

# HAMID EBRAHIMI

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[Scholar](#) | [Linkedin](#)

## Education

**Ph.D., Fiber and Polymer Science** | North Carolina State University 2018 – present

**Research Assistant at the NWI (Nonwovens Institute)**

- Designed, prepared and investigated over 200 samples to study the process-structure-property relationships of Poly(lactic Acid) (PLA) blends with other biobased polymers e.g., PLA, PBS, PCL and PHAs.
- Benchmarked available biopolymers.

**Nonwovens Certificate** | The Nonwovens Institute (NWI) 2018 – 2020

**M.S., Polymer Engineering** | Tehran Polytechnic University | Research Assistant 2012-2015

- Conducted an experimental study to investigate the chain extension of PLA.
- Conducted a response surface study on PLA-TPS blends.

**B.S., Polymer Engineering** | Tehran Polytechnic University 2008-2012

## Professional Experience

**Sater Scientific and Industrial Company** Tehran, Iran

**Technical Sales Representative** Sep. 2016 – Aug. 2018

- Installed over 10 different types of laboratory instruments made by the following companies: Kruss GmbH, Labthink Corp., Coxem, Hermle, and Binder.
- Provided technical support to over 100 customers and repaired over 30 faulty instruments.
- Presented the company to new industries, including polymer and textile industry.
- Led and launched the first-ever website for the company.
- Launched and introduced the first-ever lean program to minimize waste in different processes.

**Payaplast Company** Tehran, Iran

**R&D Engineer** Feb. 2015 – Aug. 2016

- Developed over 5 new SMC (Sheet molding compound) and BMC (Bulk molding compound) products and grades for different sections of industry based on their requirements.
- Collaborated with 3 other R&D teams in sister companies to develop 4 new product lines.
- Monitored over 1000 batches to maximize production capacity.

## Publications

- A response surface study on microstructure and mechanical properties of poly (lactic acid)/thermoplastic starch/nanoclay nanocomposites.
- Effect of Chain Extenders on Thermal Degradation and Rheological Properties of Polylactic acid (PLA).
- Study of Physical chemistry and structural properties of starch-TiO<sub>2</sub> bionanocomposites.
- PLA/ Thermoplastic Starch /Nanoclay Nanocomposites: Rheology, Crystallinity and Barrier Properties (submitted)

## Skills and Interests

**Skills:** Lean Six Sigma, Design of experiment. Critical thinking, and problem-solving. Statistical reasoning for technical problem-solving. Exploratory data analysis. Predictive modeling and text mining. Decision making with data. Correlation and Regression.

**Computer skills:** JMP, MSP, MiniTab, TRIOS, Microsoft Office, Python (Intermediate).

**Technical:** Nonwoven processes, Extrusion processes (fiber extrusion melt blowing, injection, casting), DSC, SEM, WVTR, APR, TGA, DMTA, MFI, Tensiometer, Drop Shape Analyzer, capillary, Oscillatory, rheometers,

**Interests and Affiliations:** Personal fitness and coaching, entrepreneurship, patenting and intellectual property; contemporary history, sustainability; member of SPE.