ERIC SHAMAY

Permanent Address
1790 Alder St.
Eugene, OR 97401
USA

Phone +1 (949) 633-3572
Email - eshamay@uoregon.edu
Richmond Research Group

Education

B.S. Chemistry & General Engineering
California Polytechnic State University, San Luis Obispo, CA
PhD Pre-Candidate in Physical Chemistry
University of Oregon, Eugene, OR
Advisor: Geraldine L. Richmond

Honors and Fellowships

Calpoly Dept. of Chem. and Biochem., San Luis Obispo, CA
- Calpoly President's Honor List & Dean's List
- Physical Chemistry Student Award 2004
- Hypercube Scholar 2004

National Institute of Standards and Technology, Gaithersberg, MD
- Summer Undergraduate Research Fellow 2004

Teaching Experience

University of Oregon, Dept. of Chemistry
- Chemistry tutoring for undergraduate general chemistry
- Teaching Assistant – undergraduate advanced general chemistry laboratory

Research Interests

Physical chemistry, water surfaces, sum frequency generation spectroscopy, computational chemistry, molecular dynamics, optics and spectroscopy.

Experience

Channel Islands Opto-Mechanical Engineering, Inc. 12/2004 – Present
Quality Assurance Manager
- Rebuilt and Operated a vacuum chamber for optical and infrared coating deposition.
- Designed and assembled an infrared spectrophotometer for optical coating analysis. Implemented a computer interface system for data acquisition and analysis using the LabVIEW programming environment.
- Designed several mechanical subsystems for equipment construction and interfacing using the AutoCAD and Solid Works software systems.
- Designed and implemented the company quality assurance system, manuals, procedures, and forms. Performed quality control tasks on manufactured mechanical parts and optics.

National Institute of Standards and Technology 6/2004 – 8/2004
Summer Undergraduate Research Fellow
- Developed and implemented a database and web-based front-end for real-fuels combustion models researched at NIST. Also developed several tools for polyaromatic hydrocarbon specie nomenclature, and substituted hydrocarbon specie relational identification.
- Utilized a combination of software tools including PERL, Apache, Java, MySQL.
- Presented research and application results in a final colloquium to NIST faculty and researchers, as well as other undergraduate fellows.

Chemistry Dept. California Polytechnic State University 6/2003 – 6/2004
Research Assistant
- Involved in an ongoing research effort in polyelectrolyte multilayer formation. Observed the adsorption of water vapor as a function of relative humidity, number of polymer layers, and deposition solution ionic strength.
- Operated an atomic force microscope for topographical polymer characterization
- Used quartz crystal microbalance gravimetric techniques to monitor humidity adsorption into polyelectrolyte multilayers.
- Presented preliminary research results in the Spring 2004 ACS regional convention in Anaheim, CA in the poster session.

Invensys-Triconex, Irvine, CA 6/2001 – 10/2001
Engineering and Technical Communications Internship
- Internship with a leading producer of industrial digital safety controllers
- Assumed full responsibility for the research, editing, production, and release of several in-house documents including:
  - Design requirements for an automated fault-insertion system's software front-end.
  - Operations manual for fault insertion test system.
  - Procedural manual documenting the use of an EPROM programming system.
- Performed various computer and network maintenance tasks including webpage design and system installation.
- R/D labwork including fault-insertion robot component maintenance and design.

Sierra Instruments, Monterey, CA 6/2000 – 9/2000
Engineering Internship
- Internship with an industrial mass-flow meter manufacturing company.
- Labview programming of a front-end for clean-gas data acquisition and mass-flow meter calibration loops.
- Computer aided drafting using AutoCAD 2000 to fulfill engineering action requests.
- R/D labwork including documentation of calibration procedures and software training.

California Polytechnic State University 1/2000 – Current
Laboratory Experience
- Performed a rigorous series of exploratory experiments in organic, physical, biochemical, inorganic chemistry, and instrumental analysis using state of the art laboratory equipment.
- Frequently used GC, NMR, MS, HPLC, and FT-IR for trace chemical characterization and analysis (qualitative and quantitative).
- Carried out experimentation with standard laboratory glassware including distillations, refluxing, purification by sublimation and recrystalization, and column chromatography.