

Juliann K. Raikes

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SUMMARY:

Chemical engineer with 5+ years experience in project management, project design, and commissioning of new equipment. Strong knowledge in process safety, risk management, and root cause investigations for large scale production facilities. Focus on anatomy and biology during research and studies, with experience handling DNA and other biological materials at the lab scale

PROFESSIONAL EXPERIENCE

Improvement Engineer/Process Safety Focal Point

June 2016 to Present

The Dow Chemical Company, Hahnville, LA

Large Scale cGMP Polyethylene Production Unit

- Project manager for multiple capital and expense projects installed in unit
 - Monitors project scope, schedule, and budget to ensure business targets are met for each project
 - Project sizes: \$100K-\$1.5M
 - Directs on-site engineering design teams to ensure scope is adequate and all safety and good engineering practices are followed
 - Creates and executes equipment commissioning plans with the assistance of operating staff
- Facilitates annual capital budget planning for the unit and submits project requests to business for consideration
- Manages plant Technology Implementation Plan by evaluating new project ideas, prioritizing efforts, and updating continued progress
- Leads plant *Continuous Improvement* team, which evaluates opportunities in process automation, overall profitability/raw material efficiency, and operating budget management
- Subject Matter Expert for all process safety efforts in the unit
 - Process Hazard Analysis & Layers of Protection Analysis
 - Process Safety Near Miss reporting program
 - Process Safety and Reactive Chemicals reviewer for plant changes
 - Corrective and Preventive Action focal point

Engineering Co-op (5 semesters)

August 2012 to August 2015

SABIC Innovative Plastics, Mount Vernon, Indiana

- Worked in various large scale polymer production units, as well as 2 pilot plants, performing various projects and efforts in those units
 - Coordinated installations of pumps, heat exchangers, blowers, and large scale dust collectors
 - Performed a root cause analysis of a tank-agitator system and proposed corrective actions
 - Executed successful pilot plant scale test for changing an existing batch process to a continuous process

Wright Scholar & STEP Student Research Assistant

June 2012 to August 2012

Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio

May 2011 to August 2011

- Performed research as part of a laboratory team under the guidance of a mentor
 - Designed experiments to test effectiveness of small-particle detection methods using gold nanoparticles and DNA aptamers
 - Contributed to two publications regarding colorimetric assays for the detection of small molecules
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PUBLICATIONS

- Jorge L. Chávez, Juliann K. Leny, Suzanne Witt, Grant M. Slusher, Joshua A. Hagen, Nancy Kelley-Loughnane, *Plasmonic aptamer-gold nanoparticle sensors for small molecule fingerprint identification*, Analyst, Volume 139, December 2014, Pages 6214-6222
 - Joshua E. Smith, Daniel K. Griffin, Juliann K. Leny, Joshua A. Hagen, Jorge L. Chávez, Nancy Kelley-Loughnane, *Colorimetric detection with aptamer-gold nanoparticle conjugates coupled to an android-based color analysis application for use in the field*, Talanta, Volume 121, April 2014, Pages 247-255, ISSN 0039-9140
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EDUCATION

Bachelor of Science, Chemical Engineering (2016)

University of Cincinnati, Cincinnati, Ohio

GPA: 3.9/4.0

SPECIAL SKILLS: Professional working proficiency in Spanish