

HAMIDREZA AZIMI ZONOUI

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Assistant professor of Polymer Engineering
Academic Staff
Azarbijan Shahid Madani University,
Tabriz, Iran



EDUCATION

- PhD** January 26, 2009 – January 24, 2013
Polymer Engineering
Sahand University of technology, Tabriz, Iran
Dissertation: Investigation on the Foaming Dynamic of Methyl Methacrylate-Styrene Copolymer Particles via Suspended Polymerization process
Advisor: Prof.Farhangh Abasi
Supervisor: Prof.Mostafa Rezei
- MS** September 23, 2006 - October 27, 2008
Chemical Engineering-Polymer
Sahand University of technology, Tabriz, Iran
Dissertation: Thermal degradation kinetics of methyl methacrylate-styrene and expanded polystyrene lost foams.
Supervisor: Prof.Mostafa Rezei
- BS** September 23, 2001 - September 22, 2005
Chemical Engineering-Petrochemical
Sahand University of technology, Tabriz, Iran
Dissertation: Preparation of ABS / clay nanocomposites by melt compound composition
Supervisor: Prof.Behzad Pourabas

TEACHING EXPERIENCE

January 27, 2013- Present

- Thermodynamic of chemical engineering
- Basic principles and calculations in chemical engineering
- Chemical reaction engineering
- Transition phenomena
- Refinement processes
- Fundamental of polymer processing
- Polymer composites
- Advanced Physics Chemistry Polymers
- Principles of polymerization engineering
- Advanced Mathematics
- General Chemistry
- Physics chemistry
- Characterization of polymers
- Unit Operation

October 2014 to February 2019

Head of chemical Engineering Department at University of Maragheh

SKILLS AND ACTIVITIES

- Polymer engineering
- Bio Polymers
- Polymer Foams
- Polymerization and Synthesis
- Thermal analysis (TGA,DSC)
- Morphological studied (SEM, TEM)
- X-ray Diffraction and FT-IR
- Polymer Physics
- Thermal degradation kinetics of polymers
- Polymer Nano composites

PUBLICATIONS

1. B. Pourabbas, H.R. Azimi, "Indirect Synthesis of ABS/clay Nanocomposites, Comparison and Thermal Properties", *Journal of Composite Material.*, 2008; 42: 2499-2522.
2. Azimi Hamidreza, Rezaei Mostafa, Abbasi Farhang, Charchi Ali, Bahluli Yahya. "Non-isothermal degradation kinetics of MMA-St copolymer and EPS lost foams" *J. Thermochimica Acta.* 2008; 474:72-77.
3. Azimi HamidReza, Rezaei Mostafa, Abbasi Farhang, Bahluli Yahya. "Thermo-oxidative degradation of MMA-St copolymer and EPS lost foams: kinetics study" *J. Thermochimica Acta* 2009; 488: 43-48.
4. Y.Akbarzadeh, M.Rezaei, A.A. Babaluo, A. Charchi, H.R. Azimi, Y. Bahluli. "Microstructure, permeability and rheological behavior of lost foam refractory coatings", *Surface and Coatings Technology*, 2008; 202: 4636-4643.
6. Azimi Hamidreza, Rezaei Mostafa, Abbasi Farhang, The effect of expansion conditions on the batch foaming dynamics of St-MMA copolymer, *Journal of Cellular Plastic.* 2012; 48: 125-140.
7. Azimi Hamidreza, Rezaei Mostafa, Solubility and diffusivity of carbon dioxide in St-MMA copolymers, *Journal of Chemical Thermodynamics.* 2013; 58:279-287.
8. سینتیک تخریب حرارتی پلی استایرن و پلی متیل متاکریلات", حمیدرضا عظیمی، مصطفی رضائی، مجید جمالی، علی چرچی. مجله مهندسی شیمی ایران.
9. Azimi Hamidreza, Rezaei Mostafa, The non-isothermal degradation kinetics of St-MMA copolymers, *Polymer Degradation and Stability* 99 (2014) 240-248.
10. Azimi Hamidreza, Rezaei Mostafa The determination of n-pentane solubility and diffusivity in St-MMA copolymers via designed apparatus, *Journal of Cellular plastics*, Accepted , publish on line. DOI: 10.1177/0021955X16652105, 2016.
11. Azimi Hamidreza, Rezaei Mostafa, Salehi Mostafa, The effect of copolymer composition on the batch foaming dynamics of St/MMA copolymers, *Journal of Thermoplastic Composite Materials*, 30 (2017) 47-66.

12. Gholam Reza Mahdavinia, Moslem Soleymani, Mohammad Sabzi, Hamidreza Azimi, Ziba Atlasi, Novel magnetic polyvinyl alcohol/laponite RD nanocomposite hydrogels for efficient removal of methylene blue, Journal of Environmental Chemical Engineering, 5(3), (2017) 2617-2630.

13. حمیدرضا عظیمی، بررسی فرایندهای ناپیوسته فوم شدن پلی استایرن و پلی متیل متاکریلات، مجله مهندسی شیمی ایران، سال چهاردهم، شماره 81، آبان 1394.

14. Hamidreza Azimi, Davoud Jahani, The experimental and numerical relation between the solubility, diffusivity and bubble nucleation of supercritical CO₂ in Polystyrene via visual observation apparatus, JOURNAL OF SUPERCRITICAL FLUIDS, 139, (2018) 30-37.

15. Hamidreza Azimi, Pardis Abedifard, Determination of activation energy during the thermal degradation of polyamide 66/ glass fibers composites, Journal of Thermoplastic Composite Materials (JTCM), Published online, DOI: 10.1177/0892705718815533, 2019.

16- حمیدرضا عظیمی، عزت الله اسفندیاری، سیما سروش، سیما ناظمی و اسماعیل کریمی، بررسی تولید بیوپلیمر بتاکاروتن از جلبک دونالیلا سالینا در آب شور دریاچه ارومیه، نشریه شیمی و مهندسی شیمی ایران، 1397، پذیرش نهایی شده است (نوبت چاپ مهر 1400).

17. B. Pourabbas, H.R. Azimi, " Indirect preparation of ABS/clay nanocomposites via addition of gABS to SAN nanocomposites" , ISPST, 8th International Seminar on Polymer Science and Technology, Tehran, Iran, 2007.

18. H.R. Azimi, M. Rezaei, F. Abasi. "Thermal degradation behavior of MMA-St copolymer and EPS foams used in lost foam casting process" PPS-25, 25th Annual meeting of the polymer processing society, 01-05 March, 2009. Goa, India.

19. Azimi HR, " Isokinetic Relationships to Evaluate Thermal Degradation Kinetics Parameters of MMA-St Copolymer and EPS Lost Foams", The 12th Iranian chemical engineering congress, October 2008. Sahand University of Technology.

20. H.R.Azimi, M. Rezaei, "Model-Free Approach to Kinetic Analysis of Non-isothermal Degradation of MMA-St Copolymer and EPS Foams", ISPST, 9th International Seminar on Polymer Science and Technology, Tehran, Iran, 2009.
21. A. Charchi, M. Rezaei, S. Hossainpour, M. Abarzani and H. R. Azimi, "Modeling of Gap Geometry and Pressure in Expandable Polystyrene Lost Foam Casting Process", PPS-25, 25th Annual meeting of the polymer processing society, 01-05 March, 2009. Goa, India.
22. H.R.Azimi, M. Rezaei, The effect of foam processing conditions on the foaming dynamics of MMA-St copolymer, PPS- 26th, Annual meeting of the polymer processing society, 14-17 November, 2011.Kish, Iran.
23. H.R.Azimi, M. Rezaei, "Effect of Methymetacrylate units on the non-isothermal degradation kinetics of St-MMA copolymers", ISPST 2012, Amirkabir University of Technology, Tehran, Iran, 21-25 October 2012.
24. H.R.Azimi, M. Rezaei, "The visual foaming dynamics of St-MMA copolymers with different compositions", ISPST 2012, Amirkabir University of Technology, Tehran, Iran, 21-25 October 2012.
25. Hamid Reza Azimi, Mostafa Rezaei, Faezeh Majidi, Study on the thermal degradation of St-MMA copolymers with different compositions using isoconversional method , THERMAM 2014, Izmir, Turkey
26. Hamid Reza Azimi, Mostafa Rezaei, Mostafa Salehi, Solubility and diffusivity of normal pentane and supercritical CO₂ in St-MMA copolymer with different compositions, THERMAM 2014, Izmir, Turkey
27. Hamid Reza Azimi, The temperature dependency of the St53-MMA47 copolymer foaming with n-pentane, ISPST 2014, 6-9 October, 11th International Seminar on Polymer Science and Technology
28. Hamid Reza Azimi, The PVT measurement of the Styrene copolymers , ISPST 2014, 6-9 October, 11th International Seminar on Polymer Science and Technology
29. Hamid Reza Azimi, IKR method in the thermal degradation of polymers , ISPST 2014, 6-9 October, 11th International Seminar on Polymer Science and Technology
30. Hamid Reza Azimi, The thermal degradation kinetics of SAN/Clay Nanocomposites, Asian Nano Forum Conference , ANFC 2015, Kish Island, Iran.
31. Hamid Reza Azimi, The visual physical foaming process of St-MMA copolymer with normal pentane as a blowing agent, Asian Nano Forum Conference , ANFC 2015, Kish Island, Iran.

32. Hamid Reza Azimi The morphological study and degradation kinetic of ABS/OMT nanocomposites, Isfahan, 2018.
 33. Hamid Reza Azimi, The solubility of normal pentane in PS/PMMA blends via high pressure batch chamber, Isfahan, 2018.
 34. Hamid Reza Azimi, Foaming dynamics and solubility of hexane in Acrylonitrile Butadiene Styrene (ABS), ISPST 2018, 19-22 Nov, 13th International Seminar on Polymer Science and Technology. Amirkabir University of Technology, Tehran
 35. Zahra Khodaparast · Shahryar Pashaei · Sarvin Mohammadi-Aghdam · Hamid Reza Azimi · Soleyman Hosseinzade, Fabrication of Silver Nanoparticles with Antibacterial Property and Preparation of PANI/M/Al₂O₃/Ag Nanocomposites Adsorbent Using Biological Synthesis with Study on Chromium Removal from Aqueous Solutions, Journal of Inorganic and Organometallic Polymers and Materials , <https://doi.org/10.1007/s10904-019-01243-8> , Accepted: 22 June 2019.
 36. Davoud Jahani*, Hamidreza Azimi and Amin Nazari, An experimental study on the micro- and nanocellular foaming of polystyrene/poly(methyl methacrylate) blend composites, <https://doi.org/10.1515/polyeng-2019-0197> Received June 28, 2019; accepted August 28, 2019.
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RESEARCH OPPORTUNITY

1. Research opportunity 6 months in chemical engineering department at Kyoto University, Japan. December 18, 2012 – June 12, 2012.
 2. Research opportunity 2 months in chemical engineering department at university of Groningen, Netherlands. June 7, 2018 – September 2, 2018.
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PATENT

Design and manufacturing of foaming dynamics of polymers

83390 – 1393/4/31

Declaration Number:139250140003003175

SOME RECENT INTERNATIONAL REVIEWER

A study of copolymers based on Methacrylate carrying Coumarin side group: synthesis, characterization, spectroscopic and dielectric behavior	1 Journal of thermoplastic composite materials
Microstructure, physical and mechanical properties of LDPE/UHMWPE blend foams: An experimental design methodology	2 Journal of thermoplastic composite materials
Reduced brominated flame retardant in different polystyrene nanocomposites	3 Iranian polymer journal (IPJ)
Enhanced Dielectric Performance and Energy Storage Density of Polymer/Graphene Nanocomposites Prepared by Dual Fabrication	4 Iranian polymer journal (IPJ)
Poly(lactic acid) nanocomposites toughened with nanofibrillated cellulose: microstructure, thermal, and mechanical properties	5 Iranian polymer journal (IPJ)
A novel physical and thermomechanical characteristics of aluminum silicon carbide reinforced polymer nanocomposites	6 Iranian polymer journal (IPJ)

MSC THESIS (SUPERVISOR)

1. Investigation of the Effect of A-Magnetic Laponite on the Color, Behavior and Structure of Polyvinyl Alcohol Nanocomposites (Moslem Solymani)
2. The feasibility of using modified glass fiber reinforced plastics in engineering structures (Pardis Abedifard).
3. Investigating the possibility of producing beta carotene biopolymer from Donalila salina algae in saline water of Urmia lake (Sima soroush)
4. Synthesis of Silver Nanoparticles and Preparation of Poly Aniline Sodium Nanocomposites by Plants for Removal of Heavy Metals in Water (khodaparast)
5. Modeling the Effect of Polymer Ultrafiltration Molecular Parameters on the Eclipse (Zahra rouhani)
6. Improvement of mechanical properties of polyethylene in the presence of foaming agents and fire retardants by the technique of alloying (Mahdi Aghajani)
7. nvestigation of Polystyrene / Polymethyl Methacrylate-Polymethyl Methacrylate Sponge Processes with Normal Pentane as Puffs in the Presence of Calcium Carbonate Nanoparticles (Amin Nazari)
8. Solubility and Pentane Permeability Evaluation in Polystyrene and Polymethyl Methacrylate blends (Fereshteh Mohamadpour)

9. Modeling the expansion process of styrene-methyl methacrylate copolymer and comparing it with experimental results (Mostafa Salehi)
10. Study of mechanical properties of polypropylene / poly (acrylonitrile-butadiene-Styrene) (Reviewer)
11. Correction of clay surface by polymerization at styrene and its use in the preparation of polyolefin nanocomposites (Reviewer)
12. Study of the Effect of Alpha-Methyl Styrene Comonomer on Synthesis Conditions and Expanded Polystyrene Properties (Reviewer)
13. Study on the effect of carbon nanotubes on the structure and properties of polyethylene foams (Reviewer)
14. Investigation of the effect of material composition composition on the physical and mechanical properties of polyvinyl chloride nanocomposite foam (Reviewer)