LEAD MATERIAL SCIENTIST - RUBBER AND ADHESIVES

Summary

Results-focused materials laboratory professional with strengths in project management, technical presentation, and high-quality data generation. Proactive leader with strengths in communication and collaboration. Proficient in leveraging network professionals and chemical and application testing expertise to promote business growth and novel materials development. Adept at managing concurrent objectives to promote efficiency and influence positive outcomes.

Experience

Lead Material Scientist - Rubber and Adhesives , 01/2019 - Current SI Group - City , STATE

- Lead a global team of materials scientists in rubber compounding and testing laboratories in USA and China
- Managed laboratory personnel, defined priorities, delegated tasks and planned workflow for laboratory personnel.
- Monitored team performance, work quality, and consistency in data.
- Designed and completed rubber compounding and testing experiments to support research and business objectives for tire, technical rubber goods, and antioxidant projects.
- Met pertinent milestones while managing multiple projects at once.
- Developed project timelines and schedules, prioritizing tasks for entire team of global material scientists.
- Created technical reports by observing, analyzing and interpreting lab experiment results.
- Collaborated with cross-functional departments including market development, technical services, and R&D to determine product usage, limitations and needs for application testing and performance data.
- Shared research findings through publications, presentations, patents, and conferences.
- Developed a one-of-a kind, VBA-based, experiment template to automate data entry and plotting
- Documented all processes during experiments, keeping meticulous notes of experimental parameters and unexpected changes.
- Managed equipment, building areas and inventory to keep facilities running at peak levels (incl. 5S, ZOHO applications, database tools)

Lead Chemist - Rubber Technology , 01/2017 - 01/2019 SI Group - City , STATE

- Developed Novolak and Resole resin systems and resin modifiers for applications in rubber, including improvements in passenger and truck tire performance
- Created technical reports by observing, analyzing and interpreting lab experiment and application testing results.
- Designed and completed lab experiments to support research and business objectives.
- Monitored projects for regulatory compliance.
- Worked closely with team members to deliver project requirements, develop solutions and meet deadlines.

Lead Chemist - Technology & Innovation , 08/2016 - 01/2017 SI Group - City , STATE

- Synthesis and optimization of alkylated phenolic compounds and phenol-formaldehyde resins for use in engineered plastics manufacturing, plastic antioxidants, rubber and tire compounding
- Performed complex laboratory syntheses to simulate plant manufacturing conditions for high performance plastic additives and antioxidants

Chemist - Technology & Innovation , 03/2014 - 08/2016 SI Group - City , STATE

- Synthesis and optimization of alkylated phenolic compounds and phenol-formaldehyde resins.
- Responsible for the laboratory process design and improvement for the manufacture of biphenol with the goal of a 6,000 MT/yr expansion.

Patents and Publications

- Phenolic resin composition and the use thereof in a rubber composition to reduce hysteresis. US US10851224B2 Â· Issued Dec 1, 2020
- Functionalized organosulfur compound for reducing hysteresis in a rubber article. US US20190284371A1
- High performance polyphenylquinoxaline-based proton exchange membranes synthesized via the PPA Process for high temperature fuel cell systems. J. Membr. Sci., 405-406, 57-67(2012). DOI: 10.1016/j.memsci.2012.02.044., Mar 1, 2012
- Novel polyphenylquinoxaline and polybenzimidazole proton exchange membranes for high temperature fuel cell systems. UMI Dissertation Publishing Â· Sep 9, 2011
- High Temperature Polybenzimidazole Based Membranes. Handbook of Fuel Cells: Advances in Electrocatalysis, Materials, Diagnostics and Durability, Vol. 5&6, Vielstich, W., Gasteiger, H.A. and Yokikawa, H. (eds). John Wiley & Sons Ltd, Chichester, UK, 2009, Chapter 19, pp 300-312. Â· Dec 15, 2010

Education and Training
Ph.D. , Organic And Polymer Chemistry , 2010
University of South Carolina - City
Master of Science , Applied Science , 2008
Rensselaer Polytechnic Institute - City
Bachelor of Science , Chemistry , 2004
Rensselaer Polytechnic Institute - City
Skills

- Project Management
- Team Leadership
- Complex Problem Solving
- Technical Presentations
- Work Planning and Prioritization

- Documentation and Reporting
- Experiment Protocol Development
- Research and Publication
- Data Analytics