

Miraidin Mirzapour

EDUCATION

- May 2021-Now **PhD of Civil Engineering, University of Sherbrooke**
Thesis title: Improving mechanical properties, thermal stability, and corrosion resistance of fiber-reinforced polymer composite by incorporation of carbon nanoparticles.
- Feb.2003-
Oct.2005 **Master of Science, Polymer Engineering**, Iran Polymer and Petrochemical Institute (IPPI), Tehran, Iran.
GPA: 16.89/20.
Thesis title: “The effect of interface on the mechanical properties of sandwich structures”.
Project Grade: 19.38/20

The research component was about 30% of the whole degree.
- Feb.1999-
Sept.2002 **Bachelor of Science, Chemistry**, Urmia University, Urmia, Iran.
Total average: 15.20/20.

Selected Honors and Award

- Ranked among the top 0.3 % of high schools participating in the National-wide entrance exam of Iranian universities, very competitive with nearly 400,000 participants.
- Ranked 139th among about 5636 applicants of Chemistry Master Programs in the Iranian national master’s Entrance Exam.

RESEARCH FIELDS

- Polymer, nanocomposite and composite
- Surface modification of graphene, graphene oxide, and CNT.
- Rubber compounding & blending process
- Characterization of composites and nanocomposites
- Synthesis and Characterization of Epoxy resin and Polycarbonate
- Polymer blends (PP+EPDM, ABS+ PC)
- Composite sandwich structure panel
- Increasing corrosion resistance on polymers
- Fire retardant & self-extinguishing nanocomposite
- Polymer/ carbon nanotube nanocomposites
- Compounding & curing rubber (EPDM/NR/CR)

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LANGUAGES

English
Turkish
Persian
French

SOFTWARE PROFICIENCY:

Fortran, Aspen Plus, Field bass control system(for petrochemical process), Microsoft office

ATTRIBUTES

I am punctual, team player, adaptable and motivational.

EXPERIENCE AND SKILLS

Research and Work Experiences:

- **Novin baspar sazeh Arvin Co., from 2019 to 2021.**
 - I was a full-time Product Development Manager.
 - As a Research and Development Project Manager, I was responsible for project management, including the creation of new products and the improvement of existing products. It also had to provide scientific support to the Company.
 - Evaluate the progress of projects.
 - Assess needs for equipment, supplies, and independent testing.
 - Provide staff members with appropriate training.
 - Communicate human resource needs (e.g., hiring of new employees and training) to the Director of Research and Development.
 - Developing different kinds of polymeric compounds like white, additive, filler Masterbatches, and special and technical compounds.
- **Engineering Research Institute, Full-time R&D Manager, 2008-2018.**
- **Project manager, 2016-2018.**
 - Stating the needs of industry and turning them into academic plans.
 - Management of more than 10 industry-sponsored research projects done by the university (from initiation and planning to execution, controlling, and closure).
 - Collaboration with top-rated Iranian universities in doing industry-oriented research projects.
 - Provide staff members with appropriate training.
 - Supervise and motivate staff members.
- **Senior Researcher, 2011-2015**
 - Management of several projects related to developing thermosetting and thermoplastic polymers, rubbers, and nanocomposites by incorporating fibers, chapped fibers, micro and nano-fillers, with different applications and processing methods.

- Writing more than 10 technical reports and 5 papers in the field of composites, and rubber compounds.
- Assess needs for equipment, supplies, and independent testing.
- Provide staff members with appropriate training.

- **Researcher, 2008-2011.**

- Developing fiber-reinforced polymers by hot press, vacuum bagging, and autoclave processing methodology.
- Quality control of polymer parts for thermal insulation applications.
- Writing more than 10 technical reports about composites and polymer blending.
- Manage critical raw material approval process.

➤ **Iran Polymer and Petrochemical Institute, Research Assistant, 2017-2019(part-time).**

We investigated the effect of different compatibilizers like nanofillers and chapped fibers in compounding CR/EPDM rubber.

➤ **Chemistry and Chemical Engineering Research Center of Iran, Research assistant, 2013-2015(Part-time).**

I worked on the effect of multiwall CNT in improving the properties of thermoset polymers was studied.

➤ **Azad University, Research Assistant, 2011-2012(Part-time).**

In this period investigated physical, mechanical, and flame retardancy of Thermoset polymers were investigated.

➤ **Khozestan Petrochemical Company, 2006-2008.**

I worked as a Senior Production Engineer, producing epoxy resin and Polycarbonate.

➤ **Sina Fan Khodro Co., Senior Production Engineer, 2005- 2006.**

I worked in producing polymeric products used in the automobile industry through injection molding and compression molding processes.

PUBLISHED PAPERS

1. Eslami, Z., Mirzapour M., Compatibilizing effect and reinforcing efficiency of nanosilica on ethylene-propylene diene monomer/chloroprene rubber blends, accepted in J. of Polymer Composite, 2021, DOI: 10.1002/pc.25936.

2. **Mirzapour M.**, Asadolahy M. H., Baghshahi S., Akbari M., Effect of nanosilica on the microstructure, thermal properties and bending strength of nanosilica modified carbon fiber/ phenolic nanocomposite (Composites part A,63, 159-167 ,2014).
3. Eslami Z., Yazdani F., **Mirzapour M.**, Thermal and mechanical properties of phenolic-based composites reinforced by carbon fibers and multiwall carbon nanotubes, Composites part A, 72, 22-31, 2015).
4. **Mirzapour M.**, Beheshty M. H., Vafayan M., “The response of sandwich composite panels with rigid polyurethane foam cores under flexural loading”, Iran. Polym. J., 14, 1082–1088, 2005.
5. **Mirzapour M.**, Haghghat H. R., Eslami Z., Single Vacuum Bagging and Autoclave Curing System Influence on Physical and Mechanical Properties of Phenolic Composites, Iran. Polym. J, 23, 6, 509-518, 2011.
6. **Mirzapour M.**, Beheshty M. H., Vafayan M. “The Study of Compression Strength and Morphology of Rigid Polyurethane Foams”, Iran. Polym. J, 1, 65-72, 2007.

UNDER REVIEW PAPERS

1. Mirzapour M., Robert M., and Benmokrane B., " **Vinyl ester nanocomposites construction via introducing a binary-solvent system for well-exfoliated graphene and enhancing performance**", submitted to Polymer Composite, June 2023.
2. Mirzapour M., Robert M., and Benmokrane B.,“ **A green approach to achieve high-performance epoxy nanocomposites with low graphene oxide loading**”, submitted to Composite Part A, August 2023.
3. Mirzapour M., Robert M., and Benmokrane B., " **Dispersion characteristics, mechanical and durability properties of epoxy nanocomposites reinforced with carbon nanotube, graphene, and graphene oxide**, Submitted to J. of Polymers, Nov. 2023.

Co-supervisor

- I had a supervisory role in a thesis submitted for the degree of Master of Science at the Chemistry and chemical engineering research center of Iran. Thesis title: Effect of carbon nanotubes on thermal and mechanical properties of composites, 2015.
- I have had opportunities to work with supervisors from Iran Azad University and the relevant industry, from 2014-2018.

PRESENTATIONS

<ul style="list-style-type: none"> • Eslami, Z., Mirzapour M., Compatibilizing effect and reinforcing efficiency of nanosilica on ethylene-propylene diene monomer/chloroprene rubber blends, 14th International Seminar on Polymer Science and Technology, Tehran, Iran, 2020. • Mirzapour M., Haghghat H. R., “Effect of ZrO₂ on Thermal Properties of Carbon and Ceramic Fiber Composites”, the 3rd International Conference on Composites, CCFA2012, Tehran, Iran. • Mirzapour M., and Beheshty, the study of processing condition on mechanical properties of polyurethane foam core sandwich structures, 5th Students national chemical engineering conference, Tehran, Iran, 2005. • Mirzapour M., and MH Beheshty, Optimization of Processing Conditions of Sandwich Structures, The Proceeding of 9th Iranian Chemical Engineering Congress, Tehran, Iran , 2004. <p>REVIEWER</p>	
<ul style="list-style-type: none"> • I am a volunteer reviewer in a few international journals like, Composites, j. of composite materials. 	