

Sean Owen Clancy, Ph.D.

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TECHNICAL EXPERTISE AND SKILLS

- Organic synthesis, purification, and instrumental analysis for a wide variety of materials.

EXPERIENCE

Research Associate/Chemist, ACI Technologies, Inc.

May 2008 to January 2014, Philadelphia, PA

- Generated more than \$550k in commercial sales and delivered over 250 project reports. Assisted on more than 300 other projects with quoting, planning, executing, and peer review of reports.
- Led the analytical services group, which included building and managing multi-disciplinary teams, coordinating and planning analyses, and developing and selecting test methods.
- Analyzed materials to provide root cause failure analysis and process recommendations for aerospace, defense, medical device, scientific instrument, telecommunications, and consumer products in an ISO 9001:2008 Quality System registered production facility, and according to ASTM, IPC, JEDEC, MIL, and other standards.

Staff Scientist, NanoSelect, Inc.

May 2006 to March 2008, Newark, DE

- Designed, synthesized, and analyzed materials for functional coatings for various electrodes serving as sensors for analytes in aqueous solution for water quality.
- Determined the root cause of 50% failure rate for ion-sensitive field effect transistor (ISFET) devices by examining CAD data and found the error in the silicon design, leading to corrective action preventative action (CAPA) for following Metal Oxide Semiconductor Implementation Service (MOSIS) run.

Postdoctoral Researcher, Naval Air Warfare Center Weapons Division

February 2005 to May 2006, China Lake, CA

- Designed, synthesized, and characterized heterocyclic monomers and polymers for use in charge storage applications, such as polymeric supercapacitors.
- Published a project in the peer-reviewed Journal of the Electrochemical Society **2007**, 154 (4), G95-G98.

Graduate Research Assistant, University of Southern California

August 2000 to February 2005, Los Angeles, CA

Graduate Research Assistant, Texas A & M University

August 1999 to August 2000, College Station, TX

- Designed, synthesized, and characterized small molecules and polymeric materials for light-emitting applications, such as organic light-emitting diode (OLED) displays, chemical sensing, and optical signal amplifiers for telecommunications.
- Published multiple projects in the MRS, PMSE, and SPIE proceedings. Presented project results to an audience of my peers at MRS and SPIE meetings.

Research Technologist, Mayo Clinic Jacksonville

July 1997 to August 1999, Jacksonville, FL

- Synthesized and characterized diagnostic tools and therapeutic candidates for muscular and neurodegenerative diseases in the form of carbohydrates, amino acids, peptides, monomers and oligomers of peptide nucleic acids via solution or solid-phase synthesis, which led to multiple publications for the primary investigators.
- Collaborated with multiple molecular biology and neuroscience research groups, contributing to discussions in regular group meetings.

EDUCATION

- Doctor of Philosophy, Chemistry, University of Southern California, 2005
- Bachelor of Science, Chemistry, University of North Florida, 1997

EXPERTISE

Problem Solving, Technical Writing, Technical Marketing, Laboratory and Project Management, Instructional Materials, Instrumental Analysis, Analytical Chemistry, Synthetic Organic Chemistry, Polymer Chemistry, Materials Science, Pharmaceuticals, Failure Analysis, Sensors, Nanotechnology, Thin Films, Coatings, Light-Emission, Photophysics, Corrosion Mitigation, Structural and Purity Elucidation, Separations Science, Surface Modification and Analysis, Teaching, Training, Laboratory Safety

ORGANIC SYNTHESIS

Small Molecule and Polymer Synthesis, and All Requisite Setup, Purification, and Characterization Methods, Glove Box and Schlenk Line Operation, Microwave, Pressure Reactors, Solution and Solid-Phase Synthesis

INSTRUMENTAL ANALYSIS

Chromatography, Electrochemical Analysis, Imaging / Microscopy, Spectroscopy, Structure & Purity Elucidation, Structure-Property Studies, Surface Analysis, Thermal Analysis

COMPUTERS

Advanced user of Windows, Mac OS X, Linux, iOS, Android, Microsoft Office (Word, Excel, PowerPoint, Outlook), etc.

MORE INFORMATION

Additional information about my professional experience, presentations, publications, skills, and interests are available at: www.seanclancy.org