

Prabhat Singh

Vadodara

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Summary

With over 9 years of experience in polymer engineering. My mission is to leverage my expertise in emulsions, polymerization techniques, polymer extrusion and characterization to develop and optimize novel products that meet customer needs and market demands, while enhancing sustainability and efficiency.

In my last role, I collaborated closely with cross-functional teams to conceptualize product development, ensuring seamless integration with optimized polymer extrusion processes. I orchestrate comprehensive testing and validation procedures to guarantee the robustness and performance of newly developed products, emphasizing a customer-centric perspective. I have extensive experience in polymer characterization using thermal, rheological, mechanical, and optical techniques. I also have a strong background in emulsion and solution-based reactions, having filed two patents for innovative polymerization processes. I constantly explore new technologies and methodologies to improve product quality and yield, while incorporating bio-derived alternatives and reducing the carbon footprint.

Experience

Research Executive at STYRENIX PERFROMANCE MATERIALS LTD



Dec 2022 – Apr 2024 (1 yr. 5 mos.)

- Collaborated closely with cross-functional teams to conceptualize product development, ensuring seamless integration with optimized polymer extrusion processes, playing a pivotal role in the inception and evolution of novel products.
- Orchestrated comprehensive testing and validation procedures to guarantee the robustness and performance of newly developed products, emphasizing a customer-centric perspective.
- Extensive experience in polymer characterization using thermal, rheological, mechanical, and optical techniques.

- Successfully handled pilot lab trials for emulsion and solution-based reactions (Styrenics, Acrylics), Leveraged state-of-the-art technologies and methodologies to monitor and control the reactions, ensuring the precision and reproducibility required for plant-scale production.

Research and Development Executive at INEOS Styrolution



Aug 2017 – Mar 2023 (5 yrs. 8 mos.)

- Conducting polymerization lab trials, specializing in water-based emulsions (SBR, NBR, ASA).
- Designing experiments, troubleshooting, and optimizing process conditions to enhance product quality and yield.
- Filing two patents for innovative polymerization processes.
- Analyzing various polymer materials using modern analytical techniques to validate and improve product performance.
- Exploring sustainable solutions by incorporating bio-derived alternatives and reducing the carbon footprint.

Patents:

PREPARATION OF DIENE POLYMER LATEX OF HIGH GEL CONTENT AND CONTROLLED CROSS LINKING

<https://worldwide.espacenet.com/patent/search/family/072811739/publication/WO2022074101A1?q=WO2022074101A1>

Application number: WO2022074101A1

Issued on: Apr 2022

The invention relates to a process for the preparation of a diene polymer latex having a high gel content and improved swelling index, the use of said diene polymer latex as starting rubber latex for the preparation of ABS graft rubber copolymers.

DUAL INITIATOR GRAFTING PROCESS OF POLYBUTADIENE LATEX BY STYRENE/ACRYLONITRILE

<https://worldwide.espacenet.com/patent/search/family/068944152/publication/WO2021122694A1?q=n%3DWO2021122694A1>

Patent office: -

Application number: DEWO/2021/122694

Issued on: Jan 2021

An emulsion polymerization process for preparation of ABS graft co-polymer latex having reduced residual monomer content by tweaking the initiator system (redox based and inorganic free radical initiator).

Production Engineer at Precision Technoplast Pvt. Ltd.

Jun 2013 – Mar 2015 (1 yr 10 mos.)

- Managing production operations (injection molding) for automobiles, electronics, etc .
- Process control and optimization for improved output. production monitoring and maintaining safe work environment.

Education



Central Institute of Plastics Engineering & Technology (CIPET)

Master of Engineering - MEng, Polymer/Plastics Engineering

Sep 2015 – Apr 2017



Central Institute of Plastics Engineering & Technology (CIPET)

Bachelor of Engineering - BE, Polymer/Plastics Engineering

2009 – 2013



Kendriya Vidyalaya

intermediate

2008 – 2009



Kendriya Vidyalaya

Matriculation

2006 – 2007

Licenses & certifications

- [AIGPE](#)

Lean Six Sigma White Belt Certification - Advanced Innovation Group Pro Excellence (AIGPE™)

Issued Jan 2022

Credential ID ZSSWB121146569

- [AIGPE](#)

Lean Six Sigma Yellow Belt Certification - Advanced Innovation Group Pro Excellence (AIGPE™)

Issued Jun 2022

Credential ID ZSSYB121146146