Curriculum Vitae (as of January 2022)

Mohammad Alimardani

Current Position	Assistant Professor of Polymer Engineering		
Professional address	Department of Polymer Engineering, Faculty of Chemical Engineering, Tarbiat Modares University, Tehran, Iran		
Email	M.Alimardani@modares.ac.ir		
Marital Status	Married	**Tel.**	+982182884354
Date of Birth	September 21, 1988	**Fax.**	+982182883517

Languages	Persian (Mother Tongue)
	English (All Skills; Speaking-Writing-Reading)
Area of Expertise	Fracture and Fatigue of Polymers
	Mechanics and Design of Rubber Composites
Research Management	2 PhD Students, 7 Master Students

Educations

B.Sc. (2006-2010)	Major	Applied Chemistry
	University	Ferdowsi University of Mashhad
	GPA; Class Ranking	17.55 (out of 20); Ranked 1st
	Thesis Effect of Heat Treatment of Nanodiomond on Scratch Behavior of Acrylate Paints	

M.Sc. (2010-2012)	Field	Polymer Chemistry and Technology	
	University	Iran Polymer and Petrochemical Institute	
	GPA; Class Ranking	17.66 (out of 20); Top Student	
	Supervisors	Dr. GR. Bakhshandeh - Dr. F. Abbassi-Sourki	
	Thesis		
	Title: Rheological investigating the effect of coupling agents and surface modifiers on the microstructure of SBR-MWCNT nanocomposites		Grade: 20 (out of 20)

Ph.D. (2012-2017)	Field	Polymer Engineering	
	University	Tarbiat Modares University	
	GPA; Class Ranking	18.33 (out of 20); Ranked 1st	
	Supervisor	Dr. Mehdi Razzaghi-Kashani	
	Advisor	Dr. Mir Hamid Reza Ghoreishy	
	Thesis		
	Title: Investigating the Effect of Reinforcing Filler-Polymer Interaction on Viscoelastic and Fatigue Crack Growth of Rubber-Nanosilica Composites		Grade: 19.92 (out of 20)

Sabbatical	University	Vienna University of Technology
	Supervisor	Dr. Thomas Koch

Publications

Book Chapters

1) Ghoreishy M.H.R, **Alimardani M**, Application of Natural Rubber Based Blends and IPNs in Tire Engineering and other Fields. Chapter 25 in "Natural Rubber Materials: Volume 1: Blends and IPNs", Royal Society of Chemistry, (2013), ISBN: 9781849736107.

2) Ostad Movahed.S, **Alimardani M**, Reinforcement of Rubber Compounds by Different Fillers: Recent Achievements. Chapter 1 in "Rubber: Types, Properties and Uses", Nova Science Publishers, USA, (2010), ISBN: 978-1-61761-464-4.

Journal Papers

1. Roshanaei, Hossein, Fatemeh Khodkar, and **Mohammad Alimardani**. "Contribution of filler–filler interaction and filler aspect ratio in rubber reinforcement by silica and mica." *Iranian Polymer Journal* 29.10 (2020): 901-909.
2. **Alimardani, Mohammad**, and Mehdi Razzaghi-Kashani. "The correlation of tear deviation and resistance with the bound rubber content in rubber-silica composites." *Polymer Testing* (2020): 106762.

3. **Alimardani, M**. and M. Razzaghi-Kashani, *Evaluation of Fatigue Crack Growh Resistance of Rubber-Silica Composites and Analysis of the Role of Filler-Filler Interaction and Interface Bonding.* Iranian Journal of Polymer Science and Technology, 2019. 32(5): p. 397-409.
4. **Alimardani, Mohammad**, Mehdi Razzaghi-Kashani, and Thomas Koch. "Crack growth resistance in rubber composites with controlled Interface bonding and interphase content." *Journal of Polymer Research* 26.2 (2019): 47.
5. **Alimardani, M**., Razzaghi-Kashani, M., & Ghoreishy, M. H. R. Prediction of mechanical and fracture properties of rubber composites by microstructural modeling of polymer-filler interfacial effects. Materials & Design, 115, 348-354, (2017).
6. **M. Alimardani, M**. Razzaghi-Kashani, R. Karimi, and A. Mahtabani, "Contribution of Mechanical Engagement and Energetic Interaction in Reinforcement of SBR-Silane Treated Silica Composites" *Rubber Chemistry and Technology, 89(2), 292-305*, 2016.
7. **M. Alimardani** and F. Abbassi-Sourki, "New and emerging applications of carboxylated styrene butadiene rubber latex in polymer composites and blends: Review from structure to future prospective," *Journal of Composite Materials,* vol. 49, pp. 1267-1282, 2015
8. **M. Alimardani**, F. Abbassi-Sourki, and G. R. Bakhshandeh, "An investigation on the dispersibility of carbon nanotube in the latex nanocomposites using rheological properties," *Composites Part B: Engineering,* vol. 56, pp. 149-156, 2014.
9. **M. Alimardani**, F. Abbassi-Sourki, and G. R. Bakhshandeh, "Preparation and characterization of carboxylated styrene butadiene rubber (XSBR)/multiwall carbon nanotubes (MWCNTs) nanocomposites," *Iranian Polymer Journal,* vol. 21, pp. 809-820, 2012
10. M. H. R. Ghoreishy, **M. Alimardani**, R. Z. Mehrabian, and S. T. Gangali, "Modeling the hyperviscoelastic behavior of a tire tread compound reinforced by silica and carbon black," *Journal of Applied Polymer Science,* vol. 128, pp. 1725-1731, 2013
11. Amirhossein Mahtabani, **Mohammad Alimardani**, & Razzaghi-Kashani, M. Further Evidence of Filler-Filler Mechanical Engagement in Rubber Compounds Filled with Silica Treated by Long-Chain Silane. Rubber Chemistry and Technology, 90 (3), 508-520.
12. M. H. Avazkonandeh-Gharavol, S. A. Sajjadi, S. M. Zebarjad, M. Mohammadtaheri, M. Abbasi, **M. Alimardani***, et al.*, "Effect of heat treatment of nanodiamonds on the scratch behavior of polyacrylic/nanodiamond nanocomposite clear coats," *Progress in Organic Coatings,* vol. 76, pp. 1258-1264, 2013.
13. **Alimardani M**, Razzaghi-Kashani M, Ghoreishy MHR. Comparing the Capillary Rise Technique and Sessile Drop Method of Non-Porous surfaces in Determining Surface Energy of Reinforcing Powders Utilized in Polymer Composites. Iranian Journal of Surface Science and Engineering-In Persian-2016;27:81-92.
14. Reza Karimi, **Mohammad Alimardani**, Mehdi Razzaghi-Kashani, and Mohammad-Reza Pourhossaini, Mechanistic Evaluation of Silane-Spacer Length on Dynamic and Tribological Behavior of SBR-Modifed, Silica Rubber Composite, Iran. J. Polym. Sci. Technogy, (Persian), Vol. 30, No. 6, 489-500.

Conference Papers

1. I.Abbasi Shahdehi**, M.Alimardani**, M.Razzaghi-Kashani, H. Roshanae New Insights on Dry and Wet Friction of Tire Tread Rubbers Having Safe Aromatic Oils, Polymertec 21, 2021, Merseburg, Germany.
2. M. Ghorashi, S.M. Hosseini, **M. Alimardani**, I. Abbasi, Mechanisms behind the Change of Vulcanization Kinetics of Silica Filled Maleated Natural Rubber, 14th international seminar on Polymer Science and Technology (ISPST 2020), Tehran. Iran
3. I.Abbasi Shahdehi, **M.Alimardani**, M.Razzaghi-Kashani, H. Roshanae, M. Ghorashi, Investigating the impact of aromatic content of process oils on the frictional properties of tire tread compound, 14th international seminar on Polymer Science and Technology (ISPST 2020), Tehran. Iran.
4. **Mohammad Alimardani**- Mehdi Razzaghi-Kashani; On the Relationship between Filler–Polymer Interfacial Phenomena and Fracture of Rubber Composites, Presented as Oral in PolymerTec2018-Merseburg, Germany, 2018.
5. **Mohammad Alimardani**-Mehdi Razzaghi-Kashani; Effect of Filler-Polymer Interfacial Phenomena on Fracture of SSBR-Silica Composites; Presented as Oral in 10th European Conference on Constitutive Models for Rubbers (ECCMR), Germany, 2017.
6. F.Abbassi-sourki, G.R. Bakhshandeh**, M. Alimardani**, Stress Relaxation Behavior of Carboxylated Styrene Butadiene Rubber – MWCNT Nanocomposite, presented as oral in New and Advanced Materials International Congress, Islamic Azad University, Majlesi Branch, May 10-12, 2012, Isfahan, Iran.
7. F.Abbassi-sourki, **M. Alimardani**, G.R. Bakhshandeh, Synergistic Effect of ZnO and Functionalized Carbon Nanotube on the Improvement of Filler Dispersion, presented as a poster in New and Advanced Materials International Congress, Islamic Azad University, Majlesi Branch, May 10-12, 2012, Isfahan, Iran.
8. **M. Alimardani,** Mir Hamid Reza Ghoreishy, Modeling the inelastic behavior of a tire tread compound reinforced by carbon black/ silica using a nonlinear viscoelastic model, presented as a poster in ISPST 2012 seminar, Oct. 2012, Tehran, Iran
9. **M. Alimardani,** Mir Hamid Reza Ghoreishy, Experimental and Theoretical Study of Hyper-Viscoelastic Properties of a NR/BR Compound Reinforced by Carbon Black/Silica, Oral presented in ISPST 2012 seminar, Oct. 2012, Tehran, Iran

Funded Projects

- Iran Yasa Tire and Rubber Company: Use of safe Aromatic Oils in Tire Tread Compounds
- RAYA Rubber: Design of Rubber Anti-Vibration Parts

Professional Memberships

- Iran Polymer Society
- Iran's National Elites Foundation