

Curriculum Vitae — Abdol-Rahim Faramarzi



1 Contact Information

Name: Abdol-Rahim Faramarzi, Ph.D.

Academic Rank: Assistant Professor

Affiliation: Department of Polymer Engineering, Faculty of Engineering, Golestan University, Gorgan, Iran

Official Email: a.faramarzi@gu.ac.ir

2 Education

- **Ph.D. in Polymer Engineering**, Iran Polymer and Petrochemical Institute (IPPI), Tehran, Iran (2011 – 2016)
Dissertation: “Preparation of PLGA Fine Particles/Fibers Containing Superparamagnetic Magnetite Nanoparticles via an Electrohydrodynamic Technique for Magnetic Resonance Imaging (MRI) Applications”
Dissertation grade: 19.76/20
- **M.Sc. in Textile Technology Engineering**, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran (2004 – 2006)
- **B.Sc. in Textile Technology Engineering**, Yazd University, Yazd, Iran (1999 – 2003)

3 Research Interests

Biopolymers & Biomedical Materials

Polymer Nanocomposites & Functional Hybrids

Polymeric Micro/Nanoparticles, Fibers, and Technical Textiles

Bioelectronics & Flexible Printed Electronics

4 Publications and patents

4.1 Peer-Reviewed Journal Articles

1. Gorji, M., Mazinani, S., **Faramarzi, A. R.**, Ghadimi, S., Kalaei, M. R., Sadeghianmaryan, A., and Wilson, L. D. (2021). "Coating Cellulosic Material with Ag Nanowires to Fabricate Wearable IR-Reflective Device for Personal Thermal Management: The Role of Coating Method and Loading Level." *Molecules*, 26(12), 3570. DOI: 10.3390/molecules26123570
2. **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2017). "Producing PLGA Fine Particles Containing High Magnetite Nanoparticle Content Using the Electrospray Technique." *Journal of Polymer Research*, 24(1), 13. DOI: 10.1007/s10965-016-1177-0
3. **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2016). "Effect of Solution and Apparatus Parameters on the Morphology and Size of Electrosprayed PLGA Microparticles." *Fibers and Polymers*, 17(11), 1806–1819. DOI: 10.1007/s12221-016-6685-3
4. **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2017). "Iron Oxide-Loaded PLGA Particles for Contrast Enhancement in Magnetic Resonance Imaging (MRI)." *Global Journal of Pharmacy & Pharmaceutical Sciences*, 2(5), 102–104. DOI: 10.19080/GJPPS.2017.02.555597
5. Bagherzadeh, R., Latifi, M., and **Faramarzi, A. R.** (2010). "Employing a Three-Stage Data Mining Procedure to Develop a Sizing System." *World Applied Sciences Journal*, 8(8), 923–929.

4.2 Books and Book Chapters

1. **Faramarzi, A. R.**, Barzin, J., Mobedi, H., and Gorji, M. (2017). "Polymeric Pharmaceutical Nanoparticles Developed by Electrospray." In D. Ficai & A. M. Grumezescu (Eds.), *Nanostructures for Novel Therapy: Synthesis, Characterization and Applications* (Chapter 6, pp. 137–164). **Elsevier**. ISBN: 9780323461481, 0323461484
2. **Faramarzi, A. R.**, Gorji, M., and Gazmeh, A. *Nanofibers and Nanotechnology in Textiles*. Nemayeh Sabz Publications, 2012. [In Persian]

4.3 Patent

- 1- Barzin, J., Mobedi, H., and **Faramarzi, A. R.** (2019). "Electrosprayed Poly(lactic-co-glycolic acid) (PLGA) Microparticles Containing Oleic Acid-Coated Superparamagnetic Magnetite Nanoparticles." Iranian Patent No. **98922**, Granted by the Iranian Intellectual Property Center. Assignee: Iran Polymer and Petrochemical Institute (IPPI)..

4.4 Conference Papers and Presentations

- 1- **Faramarzi, A. R.**, Mazaheri, D., and Moallemzadeh, A. (2026). "Engineering Biopolymers with Green Additives: From Improved Properties to Reduced Environmental Impacts." *7th National Conference on Environmental Engineering and Management*, Tehran, Iran. [In Persian]
- 2- **Faramarzi, A. R.**, Moallemzadeh, A., Maqsoudnia, D., and Hagh-dadi, F. (2026). "Evaluating Electrospun Nanofibrous Polymeric Membranes with Hydrophobicity and Simultaneous Breathability and Water Vapor Permeability." *7th National Conference on Environmental Engineering and Management*, Tehran, Iran. [In Persian]
- 3- **Faramarzi, A. R.** and Hagh-dadi, F. (2026). "The Effect of Reaction Time on the Growth of Silver Nanowires Monitored by UV-Vis Spectroscopy." *8th Iran Polymer Conference*, Mashhad, Iran. [In Persian]
- 4- **Faramarzi, A. R.** and Hagh-dadi, F. (2026). "The Effect of Polyvinylpyrrolidone Concentration on the Size and Morphology of Silver Nanowires Prepared by the Polyol Reduction Method." *8th Iran Polymer Conference*, Mashhad, Iran. [In Persian]
- 5- **Faramarzi, A. R.**, Barzin, J., Mobedi, H., and Robotjazi, M. (2024). "Using Coaxial Electrospray to Produce Polysorbate 80-Coated Nanoparticles for Use in Magnetic Resonance Imaging." *15th International Seminar on Polymer Science and Technology (ISPST 2024)*, Tabriz, Iran.
- 6- **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2024). "Improving the Performance of MRI Contrast Agents Using Polymer Particles Loaded with Superparamagnetic Nanoparticles." *15th International Seminar on Polymer Science and Technology (ISPST 2024)*, Tabriz, Iran.
- 7- Moallemzadeh, A., Bijani Shokouh, M., and **Faramarzi, A. R.** (2024). "Civil Defense and Enhancing the Resilience of Special Facilities Against Airborne Biological Threats." *6th National Environmental Conference*, Ahvaz, Iran. [In Persian]
- 8- **Faramarzi, A. R.**, Barzin, J., Mobedi, H., and Robotjazi, M. (2023). "Evaluation of the Biocompatibility of PLGA Microparticles Containing Magnetite Nanoparticles Prepared by Electrospraying." *7th Iran Polymer Conference*, Gorgan, Iran. [In Persian]
- 9- **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2016). "Morphological Study of Magnetic Fibrous PLGA Biocomposites Produced by Electrospinning." *5th International Conference on Composites: Characterization, Fabrication and Application (CCFA-5)*, Tehran, Iran.
- 10- **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2016). "Size and Morphology Variation of Electrosprayed Contrast-Agent-Loaded PLGA Microparticles." *2nd Iranian Nanomedicine Congress*, Zanjan, Iran.
- 11- **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2016). "Characterization of PLGA Nanofibers Fabricated by Electrospinning for Hyperthermia and MRI." *2nd Iranian Nanomedicine Congress*, Zanjan, Iran.
- 12- **Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2016). "Size and Morphology of Surfactant-Capped Iron Oxide Nanoparticles Loaded into PLGA Fine Particles by Electrospraying." *12th International Seminar on Polymer Science and Technology (ISPST 2016)*, Tehran, Iran.

- 13-**Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2015). "Processing Parameters of Electrospayed Fe₃O₄-Loaded PLGA Nanoparticles for MRI Applications." *Iran Polymer Science Conference (IPSC 2015)*, Tehran, Iran.
- 14-**Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2015). "Preparation and Evaluation of Aggregating PLGA Polymeric Microparticles for Drug Delivery by Electrospaying." *2nd National Conference on Membranes and Membrane Processes*, Tehran, Iran. [In Persian]
- 15-**Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2015). "Preparation of Biocompatible PLGA Fine Particles Containing Magnetite for MRI Applications." *1st Iranian Nanomedicine Congress*, Tehran, Iran.
- 16-**Faramarzi, A. R.**, Barzin, J., and Mobedi, H. (2015). "The Use of Biocompatible Polymer Nanoparticles Containing Magnetic Nanoparticles as Contrast Agents in MRI." *1st Iranian Nanomedicine Congress*, Tehran, Iran.
- 17-**Faramarzi, A. R.**, Nosraty, H., and Jeddi, A. A. A. (2012). "Theoretical and Experimental Evaluation of the Initial Modulus of Woven Fabrics." *8th National Conference on Textile Engineering of Iran*, Yazd, Iran. [In Persian]
- 18-**Faramarzi, A. R.**, Nosraty, H., and Jeddi, A. A. A. (2012). "Mechanical Properties of Woven Fabrics Using Finite Element Modeling." *8th National Conference on Textile Engineering of Iran*, Yazd, Iran. [In Persian]
- 19-Gorji, M., **Faramarzi, A. R.**, and Salamatbakhsh, M. (2012). "The Uses of Nanotechnology in Military Textiles." *8th National Conference on Textile Engineering (NTEC90)*, Tehran, Iran. [In Persian]
- 20-Bagherzadeh, R., Latifi, M., Najar, S. S., and **Faramarzi, A. R.** (2009). "Compatible Sizing Systems Developed from Body Classification." *World Textile Conference (AUTEX 2009)*, Izmir, Turkey.
- 21-Bagherzadeh, R., **Faramarzi, A. R.**, and Gorji, M. (2008). "Utilizing Polypropylene Fibers to Improve Concrete Durability and Reduce Cracking." *International Conference on Innovative World of Concrete (ICIWUC)*, New Delhi, India.
- 22-**Faramarzi, A. R.**, Nosraty, H., and Jeddi, A. A. A. (2007). "The Relationship Between Weave Design and the Mechanical Properties of Woven Fabric." *6th National Conference on Textile Engineering of Iran*, Isfahan, Iran. [In Persian]
- 23-**Faramarzi, A. R.**, Nosraty, H., and Jeddi, A. A. A. (2007). "The Effect of Fabric Structure on the Mechanical Properties of Woven Fabrics." *9th Asian Textile Conference (ATC-9)*, Taichung, Taiwan.

5 Research Projects

- 1- **Principal Investigator**, "Feasibility Study on the Synthesis of Silver Nanostructures on Polymeric Substrates and Characterization of Their Properties and Applications," Golestan University, 2026
- 2- **Principal Investigator**, "Investigating the Effect of Fiber Incorporation on Enhancing Concrete Strength," Golestan University, 2011

- 3- **Principal Investigator**, “Modeling and Evaluation of the Mechanical Properties of Woven Fabrics,” Golestan University, 2011
- 4- **Principal Investigator**, “Time-Dependent Evaluation of the Physical and Mechanical Properties of Nanofibrous Structures for Protective Clothing Applications,” Golestan University, 2011
- 5- **Co-Investigator**, “Development of Multifunctional Fabrics with Simultaneous Antibacterial and Heat-Retention Properties Using Nanotechnology,” Amirkabir University of Technology, 2022
- 6- **R&D Contributor & Technical Lead**, Technical Validation and Knowledge-Based Certification from the Iran Nanotechnology Innovation Council (INIC) for “*Thermal-Reflective Nanowire-Coated Textiles for Personal Thermal Management*,” Lotus Poushake Modern Co., 2022
- 7- **R&D Contributor & Technical Lead**, Technical Validation and Knowledge-Based Certification from the Iran Nanotechnology Innovation Council (INIC) for “*Ethanol-Based Silver Nanowire (AgNW) Dispersions*,” Lotus Poushake Modern Co., 2022

6 Teaching Experience

Doctoral Level (Ph.D.):

- 1- Special Topics in Polymer Engineering

Master’s Level (M.Sc.):

- 1- Advanced Engineering Mathematics
- 2- Foams, Adhesives, and Coatings
- 3- Biocompatibility and Biodegradability
- 4- Research Methodology and Seminar

Undergraduate Level (B.Sc.):

- 1- Composite Engineering
- 2- Fiber Engineering
- 3- Principles of Polymer/Chemical Process Calculations
- 4- Polymer Process Instrumentation and Control
- 5- Fundamentals of Process Design and Integration
- 6- Biotechnology in Polymers
- 7- Computer Programming
- 8- Statics and Strength of Materials
- 9- General Chemistry & General Chemistry Laboratory
- 10- Organic Chemistry & Organic Chemistry Laboratory
- 11- Engineering Statistics and Probability
- 12- Industrial Internship Coordination

Associate Degree Level:

- 1- General Mathematics and Elementary Statistics
- 2- Applied Mathematics

7 Thesis Supervision & Advising

- **M.Sc. Theses:** Supervision and Co-advising of M.Sc. students in Polymer Engineering.
- **B.Sc. Final Projects:** Supervision of undergraduate senior capstone projects and design theses.

8 Academic and Professional Experience

- 1- **Faculty Member (Assistant Professor)**, Department of Polymer Engineering, Faculty of Engineering, Golestan University, 2007–Present.
- 2- **Coordinator**, Launch and Curriculum Proposal for the Ph.D. Program in Polymer Engineering, Golestan University [2024].
- 3- **Coordinator**, Curriculum Development and Establishment of the M.Sc. Program in Polymer Engineering (Biopolymers Track), Golestan University, [2024].
- 4- **Head of Student and Cultural Affairs**, Faculty of Engineering and Technology, Golestan University, [2007–2011].
- 5- **Department Chair**, Department of Polymer Engineering, Faculty of Engineering and Technology, Golestan University, [2007–2011].
- 6- **Faculty Advisor**, Polymer Engineering Student Scientific Association, Golestan University, [2007–2011].
- 7- **Member**, Faculty Recruitment and Evaluation Committee, Faculty of Engineering and Technology, Golestan University, [2008–2011].
- 8- **Member**, University Governance Committees (Disciplinary Appeals Board, Cultural Council, Student Affairs Council, and Faculty Council), Golestan University, [2007–2011].
- 9- **Project Director**, Relocation and Commissioning of the Faculty of Engineering and Technology Campus, Golestan University, [2010].
- 10- **Technical Consultant**, Medical Textiles Division, *Polymer Sakhtar Houshmand Co.* (Knowledge-Based Company), [2018–2022].
- 11- **R&D Specialist & Technical Lead**, *Lotus Poushake Modern Co.* (Knowledge-Based Company), [2018–2022].
- 12- **Elected Executive Board Member**, Student Scientific Association, [2001–2003].