RÉSUMÉ

Sherwin Karami

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Career Objectives

A team-oriented and resourceful polymer engineer with outstanding communication skills experienced in production troubleshooting, experimental research, innovative development, project supervision and management, analytical formulation and material characterization.

Professional skills

- Experienced in working and building relationships with cross-functional groups
- Driven individual with creative thinking and problem-solving capabilities
- Deep understanding and experience of material testing, failure modes, and effects analysis.
- Extensive experience in writing scientific/technical reports.

Work Experience

Project Manager **2018-Now**
Solution Craves Inc.
Role Description:
Managing a project concerning the sustainable modification of asphalt using polymer nanocomposites targeting the mitigation of deteriorating influence of climate change on the road pavements, improving the in-service life in a start-up company.

Industrial Liaison **2015-2018**
École Polytechnique de Montréal
Role Description:
Worked on troubleshooting and technology development projects within the plastics industry by preparing research proposals, seeking research funding, managing the research team, analyzing the findings, and presenting the results.

Graduate Research Assistant **2010-2015**
École Polytechnique de Montréal
Role Description:
Conducted experimental research on the improvement of the toughness and barrier properties of the biodegradable polymer films for food packaging applications.

Project Manager **2008-2010**
Hegmataneh Industries Petrochemical Company (HIPC)

Role Description:

Carried out the evaluation of the environmental performance of the under-construction manufacturing design, as well as, the assessment of economic justification of a PVC emulsion plant.

R&D Research Officer **2007-2008**

Bandar Imam Petrochemical Complex (BIPC)

Role Description:

Optimized the Design of Suspension Polymerization Reactor of PVC, through developing a kinetic-dynamic model to simulate the particle size distribution in PVC suspension polymerization reactor adjusting the model with the experimental finding.

Chemical Engineering Internships **2006**

Bandar Imam Petrochemical Complex, Research, and Improvement

Role Description:

Accomplished a troubleshooting project regarding the clogged inlet pipes of Vinyl Chloride Monomer into the PVC suspension reactor.

Academic Background

Doctor of Philosophy (Ph.D.), Chemical Engineering Department **2010-2015**

École Polytechnique de Montréal

Master of Science (M. Sc.), Polymer Engineering Department **2006-2009**

Amirkabir University of Technology (AUT)

Bachelor of Science (B. Sc.), Polymer Engineering Department **2002-2006**

Amirkabir University of Technology (AUT)

Teaching Experience

Teacher Assistant: Rheology at Amirkabir University of Technology (AUT) **2007-2008**

Tutorial: Transport Phenomena **2013-2015**

Tutorial: Polymer Processing **2013-2015**

Community Involvement

- Tax Clinique Coordinator at Conseil Communautaire de NDG **2018-2019**

Coordinated a tax clinique assisting low-income residents across the neighborhood to file their tax return for free and training volunteers with the federal and provincial tax regulations.

- Organizer of Senior Gathering Program at Conseil Communautaire de NDG **2017-Now**

- CANADA 101: Preparation for the Canadian citizenship exam **2018**

Language Skills

- English (Fluent Level)
- French (Conversational Level)

Research Contribution

Recent Journal Publications

- Role of chain dynamics and topological confinements in cold crystallization of PLA-clay nanocomposites.
- Toughening of polylactide nanocomposites with an ethylene alkyl acrylate copolymer: Effects of the addition of nanoparticles on phase morphology and fracture mechanisms.
- Effect of strain-induced molecular ordering on mechanical performance and barrier properties of polylactide nanocomposites.
- Dispersion and exfoliation of nanoclays in itaconic acid functionalized LDPE by ultrasound treatment.
- Influence of modified polyethylene compatibilizer on filler dispersion and flammability characteristics of linear low-density polyethylene/cycloolefin copolymer blends containing flame retardant combinations.
- Enhancement of crystallinity and toughness of poly (l-lactic acid) influenced by Ag nanoparticles processed by a twin-screw extruder.

Consultation Reports

- A Review: Anti-bacterial Membranes with a Reduced Biofouling Potential for Wastewater Treatment using the Membrane Bioreactor
- Surface Treatment of Polypropylene Using Corona-induced Electron Avalanche for 3D Printing Applications.
- Design and Implementation of a Corona-induced Fluidized-bed Reactor for Surface Modification of Polymer Fine Powders at a Controlled Atmosphere.
- The Origin of the Gel-like Blister Defects in the Commercial-grade Thermoplastic Polyurethanes Extruded Firehoses.
- Sustainable processing of Firehoses by the Commercial-grade Thermoplastic Polyurethanes using a Single Screw Extruder upon a Sudden Interruption.

Research Project Supervision

- Available upon Request.

Professional References

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