MORGAN BROOKS

OVERVIEW

Ms. Brooks has four years of experience in the chemistry field. She began this journey by declaring a degree in chemistry at the University of Tennessee, where she ultimately acquired her technical skills and subject knowledge. During her time there she was invited to join a physical chemistry research group and supplemented this work by becoming involved in the Materials Science and Engineering (MSE) department. She graduated early with a major in Chemistry and a minor in MSE.

WORK EXPERIENCE

2012 - Present Covenant Health

Certified Pharmacy Technician

- Assists pharmacists and surgeons in preparing necessary pharmaceutical needs
- Records narcotic usage during anesthesia
- Manufactures various intravenous bags in sterile laminar flow hood
- Trained in 797 clean room compliance standards

2010-2012 University of Tennessee

Student Assistant in the Information Security Office

- Evaluated and redisgned the university's emergency response plan
- Created a method of checking for host redundancies within the university's firewall
- Presented weekly progress of projects to staff
- Researched solutions to improve campus IT security

SKILLS

IR Spectroscopy

Inert Atmospheres

Adsorption Isotherms

Cryogenic Equipment

GC-MS

ssNMR

Physical Chemistry

Sonication Techniques

Centrifugation Teachniques

Clean room techniques

Surface Chemistry

Material Selection

Microsoft Office

Linux Ubuntu

RESEARCH EXPERIENCE

2011 University of TN, Knoxville

Synthesis of Thermally-Exfoliated Graphene Oxide

- Prepared thermally-exfoliated graphene oxide (TEGO) by use of the original Hummer's method
- Oxidized flake graphite to create graphene oxide (GO)
- Thermally expanded GO to form TEGO
- Lithiated the TEGO for research on its use in nano-scale electronics

2011 University of TN, Knoxville

Cerium Oxide Study

- Cerium oxide was of interest due to its catalytic applications to the water-gas-shift (WGS) reaction in the automobile industry
- Researched the valence bands of the different oxidation states of cerium oxide
- Performed temperature programmed oxidation and monitored the increased catalytic activity due to the presence of cerium
- Researched the synthesis of ceria powders and sols
- Reconstructed an old isotherm machine and custom built proper copper sample cells
- Performed isotherms utilizing xenon gas

EDUCATION

2008-2011 University of TN, Knoxville

- BS in Chemistry
- Minor in Material Science & Engineering
- Awarded two academic scholarships
- Member of the Student Affiliates of the American Chemical Society

INTERESTS

My hobbies include: running, scuba diving, hiking, working towards a private pilot license, and teaching myself how to program and use Linux.

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