

# M. Reza Nofar, Ph.D.

# Curriculum Vitae

Associate Professor  
 Istanbul Technical University,  
 Faculty of Chemical & Metallurgical Engineering,  
 Metallurgical & Materials Engineering Department,  
 Office: A316, Maslak/Istanbul, 34469, Turkey

Tel. (Office): +90 212-285-7339  
 Fax: +90 212-285-3427  
 (Cell): +90 541-621-7841  
 Email: [nofar@itu.edu.tr](mailto:nofar@itu.edu.tr)  
 Citizenship Status: Canadian

## EMPLOYMENT

---

2020-Present **Associate Professor** (*h-index: 26, i10 index: 35, Citation: 2971*)

2015-2020 **Assistant Professor**

- Faculty of Chemical & Metallurgical Engineering, Metallurgical & Materials Engineering Department, Istanbul Technical University, Istanbul, Turkey
- Graduate School of Science and Technology, Polymer Science and Technology Program, Istanbul Technical University, Istanbul, Turkey

## ADMINISTRATION

---

2019-Present **ITUNANO Executive Board Member**

- ITUNANO - Nanotechnology Research Center, Istanbul Technical University, Istanbul, Turkey

2018-Present **Department Vice-Chair in Research**

- Metallurgical & Materials Engineering Department, Istanbul Technical University, Istanbul, Turkey

## EDUCATION & TRAINING

---

2019 **Visiting Professor** (June 2019– Sep 2019)

Department of Chemical Engineering, Polytechnique Montreal, Montreal, Canada

Project: Multifunctional fibrillated PLA/TPU and PLA/TPU/CNT composites

Colleagues: Professor Pierre Carreau and Professor Marie-Claude Heuzey

2014-2015 **Postdoctoral Fellow**

Department of Chemical Engineering, McGill University, Montreal, Canada

Project: Multifunctional blend nanocomposites, rheological and morphological properties

Advisors: Professor Musa Kamal (McGill), Professor Pierre Carreau (Polytechnique), and Professor Marie-Claude Heuzey (Polytechnique),

2013-2014 **Postdoctoral Fellow**

Department of Chemical Engineering, Polytechnique Montreal, Montreal, Canada

Project: Rheological properties of multiphase biopolymer systems with controlled morphology

Advisors: Professor Pierre Carreau (Polytechnique), Professor Marie-Claude Heuzey (Polytechnique), Professor Musa Kamal (McGill)

2009-2013 **Ph.D. in Mechanical Engineering**

Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, Canada

Thesis: Expanded Polylactide (PLA) bead foaming: Analysis of crystallization kinetics and development of a novel technology

- Supervisor: Professor Chul B. Park
- 2008-2009 **Research Engineer, National Research Council (NRC) Canada**  
NRC Canada, Boucherville, Canada  
Projects: Manufacturing, development, and characterization of biocomposite systems  
Supervisors: Dr. Minh-Tan Ton-That and Dr. Maryam Sepehr
- 2006-2008 **M.Sc. in Mechanical Engineering**  
Mechanical and Industrial Engineering Department, Concordia University, Montreal, Canada  
Thesis: Monitoring the failure of epoxy /glass fibers polymer composites using carbon nanotube network of sensors while cyclic fatigue loading and static loads  
Supervisors: Professor Suong Van Hoa and Professor Martin D. Pugh
- 2001-2005 **B.Sc. in Materials Science and Engineering**  
Materials Science and Engineering Department, Sharif University of Technology, Tehran, Iran  
Thesis: Fabrication and characterization of MgF<sub>2</sub> infrared transparent ceramics by hot pressing Method  
Supervisor: Professor Hamid Reza Madaah Hosseini

## FELLOWSHIPS, AWARDS and HONORS

---

- 2020 2020 Polymer Processing Society Early Career Award
- 2018 2017 Turkey Young Scientist Award
- 2017 Polymer Processing Society Young Researcher Travel Award (\$ 1,500)
- 2015 FQRNT- Fonds Québécois de la Recherche sur la Nature et les Technologies, Postdoctoral Scholarship (\$ 70,000) – (Ranked # 1 by the evaluation committee members)
- 2013-2015 Postdoctoral scholarship, Institutional (\$ 35,000/year)
- 2013 Graduate student travel grant (Departmental, \$ 750)
- 2013 Winner of poster competition- 15<sup>th</sup> Annual Industry-University, Society of Plastic Engineers (SPE) Ontario Night
- 2012-2013 University of Toronto Fellowship (\$ 14,000)
- 2012-2013 QEII-GSST- Queen Elizabeth II Graduate Scholarship in Science and Technology (\$ 15,000)
- 2012 Winner of poster competition- 14<sup>th</sup> Annual Industry-University, Society of Plastic Engineers (SPE) Ontario Night
- 2009 NSERC- Alexander Graham Bell Canada Graduate Scholarship (CGS) (\$ 105,000)
- 2009 FQRNT- Fonds Québécois de la Recherche sur la Nature et les Technologies, (\$ 75,000) (declined)
- 2011 Graduate student travel grant (Institutional, \$ 850)
- 2011 *Best Paper Award*, SPE, ANTEC 2011 Conference
- 2011 *Nominated for Best Paper Award* (for another article), SPE, ANTEC 2011 Conference
- 2010 Winner of HQP poster competition, 1<sup>st</sup> place - NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP)
- 2008 Graduate student travel grant (Institutional, \$ 1,000)
- 2006-2008 Concordia University Fellowship (\$ 15,000/year)
- 2006-2008 International Tuition Fee Remission Award-Concordia University (\$ 7,000/year)

- 2007 Campaign for a New Millennium Graduate Scholarship (\$ 1,300)
- 2007 James W. Burns Graduate Award (\$ 1,000)
- 2001 Ranked 857<sup>th</sup> out of around 500,000 students in Iran national university entrance examination in mathematics & physics field

## RESEARCH EXPERIENCE

---

2015-Present **Istanbul Technical University** - *Assistant Professor and Associate Professor*

Faculty of Chemical & Metallurgical Engineering, Metallurgical & Materials Engineering Department, Istanbul Technical University, Istanbul, Turkey

Institute of Science, Polymer Science and Technology Program, Istanbul Technical University, Istanbul, Turkey

- The areas that interest me for my research stem from my goal of developing novel material systems, multifunctional structures, and new manufacturing technologies in the field of polymer science and engineering. More specifically I am interested in:

Advanced and Additive Manufacturing:

- Development of Innovative Biopolymeric systems, Multiphase Polymer Blends and Composites, Multifunctional Polymer Nanocomposites and Polymeric Nanostructures, Nano/Microcellular Foams and Nano/Microfibrillated Polymeric systems

Materials Characterization:

- Crystallization Kinetics Analysis, Rheological and Interfacial Properties, Foaming Behaviors, Morphology and Structure Analysis, Physical and Mechanical Properties, Thermal and Electrical Properties

➤ According to the end-use applications I am interested in:

- Manufacturing and development of advanced biopolymeric systems including multiphase blend and nanocomposite systems for a wide range of environmental-friendly engineering applications (i.e., automotive, aerospace, construction, packaging, cushioning, thermal and sound insulation) and biomedical purposes (i.e., biosensors, scaffolds, tissue engineering).
- Manufacturing and development of a new class of lightweight multifunctional polymeric nanostructures and nanocomposites that have applications in packaging, construction, automotive, aerospace, electrical devices, energy conversion/storage, electromagnetic pollution control, and structural health monitoring.

2014-2015 **McGill University** - *Postdoctoral Research Associate*

Research Center for High Performance Polymer and Composite Systems (CREPEC), Department of Chemical Engineering, McGill University, Montreal, Canada (joint research projects with Polytechnique Montreal)

*Advisors:* Professor Musa Kamal (McGill) and Professor Pierre Carreau (Polytechnique)

- Sponsored by FQRNT- Fonds Québécois de la Recherche sur la Nature et les Technologies, NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP), and CREPEC
- Development of multifunctional conductive polymer/graphene nanocomposites for electronic and biomedical applications

2013-2014 **Polytechnique Montreal** - *Postdoctoral Research Associate*

Research Center for High Performance Polymer and Composite Systems (CREPEC), Department of Chemical Engineering, Polytechnique Montreal, Montreal, Canada

*Advisors:* Professor Pierre Carreau and Professor Marie-Claude Heuzey

- Sponsored by NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP) and CREPEC
  - Investigating the rheological properties and morphological stability of PLA/ poly[(butylene adipate)-co-terephthalate] (PBAT) and PLA/ poly[(butylene succinate)-co-adipate] (PBSA) blend systems under various shear flows
  - Stabilizing the PLA/PBAT blend morphology under shear flows through the use of nanoparticles such as cellulose nanocrystals (CNC) and nanoclay and via controlling the nanoparticles localization
  - Investigating the dependency of PLA/PBAT blend's properties and morphological stability on processing method (i.e., blend preparation) and PLA molecular weight as the matrix

2009-2013

**University of Toronto - Research Assistant**, doctoral level

Microcellular Plastics Manufacturing Laboratory (MPML), Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, Canada

- Sponsored by NSERC-CGS, NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP), Auto 21, Consortium for Cellular and Micro-Cellular Plastics (CCMCP)
  - Development of a novel technology to manufacture expanded PLA bead foams with double crystal melting peak structure through an autoclave-based process, to be replaced with the currently being used petroleum based expanded polystyrene (EPS) bead foams. As the main part of my PhD thesis, this technology was filed as a patent and the exclusive license was taken by Synbra Technology, Netherlands, with an agreement of paying a royalty of the net selling price of the product for 15 years.
  - Analysis of crystallization kinetics of PLA and PLA nano/microcomposites in the presence of dissolved gas
  - Analysis of rheological properties of PLA and PLA nano/microcomposites
  - Development of extruded microcellular PLA nano/microcomposites foams through tailoring the effects of nano-/micro-sized additives and the corresponding induced crystallization
  - Investigation of crystallization effects on the foam injection-molded PLA and PLA nanocomposites
  - Development of double-crystal melting peak technology for bead foam manufacturing of PLA, polypropylene (PP), polyethylene terephthalate (PET), polyether-ether-ketone (PEEK), and thermoplastic polyurethane (TPU)
  - Optimization of steam chest molding processing parameters for manufacturing expanded PP (EPP) final bead foam products with enhanced dimension stability and surface quality
  - Development of extrusion foaming of low-melt-strength linear PP/clay nanocomposites by tailoring the melt properties of the polymer/gas mixture
  - Development of nanocellular PLA foams through bead foaming technology for super-insulation applications
  - Development of electrically conductive PP/carbon nanotubes composites through foaming, with reduced electrical percolation, increased dielectric permittivity, and decreased dielectric loss
  - Analysis of the crystallization kinetics of TPU and TPU compounds for foaming purposes
  - In-situ visualization of polymer's crystallization during extrusion process

2008-2009

**NRC Canada- Research Engineer**

National Research Council (NRC) Canada, Boucherville, Canada

- Analysis of thermal and mechanical properties of the compression molded PP/natural flax fiber composites and PP/triticale Composites
- Processing of thermoplastic starch (TPS)/natural flax shive fiber composites through twin screw extruder and analysis of their mechanical behavior at various temperature and humidity conditions

2006-2008 **Concordia University** - *Research Assistant*, master's level  
Concordia Center for Composites (CONCOM), Mechanical and Industrial Engineering Department, Concordia University, Montreal, Canada

- Development of a novel failure monitoring system using conductive carbon nanotube network of sensors as a crack detector in glass fiber/epoxy composites while cyclic fatigue loading and static loads
- Manufacturing carbon/nylon commingled braided polymer composite by bladder molding method and characterized its thermal and mechanical features

2003-2005 **Sharif University of Technology** - *Research Assistant*, Bachelor's level  
The Center of Excellence for Advanced Engineering Materials, Sharif University of Technology, Tehran, Iran

- Development of a high wear resistant Al/Al<sub>3</sub>Ti metal matrix composite by in situ hot press of Al and TiO<sub>2</sub> powders
- Manufacturing Al/Al<sub>3</sub>Ti metal matrix composite by in-situ press and sinter powder metallurgy route using Al and Ti powders and characterized its micro-structural features and mechanical properties
- Manufacturing hot pressed MgF<sub>2</sub> infrared transparent ceramics and characterized their micro-structural features and infrared transparency

## TEACHING EXPERIENCE

---

### Istanbul Technical University: (Assistant Professor and Associate Professor)

- 2015-Present Metallurgical and Materials Engineering Department, Istanbul Technical University
- Engineering Polymers (MET 439E): 4<sup>th</sup> year undergraduate level course
  - Fund. of Composites Materials (MET 442E): 4<sup>th</sup> year undergraduate level course
  - Composite Materials (MET 414E) - 4<sup>th</sup> year undergraduate level course
  - Seminar (MAM 596): Graduate level
  - Seminar (MBM 596): Graduate level
- 2015-Present Polymer Science and Technology Program, Istanbul Technical University
- Polymer Characterization (PST 530) - Master level course
  - Polymer Blends and Composites (PST 618) - PhD level course
- 2015-Present Faculty of Engineering, Istanbul Technical University
- Materials Science (MAL 201E): undergraduate level course

### Concordia University: Instructor

- 2013-2015 *Part-Time Faculty Member*, Mechanical Engineering Department, Concordia University
- Materials Science
  - Teaching to a class of 96 second year undergraduate students

### University of Toronto: Instructor

- 2011-2013 Department of Mechanical and Industrial Engineering, University of Toronto
- An Introduction to Polymers and Composites
  - A non-credit summer course (voluntarily offered) for undergraduate summer students, lectured to a class of 10-15

### Teaching Assistant

- 2009-2013 Mechanical and Industrial Engineering Department, University of Toronto
- Thermodynamics
  - Running thermodynamics laboratory for the sessions of around 100 students
  - Evaluating the laboratory reports, lecture quizzes, and exams
  - Design and Computer Aided Engineering
  - Supervising the midterm and final term-projects
  - Evaluating the term-project presentations and reports
- 2009-2013 Department of Materials Science and Engineering, University of Toronto
- Introduction to Polymer Engineering
  - Conducting weekly tutorials, solving course-related questions, designing questions biweekly assignments, marking assignments and midterm exams
  - An Introduction to Materials Science
  - Conducting weekly tutorials, solving materials science questions, designing questions for quizzes, marking quizzes and midterm/final exams
- 2006-2008 Mechanical and Industrial Engineering Department, Concordia University
- Materials Science
  - Conducting weekly tutorials in classes of 40-50 students, solving materials science questions, designing questions for quizzes/assignments, marking quizzes/assignments
  - Running laboratory and evaluating laboratory reports
  - Properties and Failure of Materials
  - Conducting weekly tutorials in classes of 40-50 students, solving materials science questions, designing questions for quizzes/assignments, marking quizzes/assignments
  - Running laboratory and evaluating laboratory reports
  - Laboratory coordinator and training the other laboratory teaching Assistants
  - Mechanics of Materials
  - Running laboratory and evaluating laboratory reports

## **PUBLICATIONS**

---

### **Books**

- 1) **Nofar, M.**, Park, C.B., “*Poly lactide Foams: Fundamentals, Manufacturing and Applications*”, Elsevier, London, William Andrew, 2017, Hardcover ISBN: 9780128139912. © William Andrew 2018  
- Translated to Chinese by Wenli Zhu and published by Chemical Industry Press Co., Ltd., ISBN: 978-7-122-35623-9
- 2) **Nofar, M.**, “*Multiphase Poly lactide Blends: Towards Sustainable and Green Environment*”, Elsevier, in preparation

### **Book Chapters**

- 1) **Nofar, M.**, Park, C.B., “Chapter 5 - Heterogeneous Cell Nucleation Mechanisms in Poly lactide Foaming”, in: *Biofoams: Science and Applications of Bio-Based Cellular and Porous Materials*, Iannace, S., and Park, C.B., Editors, CRC Press Taylor and Francis Group, pp. 153-177, October 2015 (ISBN-13: 978-1-4665-6180-9).

- 2) **Nofar, M.**, Tabatabaei, A, Park, C.B., “Chapter 6 - Innovative PLA Bead Foam Technology”, in: *Polymeric Foams: Innovations in Processes, Technologies, and Products*, Lee, S.T., Editor, CRC Press Taylor and Francis Group, pp. 147-191, October 2016 (ISBN-13: 978-1-4987-3887-3).
- 3) Arslan D., Vatansever, E., **Nofar, M.** “Chapter 10- Nanocellulose PLA based composite films for packaging applications”, in: *Biobased Packaging – Material, Environmental and Economic aspects*, Sapuan S.M., Ilyas R.A. Editors. Wiley, in press.

### Patents

- 1) **Nofar, M.**, Park, C.B., “A method for the preparation of PLA bead foams”, Int. Appl. No.: PCT/NL2013/050231, **WO 2014158014 A1** (US 20160039990 A1, US10087300B2), Publication Date: October 2014
- 2) Demirtas, E., Ozkan, H., **Nofar, M.**, “Plastic foamed structures for the structure of the white goods”, Under Interval Review
- 3) **Nofar, M.**, “Self reinforced PLA-PLA innovative high performance polylactide”, Under Interval Review

### Articles Published in Refereed Journals

- 1) **Nofar, M.**, Heuzey, M-C., Carreau, P.J., Kamal, M.R., “Nanoparticle Interactions and Molecular Relaxation in PLA/PBAT/Nanoclay Blends”, *Experimental Results*, submitted
- 2) Kahraman, Y., Ozdemir, B., Kilic, V., Alkan Goksu, Y., **Nofar, M.**, “Super toughened and highly ductile PLA/TPU blend systems by in situ reactive interfacial compatibilization using multifunctional epoxy based chain extender”, *Macromolecular Materials and Engineering*, submitted
- 3) **Nofar, M.**, Salehiyan, R., Ray, S.S., “Influence of Selective Localization of Nanoparticles on the Structure-Property Relationships in Polylactide-based Blend Nanocomposites”, *Polymer*, submitted ([Review Article](#))
- 4) Azimi, H., Jahani, D., **Nofar, M.**, “Experimental and numerical analyses of n-pentane solubility and diffusivity in polystyrene/poly(methyl methacrylate) blends”, *Journal of Chemical & Engineering Data*, doi: 10.1021/acs.jced.0c00444
- 5) Vatansever, E., Arslan D., Sarul, D.S., Kahraman, Y., Durmus, A., Gunes, G., **Nofar, M.**, "Development of CNC reinforced PBAT nanocomposites with reduced percolation threshold: A comparative study on the preparation method", *Journal of Materials Science*, 2020, 55(32), 15523-15537
- 6) Salehiyan, R., **Nofar, M.**, Kuruma, M., Ray, S.S., Ojijo, V., “Morphological and rheological characterization of nanoparticles-containing polylactide/poly (butylene adipate-co-terephthalate) blend composites: Influence of nanoparticle characteristics and their selective localization”, *Polymer Engineering and Science*, doi:10.1002/pen.25505
- 7) Jalali, A., Hyun, J., Zolali, A., Soltani, I., **Nofar, M.**, Behzadfar, E., Park, C.B., “Peculiar Crystallization and Viscoelastic Properties of Polylactide/Polytetrafluoroethylene Composites Induced by In-situ Formed 3D Nanofiber Network”, *Composites Part B: Engineering*, 2020, 200, 108361
- 8) Bati, B. Kucuk, E.B., Durmus, A., **Nofar, M.**, “Microcellular foaming behavior of ether- and ester-based TPUs blown with supercritical CO<sub>2</sub>”, *Journal of Polymer Engineering*, 2020, 44 (7), 561-571
- 9) Ghanbari, A., Jalili, N.S., Haddadi, S.A., Arjmand, M., **Nofar, M.**, “Mechanical Properties of Extruded Glass Fiber Reinforced Thermoplastic Polyolefin Composites”, *Polymer Composites*, doi.org/10.1002/pc.25672
- 10) Arslan D., Vatansever, E., Sarul, D.S., Kahraman, Y., Gunes, G., Durmus, A., **Nofar, M.**, "Effect of preparation method on the properties of polylactide/cellulose nanocrystal nanocomposites", *Polymer Composites*, doi.org/10.1002/pc.25701
- 11) **Nofar, M.**, Mohammadi, M., Carreau, P.J., “Effect of TPU hard segment content on the rheological and mechanical properties of PLA/TPU blends”, *Journal of Applied Polymer Science*, 2020, 137(45), 49387
- 12) Salehiyan, R., **Nofar, M.**, Makwakwa, D., Ray, S.S., Ojijo, V., “Shear-Induced Carbon Nanotube Localization and Morphological Development in Polylactide/Poly(vinylidene fluoride) Blend

- Nanocomposites, and Their Impact on Dielectric Constants and Rheological Properties”, *Journal of Physical Chemistry Part C*, 2020, 124, 9536-9547
- 13) Kelnar, I., Bal, U., Ujčić, A., Kaprálková, L., Krejčíková, S., Steinhart, M., **Nofar, M.**, “Creep behavior of HDPE/PA66 microfibrillar composite modified by graphite nanoplatelets”, *Journal of Polymer Research*, 2020, 27, 113
  - 14) Vatansever, E., Arslan D., Sarul, D.S., Kahraman, Y., **Nofar, M.**, "The effect of molecular weight and crystallizability of PLA on the CNC dispersion quality in PLA/CNC nanocomposites", *International Journal of Biological Macromolecules*, 2020, 154, 276-290
  - 15) **Nofar, M.**, Bati, B., Kucuk, E.B., Jalali, A., “Effect of soft segment molecular weight on the microcellular foaming behavior of TPU using supercritical CO<sub>2</sub>”, *Journal of Supercritical Fluids*, 2020, 160, 104816-104827
  - 16) **Nofar, M.**, Salehiyan, R., Ciftci, U., Jalali, A., “Ductility improvements of PLA-based binary and ternary blends with controlled morphology using PBAT, PBSA, and nanoclay”, *Composites Part B: Engineering*, 2020, 182, 107661
  - 17) **Nofar, M.**, Kucuk, E.B., Bati, B. “Effect of hard segment content on the microcellular foaming behavior of TPU using supercritical CO<sub>2</sub>”, *Journal of Supercritical Fluids*, 2019, 153, 104590-104607
  - 18) Jalali, A., Huneault, M., **Nofar, M.**, Lee, P., Park, C.B., “Effect of Branching on Flow-induced Crystallization of Poly (lactic acid)”, *European Polymer Journal*, 2019, 119, 410-420
  - 19) Salehiyan, R., **Nofar, M.**, Ray, S.S., Ojijo, V., “Kinetically Controlled Migration of Carbon Nanotubes in Polylactide/Poly(vinylidene fluoride) Blend Nanocomposites and Its Influence on the Electromagnetic Interference Shielding, Electrical Conductivity, and Rheological Properties”, *Journal of Physical Chemistry Part C*, 2019, 123 (31), 19195-19207
  - 20) **Nofar, M.**, Ozgen, E., Girginer, B., “Injection-Molded PP Composites Reinforced with Talc and Nanoclay for Automotive Applications”, *Journal of Thermoplastic Composite Materials*, 2019, 33 (11), 1478-1498
  - 21) **Nofar, M.**, Salehiyan, R., Ray, S.S., “Rheology of Poly (lactic acid)-based Systems”, *Polymer Reviews*, 2019, 59 (3), 465-509. ([Review Article](#))
  - 22) Vatansever, E., Arslan, D., **Nofar, M.**, “Polylactide Cellulose-based Nanocomposites”, *International Journal of Biological Macromolecules*, 2019, 137, 912-938. ([Review Article](#))
  - 23) **Nofar, M.**, Oguz, H., “Development of PBT/recycled-PET blends and the influence of using chain extender”, *Journal of Polymer and the Environment*, 2019, 27 (7), 1404–1417
  - 24) Kelnar, I., Bal, U., Zhigunov, A., Kaprálková, L., Fortelný, I., Krejčíková, S., Kredatusová, J., Dybal, J., Janata, M., **Nofar, M.**, “Nano-modified HDPE/PA6 microfibrillar composites: effect of aminated graphite platelets coupling”, *Journal of Applied Polymer Science*, 2019, 136 (24), 47660.
  - 25) **Nofar, M.**, Oguz, H., Ovali, D., “Effects of matrix crystallinity, dispersed phase and processing type on morphological, thermal, and mechanical properties of PLA-based binary blends with PBAT and PBSA”, *Journal of Applied Polymer Science*, 2019, 136 (23), 47636.
  - 26) **Nofar, M.**, Sacligil, D., Carreau, P.J., Heuzey, M-C., Kamal, M.R., “Poly (lactic acid) Blends: Processing, Properties and Applications”, *International Journal of Biological Macromolecules*, 2019, 125, 307-360. ([Review Article](#))
  - 27) **Nofar, M.**, “Rheological, Thermal, and Foaming Behaviors of Different Polylactide Grades”, *International Journal of Material Science and Research*, 2018, 1(1), 16-22.
  - 28) Demirtas, E., Ozkan, H., **Nofar, M.**, “Extrusion Foaming of High Impact Polystyrene: Effects of Processing Parameters and Materials Composition”, *International Journal of Material Science and Research*, 2018, 1(1), 9-15.
  - 29) **Nofar, M.**, “Synergistic effects of chain extender and nanoclay on the crystallization behavior of polylactide”, *International Journal of Material Science and Research*, 2018, 1(1), 1-8.
  - 30) **Nofar, M.**, Tabatabaei A., Sojoudi, H., Park, C.B., Carreau, P.J., Heuzey, M-C., Kamal, M.R., “Mechanical and bead foaming behavior of PLA-PBAT and PLA-PBSA blends with different morphologies”, *European Polymer Journal*, 2017, 90, 231-244

- 31) Ramezani Kakroodi, A., Kazemi, Y., **Nofar, M.**, Park, C.B., "Tailoring poly (lactic acid) for packaging applications via the production of fully bio-based in situ microfibrillar composite films", **Chemical Engineering Journal**, 2017, 308, 772-782
- 32) **Nofar, M.**, Heuzey, M-C., Carreau, P.J., Kamal, M.R., "Effects of Nanoclay and its Localization on the Morphology Stabilization of PLA/PBAT Blends under Shear Flow", **Polymer**, 2016, 98, 353–364
- 33) **Nofar, M.**, Heuzey, M-C., Carreau, P.J., Kamal, M.R., Randall, J., "Coalescence in PLA-PBAT blends under shear flow: effects of blend preparation and PLA molecular weight", **Journal of Rheology**, 2016, 60 (4), 637-648
- 34) **Nofar, M.**, "Effects of nano-/micro-sized additives and the corresponding induced crystallinity on the extrusion foaming behavior of PLA using supercritical CO<sub>2</sub>", **Materials & Design**, 2016, 101, 24-34.
- 35) Ngo, T.-D., **Nofar, M.**, Ton-That, M.-T., Hu, W., "Flax and Its Thermoplastic Biocomposites", **Journal of Composite Materials**, 2016, 50 (22), 3043-3051.
- 36) **Nofar, M.**, Ameli, A., Park, C.B., "A Novel Technology to Manufacture Biodegradable Polylactide Bead Foam Products", **Materials & Design**, 2015, 83, 413-421.
- 37) **Nofar, M.**, Ameli, A., Park, C.B., "Development of Polylactide Bead Foams with Double Crystal Melting Peaks", **Polymer**, 2015, 69, 83-94.
- 38) **Nofar, M.**, Maani, A., Sojoudi, H., Heuzey, M-C., Carreau, P.J., "Interfacial and Rheological Properties of PLA/PBAT and PLA/PBSA blends and their Morphological Stability under Shear Flow", **Journal of Rheology**, 2015, 59 (2), 317-333
- 39) Ameli, A., **Nofar, M.**, Jahani, D., Park, C.B., "Development of High Void Fraction Polylactide Composite Foams Using Injection Molding: Crystallization and Foaming Behaviors", **Chemical Engineering Journal**, 2015, 262, 78-87
- 40) Ameli, A., **Nofar, M.**, Wang, S., Park, C.B., "Lightweight Polypropylene/Stainless-Steel Fiber Composite Foams with Low Percolation for Efficient Electromagnetic Interference Shielding", **ACS Applied Materials & Interfaces**, 2014, 6, 11091–11100
- 41) Keshtkar, M., **Nofar, M.**, Park, C.B., Carreau, P.J., "Extruded PLA/Clay Nanocomposite Foams Blown with Supercritical CO<sub>2</sub>" **Polymer**, 2014, 55 (16), 4077-4090
- 42) **Nofar, M.**, Ameli, A., Park, C.B., "The Thermal Behavior of Polylactide with Different D-lactide Content in the Presence of Dissolved CO<sub>2</sub>", **Macromolecular Materials & Engineering**, 2014, 299 (10), 1232–1239
- 43) **Nofar, M.**, Park, C.B., "Poly (lactic acid) Foaming", **Progress in Polymer Science**, 2014, 39 (10), 1721-1741. ([Review Article](#))
- 44) Ameli, A., **Nofar, M.**, Park, C.B., Pötschke, P., Rizvi, G., "Polypropylene/carbon nanotube nano/microcellular structures with high dielectric permittivity, low dielectric loss, and low percolation threshold", **Carbon**, 2014, 71, 206-217
- 45) Hossieny, N., Barzegari, M.R., **Nofar, M.**, Mahmood, S.H., Park, C.B., "Crystallization of Hard Segment Domains with the Presence of Butane for Microcellular Thermoplastic Polyurethane Foams ", **Polymer**, 2014, 55 (2), 651-662
- 46) Tabatabaei, A, Barzegari, M.R., **Nofar, M.**, Park, C.B., "In-Situ Visualization of Polypropylene Crystallization during Extrusion", **Polymer Testing**, 2014, 33, 57-63
- 47) Ameli, A., Jahani, D., **Nofar, M.**, Park, C.B., "Development of High Void Fraction Polylactide Composite Foams using Injection Molding: Mechanical and Thermal Insulation Properties", **Composite Science and Technology**, 2014, 90, 88-95
- 48) **Nofar, M.**, Tabatabaei A., Ameli, A., Park, C.B., "Comparison of Melting and Crystallization Behaviors of Polylactide under High-Pressure CO<sub>2</sub>, N<sub>2</sub>, and He", **Polymer**, 2013, 54 (23), 6471-6478
- 49) **Nofar, M.**, Tabatabaei, A, Park, C.B., "Effect of Nano-/Micro-Sized Additives on the Crystallization Behaviors of PLA and PLA/CO<sub>2</sub> Mixtures" **Polymer**, 2013, 54 (9), 2382–2391
- 50) **Nofar, M.**, Guo, Y., Park, C.B., "Double Crystal Melting Peak Generation for Expanded Polypropylene Bead Foam Manufacturing", **Industrial & Engineering Chemistry Research**, 2013, 52 (6), 2297–2303
- 51) Ameli, A., Jahani, D., **Nofar, M.**, Jung, P.U. Park, C.B., " Processing and Characterization of Solid and Foamed Injection-Molded Polylactide with Talc", **Journal of Cellular Plastics**, 2013, 49 (4), 351-374

- 52) **Nofar, M.**, Zhu, W, Park, C.B., "Effect of Dissolved CO<sub>2</sub> on the Crystallization Behavior of Linear and Branched PLA", *Polymer*, 2012, 53 (15), 3341–3353
- 53) **Nofar, M.**, Majithiya, K., Kuboki, T., Park, C.B., "The Foamability of Low-Melt-Strength Linear polypropylene with Nanoclay and Coupling Agent", *Journal of Cellular Plastics*, 2012, 48, 271–287
- 54) **Nofar, M.**, Zhu, W., Park, C.B., Randall, J., "Crystallization Kinetics of Linear and Long-Chain-Branched Polylactide", *Industrial & Engineering Chemistry Research*, 2011, 50 (24), 13789–13798
- 55) **Nofar, M.**, Hoa, S.V., Pugh, M.D., "Failure Detection and Monitoring in Polymer Matrix Composites Subjected to Static and Dynamic Loads Using Carbon Nanotube Networks", *Composites Science and Technology*, 2009, 69 (10), 1599-1606
- 56) **Nofar, M.**, Madaah Hosseini, H.R., Kolagar N., "Fabrication of High Wear Resistance Al/Al<sub>3</sub>Ti Metal Matrix Composite by in Situ Hot Press Method", *Materials & Design*, 2009, 30 (2), 280-286
- 57) Abbasi Chiane, V., Madaah Hosseini, H.R., **Nofar, M.**, "Micro Structural Features and Mechanical Properties of Al-Al<sub>3</sub>Ti Composite Fabricated by in-Situ Powder Metallurgy Route", *Journal of Alloys and Compounds*, 2009, 473 (1&2), 127-132
- 58) **Nofar, M.**, Madaah Hosseini, H.R., Shivayee, H.A., "The Dependency of Optical Properties on Density for Hot Pressed MgF<sub>2</sub>", *Infrared Physics & Technology*, 2008, 51 (6), 546-549

### Articles in Progress for Submission in Refereed Journals

- 59) Dorr, D., Standau, T., **Nofar, M.**, Altstädt V., "Influence of Multifunctional Epoxy Based Chain Extenders on the Rheological Behavior of Polymers – Review on Joncryl® Modified Thermoplastics", *Polymer*, in submitted, ([Review Article](#))
- 60) Ghanbari, A., **Nofar, M.**, Haddadi, S.A., Ghanbari, D., Behzadfar, E., Ameli, A., "Mechanical Properties and Foaming Ability of PP/Elastomer/Carbon Fiber Hybrid Composites", *Polymer Composites*, submitted
- 61) Ghanbari, A., **Nofar, M.**, Ameli, A., "Polypropylene Composites Reinforced by Recycled Short Carbon Fibers: Morphology, Properties, and Foaming Behavior", *Polymer Composites*, submitted
- 62) Ghanbari, A., Haddadi, S.A., **Nofar, M.**, Ameli, A., "Reinforcing Potential of Recycled Carbon Fibers in Compatibilized Polypropylene Composites", *Polymer Composites*, submitted
- 63) Jalali, A., Tuccitto, A., Diez, S.R., **Nofar, M.**, Akrami, H., Behzadfar, E., Park, C.B., "High Strength, Excellent Thermally Resistant Self-reinforced Polylactide Composites Fabricated by Melt Spunbond Technology: The Unique Role of In -situ Nanofibrillated Stereocomplexed Polylactide Fibers as Rheology Modifier and Open-cell Foam Inducer", *Macromolecules*, submitted
- 64) Ozdemir, B., Bezci B., Atalay S.E., **Nofar, M.**, "The degradation behavior of amorphous and semicrystalline PLA under natural environments" or "How degradable the PLA is under natural environmental conditions", *Polymer Degradation and Stability*, in preparation
- 65) Sarul, D.S., Vatansever, E., Arslan D., Kahraman, Y., Durmus, A., **Nofar, M.**, "Development of PLA/PBAT/CNC nanocomposites with enhanced properties", *Carbohydrate Polymer*, in preparation
- 66) Ozdemir, B., Dundar, A., Vatansever, E., **Nofar, M.**, "Dependency of rheological and morphological properties of PLA/CNC on the type of solvent and CNC", *Carbohydrate Polymer*, in preparation
- 67) Guclu, M., Ozdemir, B., Durmus, A., Nofar, M., "Influence of Chain Extension and Blending with PBT on the Rheological Behavior of Recycled-PET - Polycondensation and degradation behavior of recycled PET and PET/PBT blends during melt rheological measurements: effect of N<sub>2</sub>, air, T, shear rate, strain", *Rheologica Acta*, in preparation
- 68) **Nofar, M.**, Mohammadi, M., Carreau, P.J., "Nanoparticles migration and rheological response in blend nanocomposites", *International Polymer Processing*, in preparation
- 69) **Nofar, M.**, Mohammadi, M., Carreau, P.J., "Improvement of PLA viscoelasticity and processability through the formation of fiber-like crystal network", *Macromolecules*, in preparation
- 70) Sarul, D.S., Vatansever, E., Arslan D., Kahraman, Y., Durmus, A., **Nofar, M.**, "Influence of CNC selective localization on the properties of PLA/PBAT/CNC blend nanocomposites", *Carbohydrate Polymer*, in preparation

- 71) Dundar, A., Ozdemir, B., Vatansever, E., **Nofar, M.**, "Rheological and morphological properties of PLA/CNC/Nanoclay hybrid nanocomposites", *Carbohydrate Polymer*, in preparation
- 72) Yargici Kovanci, C., Yenigul, B., Ozdemir, B., **Nofar, M.**, "Mechanical and viscoelastic properties of PE-based fibrillated composites from 100% recycled resources", *Journal of Composites: Part B*, in preparation
- 73) Ozdemir, B., **Nofar, M.**, "Effect of Chain Extender on Rheological and Crystallization Behaviors of PLA", *Polymer*, in preparation, ([Review Article](#))
- 74) Ozdemir, B., **Nofar, M.**, "Polycondensation and degradation behavior of ether and ester based TPUs during melt rheological measurements: effect of N<sub>2</sub>, air, T, shear rate, strain", *Journal of Rheology*, in preparation
- 75) Mohammadi, M., **Nofar, M.**, Heuzey, M-C., Carreau, P.J., "Morphology stabilization of polymer blends using nanoparticles", *ACS Applied Materials & Interfaces*, in preparation, ([Review Article](#))
- 76) **Nofar, M.**, "Electrospinning of Polylactide-based Systems", *Polymer*, in preparation, ([Review Article](#))
- 77) **Nofar, M.**, Mohammadi, M., Carreau, P.J., "Super enhanced electrical properties of PLA through the generation of a conductive fiber-like PLA crystallites network", *ACS Applied Materials & Interfaces*, in preparation
- 78) **Nofar, M.**, Mohammadi, M., Carreau, P.J., "PCL/TPU microfibrillated composites and the enhanced functionalities using carbon nanotubes through a spider like network of TPU fibrils", *ACS Applied Materials & Interfaces*, in preparation
- 79) Kilic V., Daver, F., **Nofar, M.**, "3D-Printing of PLA-based Systems: Difficulties, Progresses, and Properties", *Progress in Polymer Science*, in preparation, ([Review Article](#))
- 80) Kilic V., Daver, F., Farahani, R., Therriault, D., **Nofar, M.**, "3D-Printing of Foamed Polymeric Systems", *Advanced Materials*, in preparation, ([Review Article](#))

#### **Articles published in refereed conference proceedings and presented**

- 1) **Nofar, M.**, Mohammadi, M., Carreau, P.J., "How TPU hard segment content affects the morphology, rheological, and mechanical properties of PLA/TPU blends", 18<sup>th</sup> International Congress on Rheology, Rio de Janeiro, Brazil, Aug 02-07, 2020
- 2) **Nofar, M.**, Mohammadi, M., Carreau, P.J., "Super Enhancements in Rheological Properties of PLA through Generation of Crystal Networks", 18<sup>th</sup> International Congress on Rheology, Rio de Janeiro, Brazil, Aug 02-07, 2020
- 3) Jalali, A., Diez S.R., **Nofar, M.**, Park, C.B., "In-situ Nanofibrillation of Stereocomplexed Polylactides in Polylactides: Processing condition, Rheology, crystallization, morphology development and Foamability", Polymer Processing Society 36, Montreal, Canada, May 31- June 04, 2020
- 4) Vatansever, E., Arslan D., Sarul, D.S., Gunes, G., Durmus, A., **Nofar, M.**, "Enhanced properties of PBAT by incorporating CNC", Polymer Processing Society 36, Montreal, Canada, May 31- June 04, 2020
- 5) **(Keynote)** Vatansever, E., Arslan D., Sarul, D.S., **Nofar, M.**, "The CNC Dispersion Quality in Various PLA Grades", Polymer Processing Society 36, Montreal, Canada, May 31- June 04, 2020
- 6) Jalali, A., Akrami, H., Soltani, I., **Nofar, M.**, Park, C.B., "Properties of Nanofibrillated PLA/PTFE Fibrillated Composites", Society of Plastics Engineers (SPE), Annual Technical Conference (ANTEC), Technical Papers, Saint Antonio, TX, March 29- April 02, 2020
- 7) **(Keynote)** **Nofar, M.**, Mohammadi, M., Carreau, P.J., "Self-reinforced PLA/PLA compounds with enhanced viscoelastic properties", 1<sup>st</sup> International Conference on Rheology, Tehran, Iran, Dec 17-18, 2019
- 8) **(Keynote)** **Nofar, M.**, "Multiphase Polylactide-based systems with enhanced processability and extended applications", Polymer Processing Society Europe-Africa 2019 Regional Conference, Pretoria, South Africa, Nov 18-21, 2019
- 9) Vatansever, E., Arslan, D., **Nofar, M.**, "Cellulose Nanocrystal Incorporated Nanocomposites", Polymer Processing Society 35, Izmir, Turkey, May 26-30, 2019

- 10) Kovanci, C., Kayalan, C.I., **Nofar, M.**, “Mechanical, Thermal and Flame Retardancy Properties of Polycarbonate Recycled Poly(ethylene terephthalate) Blends in the Presence of Compatibilizer”, Polymer Processing Society 35, Izmir, Turkey, May 26-30, 2019
- 11) Kucuk, E.B., Bati, B., **Nofar, M.**, “Effect of TPU hard segment content on TPU’s bead foaming behavior”, Polymer Processing Society 35, Izmir, Turkey, May 26-30, 2019
- 12) Bati, B., Kucuk, E.B., **Nofar, M.**, “Effect of TPU soft segment molecular weight on TPU’s bead foaming behavior”, Polymer Processing Society 35, Izmir, Turkey, May 26-30, 2019
- 13) **(Invited Speaker) Nofar, M.**, “Multifunctional multiphase polymeric systems”, 3<sup>rd</sup> International Organic Electronic Material Technology Conference (OEMT2018), Turkey, İğneada/Kırklareli, Sep 20-22, 2018
- 14) **Nofar, M.**, Ciftci, U., Oguz, H., “Morphological variations and properties of PLA-PBAT Bioblends reinforced with nanoclay”, Polymer Processing Society 34, Taipei, Taiwan, May 21-25, 2018
- 15) **Nofar, M.**, Oguz, H., Yargici, C., “Development of recycled-PET/PBT blend systems: Phase miscibility, crystallization behavior, thermal and mechanical properties”, Polymer Processing Society 34, Taipei, Taiwan, May 21-25, 2018
- 16) **Nofar, M.**, Sacligil, D., “Developments in PLA-based blends over last two decades”, Polymer Processing Society 33, Cancun, Mexico, December 10-14, 2017
- 17) **Nofar, M.**, Ciftci, U., Oguz, H., “Binary and Ternary PLA-based Bioblends with PBAT and PBSA”, Polymer Processing Society 33, Cancun, Mexico, December 10-14, 2017
- 18) Özgen, E., **Nofar, M.**, “Effects of processing parameters and material composition on the properties of PP compounds”, 5<sup>th</sup> International Polymeric Composites Symposium and Workshops, Izmir, Turkey, November 2-4, 2017
- 19) Demirtas, E., Ozkan, H., **Nofar, M.**, “Continuous Foam Extrusion of Polystyrene (PS) Blends and Composites”, Foams2013, Bayreuth, Germany, October 11–12, 2017
- 20) Demirtas, E., Ozkan, H., **Nofar, M.**, “Continuous foam extrusion of high impact polystyrene (HIPS): Effect of processing parameters and blowing agent type and content”, Polymer Processing Society 2017, Europe Africa Conference, Dresden, Germany, June 26-29, 2017
- 21) Oguz, H., Dogan, C., Kara, D., Ozen, Z.T., Ovali, D., **Nofar, M.**, “Development of PLA/PBAT and PLA /PBSA bioblends: Effects of processing type and PLA crystallinity on morphology and thermomechanical properties”, Polymer Processing Society 2017, Europe Africa Conference, Dresden, Germany, June 26-29, 2017
- 22) **Nofar, M.**, Tabatabaei, A., Park, C.B., Carreau, P.J., Heuzey, M-C., Kamal, M.R., " Wide-Range of Microcellular Bead Foams from Different PLA-Based Drop/Sea Blend Morphologies", Society of Plastics Engineers (SPE), Annual Technical Conference (ANTEC), Technical Papers, Anaheim, CA, May 08-10, 2017.
- 23) **Nofar, M.**, “Extending polylactide applications by overcoming its drawbacks”, International Conference on Sustainable Bioplastics, Alicante, Spain, November 10-11, 2016
- 24) **Nofar, M.**, “Role of nanoclay on development of innovative polymeric systems”, The 5<sup>th</sup> Mediterranean Clay Meeting, İzmir-Çeşme, Turkey, September 25-29, 2016
- 25) **Nofar, M.**, Carreau, P., Heuzey, M-C., Kamal, M.R., “Development of PLA-Based Multiphase Bioblends with Improved Properties”, 10<sup>th</sup> World Biomaterials Congress, Montreal, Quebec, Canada, May 17-22, 2016
- 26) **Nofar, M.**, Park, C.B., "Manufacturing of High-Performance Nano/Microcellular Expanded PLA Bead Foams", ASME 2015 International Mechanical Engineering Congress & Exposition (IMECE 2015), Houston, Texas, USA, November 13-19, 2015
- 27) **Nofar, M.**, Park, C.B., "Manufacturing of High-Performance Expanded PLA Bead Foams", Polymer Foam 2015, International industry conference on polymer foam applications, manufacturing and performance, Cologne, Germany, November 2-4, 2015
- 28) **Nofar, M.**, Park, C.B., "Development of PLA foam products through three different foam processing routes", 5<sup>th</sup> Biofoams, Sorrento, Italy, October 13-16, 2015

- 29) **(Keynote) Nofar, M.**, Heuzey, M-C., Carreau, P.J., Kamal, M.R., Randall, J., "Effects of Nanoclay on Stabilizing the PLA/PBAT Blends' Morphology under Shear Flow", The Polymer Processing Society Conference 2015, Graz, Austria, September 21-25, 2015
- 30) Ameli, A., **Nofar, M.**, Saniei, M., Wang, S., Park, C.B., "Foam injection molding of polypropylene/stainless steel fiber composites for efficient EMI shielding", 31<sup>st</sup> International Conference of the Polymer Processing Society, Jeju Island, Korea, June 7-11, 2015
- 31) **(Keynote) Nofar, M.**, Heuzey, M-C., Carreau, P.J., Kamal, M.R., Randall, J., "Rheological and Morphological Properties of PLA-PBAT Blends - Effects of Nanoclay Localization", 31<sup>st</sup> International Conference of the Polymer Processing Society, Jeju Island, Korea, June 7-11, 2015
- 32) **Nofar, M.**, Heuzey, M-C., Carreau, P.J., Kamal, M.R., "Droplet Coalescence of PLA/PBAT Blends under Shear Flow: Effects of Blend Preparation Method and PLA Matrix Molecular Weight", 10<sup>th</sup> Annual European Rheology Conference, Nantes, France, April 14-17, 2015
- 33) **Nofar, M.**, Maani, A., Heuzey, M-C., Carreau, P.J., "Morphological Stability of PLA/PBAT and PLA/PBSA Blends under Shear Flow", The Society of Rheology 86<sup>th</sup> Annual Meeting, Philadelphia, Pennsylvania, USA, October 5-9, 2014
- 34) **Nofar, M.**, and Park, C.B., "Nanocellular and Microcellular Expanded PLA Bead Foams", FOAMS 2014, Iselin, NJ, USA, September 10-11, 2014.
- 35) **(Keynote) Nofar, M.**, Ameli, A., Park, C.B., "Expanded PLA Bead Foaming- A New Technology", 30<sup>th</sup> International Conference of the Polymer Processing Society, Cleveland, Ohio, USA, June 8-12, 2014
- 36) Ameli, A., **Nofar, M.**, Hossieny, N., Park, C.B., "Electrical and dielectric properties of foam injection-molded polypropylene/multiwalled carbon nanotube composites", 30<sup>th</sup> International Conference of the Polymer Processing Society, Cleveland, Ohio, USA, June 8-12, 2014
- 37) **(Keynote) Nofar, M.**, Park, C.B., "Polylactide Foam processing Technologies", 13<sup>th</sup> International Symposium on Bioplastics, Biocomposites & Biorefining, Guelph, Ontario, Canada, May 19-24, 2014
- 38) Ameli, A., Jahani D., **Nofar, M.**, Park, C.B., Pötschke, P., "Lightweight polypropylene-carbon nanotube foams with low filler content, high permittivity and low dielectric loss for charge storage applications", SPE, ANTEC, Technical Papers, Las Vegas, Nevada, USA, April 28-30, 2014
- 39) **Nofar, M.**, Park, C.B., "Development of Expanded PLA Bead Foams: A Promising Substitute for Expanded PS and PP Products", SPE, ANTEC, Technical Papers, Las Vegas, Nevada, USA, April 28-30, 2014
- 40) **(Plenary) Nofar, M.**, Ameli, A., Park, C.B. "Manufacturing of Low-Density Expanded PLA Foams with Superior Intra-Bead Sintering Behaviors", Ningbo Forum of Materials Science, Ningbo, China, November 13-15, 2013
- 41) Ameli, A., Hossieny, N., **Nofar, M.**, Park, C.B., Pötschke, P. "Nanocellular foams of polypropylene-multiwalled carbon nanotube composites", Foams2013, Seattle, Washington, USA, September 11-12, 2013
- 42) **Nofar, M.** and Park, C.B., "Crystallization Kinetics of Different Polylactide Materials in Presence of Dissolved CO<sub>2</sub>", 4<sup>th</sup> Biofoams, Toronto, Canada, August 27-29, 2013
- 43) Ameli, A., **Nofar, M.**, Jahani D., Park, C.B., "Foaming and crystallization behaviors of highly expanded Injection-Molded Polylactide Composite Foams", 4<sup>th</sup> Biofoams, Toronto, Canada, August 27-29, 2013
- 44) **Nofar, M.**, Ameli, A., Park, C.B., "The Crystallization Effect on the Properties of Expanded Polylactide Bead Foams", 4<sup>th</sup> Biofoams, Toronto, Canada, August 27-29, 2013
- 45) Hossieny, N., **Nofar, M.**, Shaayegan, V., and Park, C.B., "Effects of Glycerol Monosterate on TPUs Crystallization and its Foaming Behavior", 29<sup>th</sup> International Conference of the Polymer Processing Society, Nuremberg, Germany, July 15-20, 2013
- 46) **Nofar, M.**, Ameli, A., Park, C.B., "Crystallization and Melting Behavior of PLA in Contact with Pressurized CO<sub>2</sub>, N<sub>2</sub>, and helium", 29<sup>th</sup> International Conference of the Polymer Processing Society, Nuremberg, Germany, July 15-19, 2013
- 47) Tabatabaei, A, Barzegari, M.R., **Nofar, M.**, and Park, C.B., "Effects of Crystallinity on the Foaming Behaviors of Extruded Polypropylene Blown with CO<sub>2</sub>", 15<sup>th</sup> Annual Conference of Blowing Agents & Foaming Processes, Mainz, Germany, May 14-15, 2013

- 48) **Nofar, M.**, Barzegari, M.R., Tabatabaei, A., and Park, C.B., "PLA Extrusion Foaming Behavior: Effects of Varying Isothermal Melt Crystallization Kinetics", SPE, ANTEC, Technical Papers, Cincinnati, Ohio, USA, April 22-24, 2013
- 49) Tabatabaei, A, Barzegari, M.R., **Nofar, M.**, and Park, C.B., "Visualization of Polypropylene Crystallization in Extrusion Foam Process", SPE, ANTEC, Technical Papers, Cincinnati, Ohio, USA, April 22-24, 2013
- 50) **(Keynote) Nofar, M.**, and Park, C.B., "The Dependency of PLA's Crystallization Kinetics on Dissolved CO<sub>2</sub> Pressure", 28<sup>th</sup> International Conference of Polymer Processing Society, Pattaya, Thailand, Dec. 11-15, 2012
- 51) Tabatabaei, A, Barzegari, M.R., Keshtkar, M., **Nofar, M.**, and Park, C.B., "Visualization of PLA Crystallization in Extrusion Process and its Effect on Foaming Behavior of PLA", PPS Americas Conference 2012, Niagara Falls, Ontario, Canada, May 21-24, 2012
- 52) **Nofar, M.**, and Park, C.B., "Effect of Gas Pressure on Crystal Melting Behavior of Polylactide", PPS Americas Conference 2012, Niagara Falls, Ontario, Canada, May 21-24, 2012
- 53) Hossieny, N., **Nofar, M.**, Barzegari, M.R., and Park, C.B., "Foaming Behavior of Melt Compounded Thermoplastic Polyurethane in Presence of Butane", SPE, ANTEC, Technical Papers, Orlando, FL, USA, April 2-4, 2012
- 54) Wang, H., Zhang, S.L., **Nofar, M.**, Barzegari, M.R., Park, C.B., and Jiang, Z.H., "Development of Beads Foaming Technology for High Performance PEEK, I. Thermal Analysis", SPE, ANTEC, Technical Papers, Orlando, FL, USA, April 2-4, 2012
- 55) **Nofar, M.**, Barzegari, M.R., Tabatabaei, A., Keshtkar, M., and Park, C.B., "Effect of Various Additives (Talc, Nanoclay, and Nanosilica) on Extrusion Foaming of PLA through Crystallization", SPE, ANTEC, Technical Papers, Orlando, FL, USA, April 2-4, 2012
- 56) **Nofar, M.**, and Park, C.B., "Feasibility of Double Crystal Melting Peak Generation in PLA for Expanded PLA Bead Foams", SPE, ANTEC, Technical Papers, Orlando, FL, USA, April 2-4, 2012
- 57) **Nofar, M.**, Zhu, W., Park, C.B., and Randall, J. "Effect of D-Lactide Content on Thermal Behavior of Polylactide in Presence of CO<sub>2</sub> Dissolved Gas", SPE, ANTEC, Technical Papers, Orlando, FL, USA, April 2-4, 2012
- 58) **Nofar, M.**, Barzegari, M.R., Tabatabaei A., Keshtkar, M., and Park C.B., "Effect of Inorganic Filler Type on the Rheological Properties of Linear Polylactide", Polymer Processing Society 2011 Asia/Australia Conference, Kish Island, Iran, November 15-17, 2011
- 59) Hossieny, N., **Nofar, M.**, and Park, C.B., "Effect of Hard Segment Distribution on the Foaming Behavior of Thermoplastic Polyurethane", Polymer Processing Society 2011 Asia/Australia Conference, Kish Island, Iran, November 15-17, 2011
- 60) **Nofar, M.**, Zhu, W., Park, C.B., and Randall, J., "Effect of Dissolved CO<sub>2</sub> on the Crystallization Behavior of PLA with Various D-contents", Polymer Processing Society 2011 Asia/Australia Conference, Kish Island, Iran, November 15-17, 2011
- 61) Barzegari, M.R., **Nofar, M.**, and Park, C.B., "Double Melting Endotherms of Polyethylene Terephthalate (PET) for Expanded Bead Foams", FOAMS 2011, Iselin, New Jersey, USA, September 14-15, 2011
- 62) Keshtkar, M., **Nofar, M.**, Park, C.B., and Carreau, P., "Foaming Behavior of PLA/Nanoclay Nanocomposites in Continuous Extrusion", 3<sup>rd</sup> Biofoams, Capri, Italy, September 21-24, 2011
- 63) **Nofar, M.**, Zhu, W., Park, C.B., and Randall, J., "Effect of Dissolved CO<sub>2</sub> on Nonisothermal Crystallization Behavior of PLA with Various Branching Degrees & Talc", 3<sup>rd</sup> Biofoams, Capri, Italy, September 21-24, 2011
- 64) **Nofar, M.**, Park, C.B., Tabatabaei, A., and Randall, J., "The Effect of Various Fillers on the Crystallization Behavior of PLA with the Presence of Dissolved CO<sub>2</sub>", 3<sup>rd</sup> Biofoams, Capri, Italy, September 21-24, 2011
- 65) Hossieny, N., **Nofar, M.**, and Park, C.B., "Investigating the Mechanical Properties of Expanded Polypropylene Bead Products", SPE, ANTEC, Technical Papers, Paper # PENG-11-2010-0416, Boston, MA, USA, May 1-4, 2011

- 66) **Nofar, M.**, Guo, Y., and Park, C.B., "Simulation of EPP Bead Manufacturing in Batch Foaming Process through High Pressure Differential Scanning Calorimeter (HPDSC)", SPE, ANTEC, Technical Papers, Paper # PENG-11-2010-0347, Boston, MA, USA, May 1-4, 2011
- 67) **Nofar, M.**, Majithiya, K., Kuboki, T., Bonnet, T., and Park, C.B., "Investigating the Foamability of Low Melt Strength Homopolymer Linear PP and Coupling Agent by Using Nanoclay", SPE, ANTEC, Technical Papers, Paper # PENG-11-2010-0361, Boston, MA, USA, May 1-4, 2011
- 68) **Nofar, M.**, Zhu, W., Park, C.B., and Randall, J. "The Dependency of Polylactide Crystallization Behavior on The Chain Branching and Nano-Clay Contents", SPE, ANTEC, Technical Papers, Paper # PENG-11-2010-0380, Boston, MA, USA, May 1-4, 2011
- 69) **(Best Paper Award)** Zhu, W., **Nofar, M.**, Zhai, W., Park, C.B., and Randall, J. "The Effect of Chain Branching on the Crystallinity Behavior of Polylactide with the Presence of Dissolved CO<sub>2</sub>", SPE, ANTEC, Technical Papers, Paper # PENG-11-2010-0380, Boston, MA, USA, May 1-4, 2011
- 70) **Nofar, M.**, Park, C.B. "Dependency of LPP Foaming Behavior on Foam Composition and Processing Parameters", SPE, ANTEC, Technical Papers, Paper #604, Orlando, FL, USA, May 16-20, 2010
- 71) Ngo, T.-D., **Nofar, M.**, Ton-That, M.-T., Sepehr, M., Hu, W., Denault, J., "Green Laminate Composites Based on Polypropylene (PP) and Flax Fiber", SPE, ANTEC, Technical Papers, Orlando, FL, USA, May 16-20, 2010
- 72) **Nofar, M.**, Hoa, S.V., and Pugh, M.D., "Self Sensing Glass/Epoxy Composites Using Carbon Nanotube", 17<sup>th</sup> International Conference on Composite Materials, Edinburgh, UK, July 27-31, 2009
- 73) **Nofar, M.**, Hoa, S.V., and Pugh, M.D., "Carbon Nanotube Networks as a Strain Indicator and Failure Predictor in Polymer Matrix Composites Subjecting to Static and Dynamic Loads", ASC Conference, Memphis, TN, USA, Sep 9-11, 2008
- 74) **Nofar, M.**, Madaah Hosseini, H.R., Shivayee, H.A., "The Effect of Hot Pressing Parameters on the Microstructure and Infrared Transparency of MgF<sub>2</sub> Ceramics", Tehran International Congress on Manufacturing Engineering (TICME), Tehran, Iran, Dec. 12-15, 2005

### **Industrial Reports, Workshops, and Presentations**

- 1) **Nofar, M.**, Polylactide Foam Processing Technologies, Workshop, Amirkabir University of Technology, Iran, Tehran, March, 2018
- 2) **Nofar, M.**, Polylactide Foam Processing Technologies, Workshop, Iran Polymer and Petrochemical Institute, Iran, Tehran, January, 2018
- 3) **Nofar, M.**, Extending polylactide applications by overcoming its drawbacks, Workshop, International Conference on Sustainable Bioplastics, Spain, Alicante, November 10-11, 2016
- 4) **Nofar, M.**, Optimization of Bead Foaming Technology: Use of Crystallization to Enhance Foaming, Workshop, Huntsman, Belgium, January, 2016
- 5) **Nofar, M.**, Development of Advanced Polymeric and Multifunctional Composite Systems, Workshop, Arcelik A.S., Turkey, Tuzla, November, 2015
- 6) **Nofar, M.**, Development of PLA Biofoam Products through Three Foam Processing Routes, Workshop, Kocaeli University, Turkey, Kocaeli, September, 2015
- 7) **Nofar, M.**, Heuzey, M-C., Carreau, P., and Kamal, M.R. "Droplet Coalescence of PLA/PBAT Blends under Shear Flow: Effects of Blend Preparation Method and PLA Matrix Molecular Weight", NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP) HQP Scientific Network Conference, Polytechnique Montréal, Montreal, Canada, May 2015
- 8) **Nofar, M.**, Heuzey, M-C., and Carreau, P., "Morphological Stability of PLA/PBAT & PLA/PBSA Blends under Shear Flow", NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP) HQP Scientific Network Conference, University of Toronto, Toronto, Canada, June 2014
- 9) **Nofar, M.**, "Expanded PLA Bead foaming: Crystallization Kinetics Analysis and Novel Technology Development", Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), October 2013
- 10) **Nofar, M.**, and Park, C.B., "Extruded PLA Foams: Effects of Nano-/Micro-Sized Additives and Crystallization", NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP) HQP Scientific Network Conference, McGill University, Montreal, Canada, June 2013

- 11) **Nofar, M.**, “A Novel Technology to Manufacture Expanded PLA Bead Foams”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), May 2013
- 12) **Nofar, M.**, “Foaming Behavior of Polylactide with Double Crystal-Melting Peak Structure for Bead Foaming Technology”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), November 2012
- 13) **Nofar, M.**, “Foaming Behavior of Polylactide with Double Crystal-Melting Peak Structure for Bead Foaming Technology”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), November 2012
- 14) **Nofar, M.**, “Crystallization and Melting Behavior of Polylactide in Contact with Pressurized CO<sub>2</sub>, N<sub>2</sub>, and Helium”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), November 2012
- 15) **Nofar, M.**, “Foaming Behavior of PLA/Clay Nanocomposites in Continuous Extrusion Foaming”, NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP) HQP Scientific Network Conference, University of Toronto, Toronto, Canada, June 2012
- 16) Park, C.B., **Nofar, M.**, Barzegari, M.R., Hossieny, N., “Bead Foaming Technology for Low-Density Foam Products with 3D Geometry”, PI Progress Report, NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP) HQP Scientific Network Conference, University of Toronto, Toronto, Canada, June 2012
- 17) **Nofar, M.**, and Park, C.B.,” Manufacturing of Bio-based/Bio-degradable Expanded Polylactide Bead Foams”, 3<sup>rd</sup> annual MIE research symposium, University of Toronto, June 2012
- 18) **Nofar, M.**, “Effect of micro-/nano-sized additives (Talc, Nanoclay, and Nanosilica) on Extrusion Foaming of PLA through Crystallization”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), April 2012
- 19) Park, C.B., **Nofar, M.**, Barzegari, M.R., Hossieny, N., Optimization of Bead Foaming Technology: Formation of Balanced Two Crystal Peaks, Polymer Foams, Industrial Workshop, Bayreuth, Germany, September 2011
- 20) **Nofar, M.**, “Three Novel Applications of Foaming Technology for Polypropylene”, NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP) HQP Scientific Network Conference, University of Toronto, Toronto, Canada, June 2011
- 21) **Nofar, M.**, “Effect of Chain-Branching on Crystallization Behavior of PLA with the Presence of Dissolved CO<sub>2</sub>”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), April 2011
- 22) **Nofar, M.**, “The Dependency of Polylactide Crystallization Behavior on the Chain Branching and Nano-Clay Contents”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), November 2010
- 23) **Nofar, M.**, “Crystallization Kinetics of Linear and Long-Chain-Branched Polylactide”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), November 2010
- 24) **Nofar, M.**, “EPP Foams Manufacturing Process & their properties Made by Steam Chest Molding”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), May 2010
- 25) **Nofar, M.**, “Microcellular LPP/Nano-clay Foam”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), November 2009
- 26) **Nofar, M.**, “Foaming of linear PP with Nanoclay”, Presented at Consortium for Cellular and Microcellular Plastics (CCMCP), June 2009

## RESEARCH PROPOSALS

---

- |      |   |
|------|---|
| 2020 | <b>Co-Principle Investigator:</b> TUBITAK 2507 – Joint Research Project between Turkey Scientific and Technological Research Projects Funding Program (TUBITAK) and German Research Foundation (DFG), Bead foaming of high performance EPET and EPBT for automotive applications, to be submitted (1.000,000.00 TL) |
| 2020 | <b>Co-Principle Investigator:</b> TUBITAK 2537 – Joint Research Project between Scientific and Technological Research Projects Funding Program (TUBITAK) and Czech Academy of   |

Sciences, Biodegradable polymer-polymer composites using self-reinforcement aided with organic nanocrystals, submitted (1.000,000.00 TL)

- 2019-2020 **Principle Investigator:** Istanbul Technical University Scientific Research Projects Process Automation (ITU BAP), Development of innovative and functional PLA-TPU in-situ nano / microfibril composites, Approved (29,600.00 TL)
- 2018-2020 **Principle Investigator:** TUBITAK 1001 - Scientific and Technological Research Projects Funding Program, Project Number 313262; Nanomodified supertough biopolymeric blends, Approved (360,000.00 TL)
- 2018-2019 **Principle Investigator:** Istanbul Technical University Scientific Research Projects Process Automation (ITU BAP), Development of super-tough ternary blends and blend nanocomposites, Approved (49,600.00 TL)
- 2017 **Principle Investigator:** TUBITAK 3001 - Scientific and Technological Research Projects Funding Program, Project Number 378069; Development of high-performance PLA-based in-situ nano/microfibrillar composites via an innovative processing technology, declined (60,000.00 TL)
- 2017 **Principle Investigator:** TUBITAK 1003 - Scientific and Technological Research Projects Funding Program, Project Number 359169; Microcellular Biopolymeric Blend and Nanocomposite Systems for Automotive Applications, declined - (2,200,000.00 TL)
- 2017 **Principle Investigator:** TUBITAK 3501 - Scientific and Technological Research Projects Funding Program, Project Number 350504; High-performance in-situ nano/microfibrillar composites via an innovative processing technology, declined (225,000.00 TL)
- 2016 **Co-Principle Investigator:** TUBITAK 2553 – Joint Research Project between Scientific and Technological Research Projects Funding Program (TUBITAK) and Pakistan Science Foundation (PSF), Project Number 290584; Synthesis of Boron nitride nanosheets and development of their nanocomposite adhesives, coatings and paints for electronic packaging and functional applications, declined (360,000.00 TL)
- 2016-2017 **Principle Investigator:** Istanbul Technical University Scientific Research Projects Process Automation (ITU BAP), Quick Support Projects, Development of microcellular expanded thermoplastic polyurethane bead foams: Dependency of the foam structure on TPU's molecular weight and configuration, Approved (20,000.00 TL)
- 2015-2017 **Principle Investigator:** Istanbul Technical University Scientific Research Projects Process Automation (ITU BAP), Development of PLA-based blend nanocomposites with controlled morphology using clay nanoparticles, Approved (32,000.00 TL)
- 2011-2013 The list of proposals during PhD; Assisted the PI in the drafting, managing research funds, and preparing reports of the following proposals:
- Annual Progress Report of NSERC Strategic Project Grant, “Development of bead foaming technology for polyester nanocomposites”, June 2013
  - Network Researcher Interim Status Report of Auto21, “Light Weight Microcellular Foams of Recyclable Plastics and Their Composites for Automotive Applications”, April 2013
  - Proposal for Strategic Network Enhancement Initiative (SNEI) Funding, NSERC Business Intelligence Network, November 2012
  - Principal Investigator (PI) Progress Report of NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP), September 2012

- Annual Progress Report of NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP), September 2012
- Progress Report of Strategic Network Grant Mid-term, September 2012
- Annual Progress Report of NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP), September 2011
- Progress Report of NRC-NSERC-BDC Nanotechnology Initiative, “Polyester nanocomposites for greener transportation, construction and packaging applications”, October 2011
- Proposal for NSERC Strategic Project Grants, “Development of bead foaming technology for polyester nanocomposites”, February 2011

## COMPANY PROJECTS AND COLLABORATIONS

---

- 2017-present Meca-Plas (automotive part manufacturer), Turkey
- 2016-present Far-Plas (automotive part manufacturer), Turkey
- 2016-present B-Plas (automotive part manufacturer), Turkey
- 2016-present Huntsman (Polyurethane European headquarters), Belgium
- 2015-present Arcelik (white goods manufacturer: KOC holding), Turkey
- 2011-2012 Synbra Technology, Netherlands

## SUPERVISED STUDENTS

---

### ISTANBUL TECHNICAL UNIVERSITY

#### ➤ *PhD Thesis Projects*

- 4- Volkan Kilic 2019-2023 3D printing of multifunctional nanocomposites
- 3- Emre Demirtas 2018-2022 Conductive fibrillated polymer nanocomposites
- 2- Yusuf Kahraman 2017-2021 Multifunctional ternary polymer nanocomposite hybrids
- 1- Ceren Yargici 2016-2020 Revaluing recycled plastics through different strategies

#### ➤ *Master Thesis Projects*

- 24- Hatice Akcakaya 2020-2022 PEEK Carbon fiber reinforced composites manufactured by AFP
- 23- Kubra Gencmen 2020-2022 Bead foaming behavior of PLA/CNC nanocomposites
- 22- Nesrin Avcioglu 2020-2022 Screw configuration effect on graphene dispersion in PLA
- 21- Hakime Sevimli 2019-2021 New PLA based compounds for automotive applications
- 20- Gizem Ozge Kayan 2019-2021 Sol-gel coating of biopolymers on metallic implants
- 19- Busra Benli 2018-2020 Bead foaming behavior of PET/PBT blends
- 18- Anil Dunder 2018-2020 Rheological properties of ester and ether based TPUs
- 17- Aslinur Ozboyaci 2017-2019 Viscoelastic properties of PLA glass fiber composites
- 16- Ece Guler 2018-2020 Bead foaming behavior of CNC based blends and nanocomposites
- 15- Merve Guclu (**Graduated**) 2018-2020 Rheological properties of PET/PBT blends
- 14- Deniz Sema Sarul (**Graduated**) 2018-2020 Rheological behavior of PLA/PBAT/CNC nanocomposites
- 13- Burcu Ozdemir (**Graduated**) 2018-2020 Effect of solvent type on dispersion quality of CNC within PLA
- 12- Dogan Arslan (**Graduated**) 2017-2019 CNC incorporated bio/nanocomposites
- 11- Emre Vatansever (**Graduated**) 2017-2019 PLA/PBAT/CNC nanocomposites and their properties

- 10- Elif Ozperk (**Graduated**) 2017-2019 Self-reinforced polymeric composites
- 9- Beril Yenigul (**Graduated**) 2017-2019 Improving blending features of PP/PE
- 8- Elif Nobet (**Graduated**) 2016-2019 Laser hardening of steel alloys
- 7- Umitcan Bal (**Graduated**) 2016-2019 High-performance fibrillated composites
- 6- Ümit Çiftçi (**Graduated**) 2015-2019 Ternary PLA-based biopolymeric blends and nanocomposite systems
- 5- Bige Bati (**Graduated**) 2016-2018 TPU bead foaming and HS dependency
- 4- Emine Busra Kucuk (**Graduated**) 2016-2018 TPU bead foams with superior insulation/barrier properties
- 3- Emre DEMİRTAŞ (**Graduated**) 2016-2018 Development of Extruded HIPS Foams
- 2- Elif Ozgen (**Graduated**) 2015-2017 Effects of processing parameters and material composition on the properties of PP compounds
- 1- Hazal Oğuz (**Graduated**) 2015-2017 Development of PBT/recycled PET binary blends

➤ *Undergraduate Graduation Thesis Projects*

- 9- Rheology behavior of ether and ester based TPU grades 2019-2020: Onur Nuri Arslan - Begüm Aksu - Oğuzhan Özenç - Ahmet Berkay Ezgü - Burak Kardeşler
- 8- Rheology and degradation behavior of PLA (**Graduated**) 2019-2020: Efe Can Dalbudak - Mert Sağır - Betül Bezci - Sinan Ege Atalay
- 7- Reclamation of EPDM based rubber (**Graduated**) 2018-2019: Onur Can Şen - Berdan Sakalli - Hülya Telli - Çağlar Öksüzoğlu
- 6- Increasing Toughness of PLA by In-Situ Fibrillation of PET (**Graduated**) 2016-2017: Beril Saadet Yenigül - Burak Tekcan - Gizem Uğurtay - Osman Çağlar Baysalli
- 5- In-Situ Fibrillation of PA in PLA (**Graduated**) 2016-2017: Mertcan Apaydın - Tufan Gümüşlü - Samet Ocak - Burak Özman
- 4- Blend manufacturing with various compositions of PLA PBAT PBSA (**Graduated**) 2016-2017: Kemal Babayev - Metehan Sazak
- 3- Development of light-weight cost-effective high impact polystyrene foams (**Graduated**) 2015-2016: Emre DEMİRTAŞ - Bayçu ONGUNYURT - Tuncay ÇAKMAK - Berçem Naz KAYGUSUZ
- 2- Manufacturing of PLA blend systems and their characterization (**Graduated**) 2015-2016: Çisem DOĞAN - Deniz KARA - Zeynep Tutku ÖZEN
- 1- TPU modification: Enhancement of wear and tear resistance (**Graduated**) 2015-2016: Gokce Vural - Ümitcan Bal - Muhammed Ay

## POLYTECHNIQUE MONTREAL

➤ *Undergraduate Internship project*

- 2015 Rheological properties of PLA/TPU blends and fibrillated structures  
- Valentin Artaud- from France, École Nationale Supérieure des Industries Chimiques

## UNIVERSITY OF TORONTO:

➤ *Last Year Undergraduate Capstone Projects*

- 2011-2012 Pilot-Scale Extrusion Sheet Foaming of Polylactide for Biomedical Applications  
- Joo Hyoung Lee  
- Eunse Chang  
- Seong Soo Bae

➤ *Undergraduate Summer projects*

- 2013 Extrusion foaming of Polylactide-based nanocomposites and their morphology analysis  
 - Chongda Wang  
 - Errol Coutinho  
 - Krisnabavan Yogarajah
- 2012 Lab-scale manufacturing of PLA bead foams using double crystal melting peak technology  
 - Leyla Beriker  
 - Jikeon Yoo
- 2011 Preparation of PLA, TPU, PET micro/nanocomposites using nanoclay, nanosilica and talc particles via mini-compounder and their crystallization analysis  
 - Edward Choi  
 - Erickson Taruc  
 - Louie Miranda  
 - Bryan Gellner

➤ *Master Students Internship Project*

- 2010 Foaming behaviors of low-melt-strength polypropylene-nanoclay nanocomposites  
 - Thomas Bonnet - from France, Ecole Montpellier

## **LEADERSHIP ACTIVITIES and COMMUNITY INVOLVEMENT**

---

### **Participation as Journal Editor**

2018-Present **Editorial Board Member**

- *Journal of Renewable Materials*
- *Journal of Cellular Plastics*
- *International Journal of Material Science and Research*

2020-Present **Reviewing Editor**

- *Experimental Results Journal*

### **Participation as External Reviewer**

2009-Present **Journal reviewing** (82 articles)

1. ACS Applied Materials & Interfaces (1 paper)
2. ACS Omega (2 paper)
3. ACS Sustainable Chemistry & Engineering (3 paper)
4. Advances in Polymer Technology (1 paper)
5. Cellulose (1 paper)
6. Chemical Engineering Science (1 paper)
7. Colloid and Polymer Science (1 paper)
8. Composite Science and Technology (1 paper)
9. European Polymer Journal (2 paper)
10. eXPRESS Polymer Letters (2 paper)
11. Industrial & Engineering Chemistry Research (5 paper)
12. International Polymer Processing (2 paper)
13. Journal of Bioscience and Bioengineering (1 papers)
14. Journal of Cellular Plastics (10 papers)
15. Journal of Composites Part A: Applied Science and Manufacturing (1 papers)
16. Journal of Composites Part B: Engineering (1 papers)
17. Journal of Physical Chemistry (1 paper)
18. Journal of Polymers and the Environment (2 paper)
19. Journal of Polymer Engineering (2 paper)
20. Journal of Polymer Research (1 paper)
21. Journal of Polymer Science (1 paper)
22. Journal of Rheology (1 paper)
23. Journal of Supercritical Fluids (8 paper)

24. Journal of the Mechanical Behavior of Biomedical Materials (1 paper)
25. Macromolecular Materials and Engineering (4 papers)
26. Materials and Design (4 papers)
27. Materials Characterization (1 paper)
28. Polymer (11 paper)
29. Polymer Bulletin (1 paper)
30. Polymer Engineering and Science (4 paper)
31. Polymer International (5 paper)

#### 2015-Present **Books/Book Chapters/Conference papers for proceeding**

FOAMS@ 2015: 13<sup>th</sup> International Conference on Advances in Foam Materials & Technology, Kyoto, Japan, September 10-11, 2015 (**10 papers**)

#### **Participation in Scientific Outreach**

- |            |  |
|------------|--|
| 2020       | Polymer Foams Symposium Organizer and Reviewer at 36 <sup>th</sup> International Polymer Processing Society, May 31 - June 04, 2019, Montreal, Canada                                |
| 2013       | Organizing Committee Member of the 85 <sup>th</sup> Annual Meeting of the Society of Rheology, 2013, Montreal, Canada (as a volunteer)   |
| 2013       | Organizing Committee Member of the grand opening ceremony of the Centre for Industrial Application of Microcellular Plastics (CIAMP), Mississauga, Canada                            |
| 2013       | Exhibitor of an industrial-scale tandem extrusion line at the grand opening ceremony of the Centre for Industrial Application of Microcellular Plastics (CIAMP), Mississauga, Canada |
| 2012       | Organizing Committee Member of Polymer Processing Society (PPS) Americas Conference 2012, Niagara Falls, Canada  |
| 2010, 2013 | Organizing Committee Member of NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP), Toronto, Canada (Annual Meeting)                                 |
| 2011-2013  | HQP Member of Auto 21, Canada  |
| 2010-2013  | HQP Member of NSERC Network for Innovative Plastic Materials and Manufacturing Processes (NIPMMP), Canada  |
| 2008       | Organizing Committee Member of 64 <sup>th</sup> American Helicopter Society (AHS) international annual Forum, Montreal, Canada   |
| 2009-2013  | Organizing Team Member of Consortium for Cellular and Micro-Cellular Plastics (CCMCP), (Biannual Meeting)  |
| 2009-2013  | Coordinator of thermal analysis equipment (TGA, DSC, and high-pressure DSC) at Microcellular Plastics Manufacturing Laboratory (MPML), University of Toronto                         |

#### **Participation on Committees**

- |              |   |
|--------------|---|
| 2013-Present | Member of the Society of Rheology (SOR)                                   |
| 2011-Present | Member of International Polymer Processing Society (PPS)                  |
| 2009-Present | Member of Society of Plastics Engineers (SPE)                             |
| 2013-2015    | Member of Center for Applied Research on Polymers and Composites (CREPEC) |
| 2009-2013    | Member of Consortium for Cellular and Micro-Cellular Plastics (CCMCP)     |
| 2007-2009    | Member of American Helicopter Society (AHS)                               |
| 2006-2009    | Member of Center for Applied Research on Polymers and Composites (CREPEC) |
| 2001-2006    | Member of Iranian Metallurgical Engineering Society (IMES)                |

#### **Participation in Social Activities**

- 2013-2015 Organizing committee member of Savalan Cultural Group in Montreal presenting Azerbaijani Cultural Activities (as a volunteer)
- 2009-2013 Organized social activities in Microcellular Plastics Manufacturing Lab. (MPML), Toronto
- 2009 Coordinator of Iranian new-year ceremony at Concordia University; hosting almost 1000 guests
- 2007-2008 Performed music at McGill and Concordia Universities in Iranian events, Montreal
- 2003-2005 Organizing social activities for ethnical Azerbaijani students at Sharif University of Technology
- 2003-2005 Charter member of tourism institute at Sharif University of Technology
- 2002-2005 Active members of music and mountain climbing groups at Sharif University of Technology
- 2002 Member of organizing committee, commemoration ceremony of Sahand, an Azerbaijani poet, at Sharif University of Technology

## TECHNICAL SKILLS

---

Manufacturing and polymer processing:

- Biopolymers, composites, polymer nanocomposites, polymer blends, advanced functional nanocomposites, polymer foams:  
E.g., single screw extrusion (with tandem line for foaming), twin screw extrusion, injection, molding, compression molding, autoclave bead foaming, steam chest molding, brabender internal mixer, bladder molding, vacuum assisted resin transfer molding (VARTM), polymer composite hand lay-up, calendaring mixing (three role mill), and ultrasonic mixing
- Metal alloys, metal matrix composites:  
E.g., powder metallurgy, hot press, press and sinter, rolling, and forming

Polymer characterization:

- Mechanical properties, crystallization kinetics, rheological properties, morphology and structure analysis, thermal and electrical properties, foam analysis, fatigue and fracture

## INDUSTRIAL EXPERIENCE

---

- 2005-2006 **Service Engineer**, Shenavar Saze Pooyesh (SSP) Company, Tehran, Iran  
Exclusive agent of LIEBHERR WERK NENZING and BAUDOUIN SHIP ENGINE in Iran
- Trained for installation, operation, and maintenance of Offshore Cranes, Deck Cranes, Crawler Cranes, (Austria, Nenzing), May 2006 (three weeks)
  - Trained for installation and maintenance of BAUDOUIN SHIP ENGINES, (France, Marseille), May 2006 (one week)
  - Maintenance services and inspections for crawler cranes HS series.
  - Installed crawler crane HS 895 HD Litronic on site, Iran.
  - Installed and run ship engine on site, Iran
- 2005 **Summer Internship**, Mangan Crane Manufacturing Co., Tehran, Iran
- Nondestructive test (NDT) and welding section
- 2002 **Summer Internship**, Iran Tractor Manufacturing Co., Tabriz, Iran
- Iran Tractor Foundry Company, casting gray/ductile cast iron parts for automotive/tractor

## LANGUAGE SKILLS

---

English: Fluent (Professional)

Azerbaijani Turkish /Turkey Turkish: Fluent

Persian: Fluent

French: Intermediate

Arabic: Basic

**Publications and Citations on Google Scholar:**

<https://scholar.google.ca/citations?user=LxNEcP8AAAAJ&hl=en&oi=ao>