018**
- P Babaniamansour, M Ebrahimian-Hosseinabadi, **A Zargar-Kharazi**, Designing an optimized novel femoral stem, Journal of medical signals and sensors 7 (3), 170 , **2017**
- P Shirazaki, J Varshosaz**, A.Zargar Kharazi**, Electrospun gelatin/poly (glycerol sebacate) membrane with controlled release of antibiotics for wound dressing, Advanced biomedical research , **2017**
- S. Soltani, M. Ebrahimian-Hosseinabadi, **A.Zargar Kharazi**, Chitosan/graphene and poly(D, L-lactic-co-glycolic acid)/graphene nanocomposites for nerve tissue engineering, Tissue Engineering and Regenerative Medicine 13 (6), 684–690 , **2016**
- S Haghjooy Javanmard, J Anari, **A Zargar Kharazi**, E Vatankhah, In vitro hemocompatibility and cytocompatibility of a three-layered vascular scaffold fabricated by sequential electrospinning of PCL, collagen, and PLLA nanofibers Journal of biomaterials applications 31 (3), 438-449, **2016**
- R Naser, **A Zargar-Kharazi**, Fabrication and Evaluation of Cell-Compatibility and in-Vitro Biodegradation of PGS/CaTiO3 Composite for Nerve Conduit Application
  Journal of Isfahan Medical School 33 (361), 2084-2091, **2016**
- E Hosseini, **A. Zargar Kharazi**, Design And Optimization Of Poly Lactic Acid/Bioglass Composite Screw For Orthopedic Applications, journal of simulation and analysis of novel technologies in mechanical engineering, **2016**
- R. Naser, **A. Zargar Kharazi**, Fabrication of PGS/CaTiO3 Nano-Composite for Biomedical Application, International Journal of Nanoscience and anotechnology 12, 103-108, **2016**

- E Tavakoli, M Mehdikhani-Nahrkhalaji, B Hashemi-Beni,**A Zargar Kharazi**, Preparation, characterization and mechanical assessment of poly (lactide-coglycolide)/hyaluronic acid/fibrin/bioactive glass nano-composite scaffolds for cartilage tissue engineering, Procedia Materials Science 11, 124-130, **2015**
- N Alikhanifard, **A Zargar Kharazi**, S Karbasi, Preparation and Characterization A Novel Nano Composite Barrier For Gtr/Gbr, Procedia Materials Science 11, 588-593, **2015**
- **A. Zargar Kharazi**, MH Fathi, Load capacity assessment of a braided textile composite bone plate under real-life condition, International Journal of Biomedical
  Engineering and Technology 18 (2), 186-198, **2015**
- **A.Zargar Kharazi**, MH Fathi, F Bahmani, H Fanian, Nonmetallic textile composite bone plate with desired mechanical properties, Journal of Composite Materials 46 (21), 2753-2761,**2012**
- **A.Zargar Kharazi**, MH Fathi, F Bahmani, H Fanian, Partially resorbable composite bone plate with controlled degradation rate, desired mechanical properties and bioactivity Polymer degradation and stability 96 (12), 2055-2063, **2011**
- **A.Zargar Kharazi**, MH Fathi, F Bahmany, Design of a textile composite bone plate using 3D-finite element method, Materials & Design 31 (3), 1468-1474, **2010**
- MH Fathi, F Bahmani, **A.Zargar Kharazi**, three-dimentional Modeling Of Partially Resorbable Textile Composite Bone Plate:
- The International Journal of Artificial Organs 32 (7), 456, p138 **2009**

<u>Conference</u>

- **Anoushe Zargar**, Elahe Bahremandi Mehdi Atari, A bi-layer and biomimmetic scaffold for tissue engineering of vascular graft, 8th International Conference on Tissue Science and regenerative Medicine, **2017**
- Parisa Heidary, **Anousheh Zargar**, Coaxial electrospun PGS/PHB (core-shell) composite fiber for drug delivery, international conference on nanofibers **2017**
- Mehdi Atari, **Anoushe Zargar** Shaghayegh Haghjooy, Hemocompatibility Assessment of PGS-PCL Electrospun Scaffolds For Tissue Engineering Vascular Graft: The Role of Fibers Morphology, 3rd Iranian congress on progress in Tissue Engineering and Regenerative Medicin, **2016**
- N. Alikhanifard, **A. Zargar Kharazi**, Preparation and Characterization a novel nanocomposite Membrane for GTR/GBR Applications, International Congress of Conservative Dentistry**, 2016**
- Alikhanifard, **A. Zargar Kharazi**, Fabrication a New Scaffold as a Barrier Membrane for GBR, 3rd international congress of dental implants, **2016**
- Doostmohammadi A, Karimzadeh, **Zargar Kharazi A**. Novel Baghdadite (Ca3ZrSi2O9) bioceramic nanoparticles for repairing bone defects, Asian Nano Forum conference**, 2015**

- حسین احمدزاده، ، تقی اصفهانی ، **انوشه زرگر خرازی** ، طراحی و ساخت محفظه جدید جهت سنتز و پوشش دهی به روش فعالسازی مکانیکی، ششمین کنفرانس بین المللی مهندسی موادو متالورژی ، **۲۰۱۷**
- حسین احمدزاده، ، تقی اصفهانی ، **انوشه زرگر خرازی** ، بهینه سازی شرایط سنتز نانوذرات هیدروکسی آپاتیت با استفاده از استخوان ران شتر به وسیله آسیاکاری ، ششمین کنفرانس بین المللی مهندسی موادو متالورژی ، **۲۰۱۷**

Patents:----------

4 national patents in the following field:

- Drug Released Wound Dressing (2020)
- Wound Healing Ointment For Diabetic Wounds,(2019)
- Vitamin D Released GTR/GBR Membrane(2021)
- Tissue Engineered Vascular Grafts(2017)

- **Research Experience_____**

Research Grants successfully applied:

- Comparing the Wound Healing Effect Of a Controlled Release Wound Dressing Containing Curcumin/ Ciprofloxacin and Simvastatin/Ciprofloxacin in a Rat model: A preclinical study**, NIMAD, 2017**
- *Fabrication Of Biomimetic Tubular Bi-Layer Composite Scaffold Using Functionally Graded Materials And Surface Modification Techniques And assessment The Endotelial Cell (HUVEC) Behavior On The scaffold Surface under shear stress In Bioreactor*. **NIMAD, 2017**
- *Design and Synthesis of Polyurethane Membrane based on Chitosan, and Surface modification using immobilize biomolecules and its effect on the attachment, growth and proliferation of fibroblast, **2017***
  Research Grant From biosensor reaserch center
- *fabrication and characterization of nano forstrite and nano diopside powders via microwave assisted processing for orthopedic applications Research Grant From MSS research center*, **2016**
- Preparation, characterization and mechanical assessment of poly (lactide-coglycolide)/hyaluronic acid/fibrin/bioactive glass nano-composite scaffolds for cartilage tissue engineering**, Council for stem cell and technologies, 2015**

Teaching Experience_____

- Bioceramics and their application in medicine
- Biomaterials characterization methods
- Mechanics of materials
- Static
- Research method and writing proposal
- Teaching Assistant in composite materials- Isfahan university of technology
- Teaching Assistant in finite element analysis, Isfahan university of technology

Softwares_____

ABAQUS

ANSYS

CAD

CATIA

SPSS

MICROSOFT OFFICE (Word, Power Point, Excel, …)

MENDELEY