

Condell (Dell) Doyle, Ph.D.

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Professional Experience

Western Falcon, Houston, Texas

July 2014 - Present

Technical Manager

- Responsible for product design, development and validation for new liners for Oil Country Tubular Goods (OCTG); projects focused on polyolefin and PEEK product development
- Improve polyolefin blends by addition of minerals and processing aids to increase well fluid and temperature resistance
- Develop thermodynamic models to predict heat loss as a function of fluid flow rate, pipe size/insulation, and various other variables
- Manage testing of materials with contract test laboratories
- Review oil and gas well environmental data (thermal, chemical, side load) to suggest proper polymeric product mix for the presented conditions
- Fostered relationships with vendors to support new product development
- Provide technical support to the sales team by attending sales meetings and fielding questions

FlexSteel Pipeline Technologies, Houston, Texas

May 2011 – April 2014

Materials Engineer

- Validate and engineer new pipe designs and polymeric materials to be used in onshore and shallow water offshore flexible pipe systems
- Leader in the effort to develop two new products to aid in the market expansion of FlexSteel into high sour gas and higher temperature (82° C) oil fields
- Manage a variety of research programs utilizing internal and external laboratory resources
- Evaluate potential pipeline projects for FlexSteel compatibility
- Effectively communicates with Manufacturing and Quality to approve or reject non-conforming products and to develop mitigations for lowering the non-conforming instances
- Utilizes chemistry knowledge to develop and manage research programs to determine FlexSteel's compatibility with aggressive hydrocarbons
- Designed and outfitted a Research & Development laboratory build out/expansion project – met or exceeded expectations and came in 33% under budget
- Served on the API 15S – qualification of spoolable reinforced plastic line pipe draft committee
- Familiar with several ASTM and API standards

SaskPower/Crown Investments Corp, Regina, Saskatchewan

May 2009 – Aug 2010

Research and International Officer and Risk Management Coordinator – Clean Coal

- Devised risk management strategies for a \$1.2 billion clean coal facility as part of an interdisciplinary team
- On behalf of SaskPower, minimized the potential impact of pending provincial greenhouse gas regulations by the Saskatchewan government
- Constructed and implemented a strategy to market a clean coal project (CO₂ product) to US lawmakers, oil companies, and potential investors
- Evaluated contracts key contracts to aid with corporate negotiations with vendors
- Developed price models for CO₂ and other byproducts of the facility

Rice University, Houston, Texas Jan 2004 – May 2009 & Sept 2010 – May 2011

Research Assistant – Organic/Carbon Nanomaterials Chemist

- Published articles in peer review journals such as *Science* and *JACS*
- Innovated research projects into marketable patents
- Conducted research on carbon nanotube functionalization for materials applications
- Formulated and synthesized materials for projects to support hydrogen storage, proton exchange membranes, and polymer reinforcement
- Developed surfactant formulations to solubilize Carbon Nanotubes for derivatization
- Synthesized materials and designed experiments to test single walled carbon nanotube reactivity rates with various diazonium salts
- Utilized supramolecular chemistry knowledge to tailor nanoparticles for polymer blending
- Synthesized molecules under zero oxygen (glove box) and Schlenk line conditions
- Organized and participated in a delegation responsible for speaking with several Senators and Congressmen in D.C. about science policy
- Lead teaching assistant (TA) for undergraduate Organic lab, responsible for mentoring TAs on their duties and general organization of the Rice University Undergraduate laboratory

SunGard Energy Systems Inc., Houston, Texas

April 2001 - Nov 2003

Business Analyst/Consultant

- Implemented risk management systems for energy trading companies
- Created reports and maintenance screens for energy trade floor usage in Crystal Reports, Visual Basic 6.0 and Oracle 8i. This was completed using the full life cycle of development from assessment to production
- Aided trade floor analysts and risk managers in their daily duties by providing ad hoc report development
- Developed and conducted on-site training classes for SunGard software
- On-site trade floor support and database optimization for SunGard Products
- Responsible for real-time, worldwide client support for Panorama for Energy

Education

Ph.D., Chemistry, Jan 2009

Rice University
Houston, Texas

M.A., Chemistry, May 2006

Rice University
Houston, Texas

B.S. in Chemistry, Dec 2000

Midwestern State University
Wichita Falls, Texas

Leadership

Society of Plastics Engineers – severed on conference committees	2014- current
Organize Habitat for Humanity Volunteer effort for my church	Oct-2014
CBEN Student Leadership Council, held several positions	2004 – 2008
<ul style="list-style-type: none">• Solely responsible for organizing student activities from presentations, invitational speaking events, and to policy based trips to Washington D.C• Increase the annual budget from 5K to over 65K by soliciting donations	
Supervising Graduate Teaching Assistant for Undergraduate Organic Chemistry	2006
Rice University Chemistry Graduate Recruiting	2004 – 2008
Tau Kappa Epsilon Fraternity, held many offices	1996 – 2000
Eagle Scout	1996

Professional Qualifications

Instrumentation

NMR, XPS, GC-MS, AFM, Raman, UV/Vis, TGA, DSC, SEM, FTIR, EDS

Selected Publications

Doyle, Condell D.; Tour, James M. **Environmentally Friendly Functionalization of Single Walled Carbon Nanotubes in Molten Urea.** *Carbon* (2009), 47, 3215-3218.

Doyle, Condell D. ; Rocha, John-David R.; Weisman, R. Bruce; Tour, James M. **Structure-Dependent Reactivity of Semiconducting Single-Walled Carbon Nanotubes with Benzene Diazonium Salts.** *Journal of the American Chemical Society* (2008), 130 (21), 6795-6800.

Lomeda, Jay; Doyle, Condell D.; Kosynkin, Dmitry; Hwang, Wen-Fang; Tour, James. **Functionalization of Graphene Sheets in Water** *Journal of the American Chemical Society* (2008), 130 (48), 16201-16206

Cognet, Laurent; Tsybouski, Dmitri A.; Rocha, John-David R.; Doyle, Condell D.; Tour, James M.; Weisman, R. Bruce. **Stepwise Quenching of Exciton Fluorescence in Carbon Nanotubes by Single-Molecule Reactions.** *Science* (2007), 316(5830), 1465-1468.

He, Jianli; Chen, Bo; Flatt, Austen K.; Stephenson, Jason J.; Doyle, Condell D.; Tour, James M. **Metal-free silicon-molecule-nanotube testbed and memory device.** *Nature Materials* (2006), 5(1), 63-68.

Zhou, Chongfu; Doyle, Condell D.; Tour, James M.; Kumar, Satish **Functionalized Single Wall Carbon Nanotubes Treated with Pyrrole for Electrochemical Supercapacitor Membranes.** *Chemistry of Materials* (2005), 17(8), 1997-2002.

Patents

Awarded:

- Radiation protection using Carbon Nanotube derivatives
- Metal-free silicon-molecule-nanotube testbed and memory device
- Graphene compositions and drilling fluids derived therefrom

In provisional phase:

- Use of functionalized Carbon Nanostructures in ion exchange membranes for use in fuel cells

Awards and Memberships

Chemistry Graduate Student Mentor, 2007 & 2008

Wisner Chemistry Departmental Award, 2007

Tau Kappa Epsilon Fraternity - National Histor Award, 1999

First Place: Texas - State academic competition in Biology, JETS, 1995 & 1996

Received full scholarship for undergrad college education

American Society for Testing and Materials – 2012- current

Society of Petroleum Engineers – 2010- current

Society of Plastics Engineers – 2010- current

American Chemical Society member, 2006 – current

American Association for the Advancement of Science – 2006 – current

References available upon request