Robert Alpern

Philadelphia, PA - Email me on Indeed: indeed.com/r/Robert-Alpern/149e2b265ce8d556

WORK EXPERIENCE

Capital Project Engineer

Merck & Co - West Point, PA - May 2011 to Present

Responsibilities
Global Engineering Services (GES) – Capital Project Engineer, Project Management
•Presently – Lead Capital Project Engineer for Merck's new Keytruda® cancer drug. Actively leading a highly global cross-functional team for the new custom and innovative single-use End-to-End Freeze/Thaw Platform. Responsible for leading seven interdependent work streams from research and development through Proof-of-Concept to develop a scalable single-use technology across Merck's future vaccines and biologics.
•Lead Capital Project Design Engineer for Merck's Keytruda® single-use stability developmental study. Responsible for designing, fabricating and testing the mechanical design through qualification for the stability studies and scale-up platform.
•Lead Capital Project Engineer for Barrier Operations to design, install and commission new innovative production utility equipment to significantly eliminate operational risks. Actively led the project team through engineering design, schedule, cost controls, installation, qualification, and production start-up.
•Lead Capital Project Engineer to retrofit the Measles, Mumps, and Rubella (MMR®) and Culture Media facility to meet the World Health Organization (WHO), TGA, FDA, Merck Quality Gaps. Consulted closely with internal company stakeholder and external engineering partners to lead the project's concept, basis of design, and detailed design engineering deliverables. Actively provided engineering support for installation through the qualification and start-up phases.
•Actively led a team of internal and external engineering partners to meet the business' long range operating goals to design, build, install, validate, and turnover two new custom temperature control units to renovate the MMR® production facility. Recognized by Corporate Merck for successful project delivery, doubling current yearly production of MMR®.
•Commissioning and Qualification Lead to develop, generate, execute and approve over 70 GMP protocols for the Barrier Operations, MMR® and Culture Media Projects.

Staff Engineer - Global Engineering Services

Merck Sharp & Dohme Co - Whitehouse, NJ - December 2008 to May 2011

Global Engineering Services (GES) - Rotational/Leadership Program
•Engineer Lead for the Varivax® roller bottle tissue culture retrofit project to implement process design improvements. Installed new process waste air breaks and associated diaphragm valves, recirculation pumps, and process air valves for cGMP compliance. Led project with a team of operations, quality/compliance, automations, and external manufacturing partners from concept through detailed design, construction, qualification, start-up and site turnover.
•Analyzed Total Cost of Ownership (TCO) of three different Shell Freezer designs for Merck's new Varivax® facility in Durham, NC. Least cost shell freezer failure mode option chosen, resulting in cost savings of $2.55MM.
•Consulted closely with Operations to streamline, standardize and optimize the new GMP material and personnel flow requirements for Schering Plough's newest packing line in Xochimilco, Mexico.
•Corporate team member to harmonize and consolidate Merck/Schering-Plough's Engineering Standard, Practices and Procedures for the newly combined company.

•Green Belt Project Design lead to install new Varivax® waste pumps for automated process disposal, resulting in financial savings of $187K/year.

Global Engineering Services - Viral Vaccine Process Engineer

Merck & Co - West Point, PA - June 2007 to August 2007

Co-Op - West Point, PA June 2007 - August 2007

Global Engineering Services (GES) - Viral Vaccine Process Engineer
• Designed and developed a process improvement to help automate the new VAQTA® Incubators and Alum Skids. Strategically designed a shroud to encase the incubator's and alum's scale for accurate GMP data reading.
• Completed P&ID walk downs and redlines of the new VAQTA® incubators, alum skids, and chromatography instruments.

Technical Operations/System Engineering - Electro Optics Engineer

Lockheed Martin Co-Op - June 2006 to August 2006

Created FLIR LOS Matlab program for the Internal Research and Development (IRAD) program.
• Performed image enhancement and processing and improvements on Joint Strike Fighter's (JSF) sniper pod.

Technical Operations

Johnson & Johnson Co-Op - Gurabo, Puerto Rico, US - December 2005 to May 2006

Performed scanning electron microscope analyses for Anti-Counterfeiting project in Chicago, IL.
• Created Process Capability chart of all J&J North American pharmaceutical products.
• Developed Lean Value Stream Maps to improve Alza Corp Clinical Supply Process.
• Yellow Belt Process Excellence training and certification through J&J.

Research Assistant - Nanopolymers

Tufts University - July 2005 to August 2005

Research Assistant
• Performed various tests and analyses on Poly(vinylidene) Fluoride, PVDF: X-Ray Diffraction, Differential Scanning Calorimetry, Polarized Optical Microscopy, and Fourier Transform Infrared Spectroscopy.
• Project Results presented to the American Chemical Society (ACS) in Washington D.C. August 29 - 30, 2005.

EDUCATION

Master of Engineering - Mechanical Engineering in Mechanical Engineering

Rochester Institute of Technology - Rochester, NY
2008

SKILLS

ProEngineer, Matlab, ANSYS, Minitab

LINKS

http://www.linkedin.com/pub/robert-alpern/5/a62/178/

AWARDS

Merck Award of Excellence: 2009, 2010, 2011, 2012, 2013

CERTIFICATIONS

Fundamentals of Engineering Certification - NY State Board of Engineering
April 2009 to Present

Green Belt Certification - Merck & Co
December 2009 to Present

PUBLICATIONS

Impact of Nanosilicates on Poly(vinylidene fluoride) Crystal Polymorphism: Part 1. Melt-crystallization at High Supercooling
http://www.sciencedirect.com/science/article/pii/S0032386110000388
March 11, 2010
Polymorphism of poly(vinylidene fluoride), PVDF, in the presence of Lucentite STN organically modified silicate (OMS) is investigated for PVDF nanocomposites melt-crystallized at high supercooling temperatures where neat PVDF crystallizes exclusively in the alpha crystalline phase. Nanocomposites were prepared from solution with 0–1.0 wt% OMS composition. Here we observed that clay addition promotes gamma phase formation in nanocomposites melt-crystallized at high supercooling (i.e., at low crystallization temperature), whereas previously we showed that even small amount of nanosilicates resulted in beta phase formation in cold-crystallized PVDF nanocomposites [1]. (Polymer: Volume 51, Issue 6, 11 March 2010, Pages 1485–1493)