Benjamin J Jones, Ph.D.
634 Butterfield
West Fork, AR 72774
United States
Mobile: 479-200-0272
Email: benjaminjessejones@gmail.com

Work Experience:
University of Arkansas
345 N Campus Drive CHEM 119
Fayetteville, AR 72701
United States

08/2020 - 01/2021
Hours per week: 40
Hourly Lecturer
Duties, Accomplishments and Related Skills:
The position was a 25% appointed hourly lecturer for a three-credit hour class of 55 students (beginning semester roster) teaching a one semester organic chemistry survey course with some physiological and biochemistry topics at the end of the semester, that was delivered remotely. Although the position was only 25% appointed, I never put in less than 40 hours per week. I prepared an original syllabus, lecture slides, exam questions, and hand selected homework problems from the textbook. For the first half of the semester, I also led a 1.5 h weekly homework help session. I managed a TA that helped with grading and some administrative organization (keeping files organized and up to date).
Supervisor: Matt McIntosh ((479) 575-4692)
Okay to contact this Supervisor: Contact me first

University of Arkansas
345 N Campus Drive CHEM 119
Fayetteville, AR 72701
United States

08/2011 - 07/2020
Hours per week: 20
Senior Graduate Assistant
Duties, Accomplishments and Related Skills:
As a senior graduate assistant for the Department of Chemistry and Biochemistry of the University of Arkansas I performed several different duties while I was a doctoral student within the department, the main one being an instructor for various undergrad laboratory courses. Most of the lab courses consisted of 24 undergraduate students performing routine chemistry laboratory exercises to reinforce, from a practical and technical perspective, the theory they learned in lecture. The introductory labs were 2-3 hours per session per week. On average I would have 10 contact hours per week (directly in front of students) and 10 non-contact hours (preparing and grading).

Of the different laboratory courses I taught, the most intensive was the department's senior

level capstone advanced quantitative analysis course, Instrumental Analysis. I worked closely with the professor of record (before the departmental change to have it overseen by the director of undergraduate laboratory courses) to revamp the course syllabus and how the laboratory was conducted. The course was designed to teach students how to properly use different instrumentation that they might use in an academic or industrial research setting. The instrumentation and techniques we focused on consisted of gas chromatography, high performance liquid chromatography, atomic absorption spectroscopy, fluorimetry, cyclic voltammetry, and attenuated total reflectance Fourier transform infrared spectroscopy. This course required me to be well organized and familiar with all techniques and instrumentation so I could not only teach each group how to use each instrument but to also troubleshoot and verify each instrument was working properly on a weekly basis.
Supervisor: Chris Mazzanti ((479) 575-2101)
Okay to contact this Supervisor: Contact me first

Nano Diagnostics, LLC
1131 W Cato Springs Road
Fayetteville, AR 72701
United States

05/2011 - 08/2011
Hours per week: 40 Junior Scientist
Duties, Accomplishments and Related Skills:
This was a temporary position during the summer before I entered graduate school. I was charged with developing a water-soluble gold nanoparticle product line from established protocols from the literature. I developed standard operating procedures for the synthesis of water-soluble gold nanoparticles, and their characterization by UV/VIS absorption spectroscopy and transmission electron microscopy.
Supervisor: John Xia ((479) 595-0320)
Okay to contact this Supervisor: Contact me first

Ocean Nanotech, LLC
2143 Worth Lane
Springdale, AR 72764
United States

08/2008 - 12/2010
Hours per week: 40
Lab Technician
Duties, Accomplishments and Related Skills:
I began my training with the organic-phase synthesis of superparamagnetic iron oxide nanoparticles. Eventually, I transitioned to quality control and assurance of the company's water-soluble product line (quantum dots, iron oxide, gold, and silver nanoparticles) and their biofunctionalization (mostly streptavidin, sometimes biotinylated antibodies). I characterized the water-soluble products by UV/VIS absorption spectroscopy, dynamic light scattering, gel electrophoresis, and transmission electron microscopy. I also provided technical support to customers and collaborators that were using our products.

Hanna's Candle Company
2700 S. Armstrong Ave
Fayetteville, AR 72701
United States

08/2007 - 08/2008
Hours per week: 40
Lab Technician
Duties, Accomplishments and Related Skills:
As a lab technician in the company's research and development lab I was charged with testing wax blends with certain fragrances and dyes. Qualitative methods were used.

Education:
University of Arkansas
Fayetteville, AR United States
Doctorate 7/2020
GPA: 4.0 of a maximum 4.0
Credits Earned: 115 Semester Hours
Major: Chemistry
Relevant Coursework, Licenses and Certifications:
Relevant Coursework:
1. Energy Conversion and Storage (analytical chemistry special topics course focused on chemical energy storage systems)
2. Chemical Kinetics
3. Single Molecule Spectroscopy (physical chemistry special topics course focused on detection and spectroscopy on single molecules)
4. Chemical Separations
5. Mass Spectrometry
6. Electrochemical Methods
7. Lab Construction Techniques (inorganic chemistry special topics course focused on glass blowing, circuit building, use of a shop tools such as a metal lathe, band saw, and drill press to construct custom metal apparatuses for lab work)

Specialized Training:
1. Electrochemical techniques including cyclic voltammetry, chronoamperometry, and differential pulse voltammetry
2. Proton nuclear magnetic resonance spectroscopy
3. Attenuated total reflectance Fourier transform infrared spectroscopy
4. Standard photolithographic techniques including mask design in AutoCAD, photolithography, wet etching, dry etching, photoresist stripping, and wafer dicing.
5. Trained on FEI Titan 80-3000 (transmission electron microscope)
6. Trained on FEI XL-30 (environmental scanning electron microscope)

University of Arkansas
Fayetteville, AR United States
Bachelor's Degree 5/2007
GPA: 3.315 of a maximum 4.0

Credits Earned: 143 Semester Hours
Major: Chemistry
Relevant Coursework, Licenses and Certifications:
Bachelor of Science in Chemistry with an emphasis in biochemistry. I took an additional 16 credit hours in the following coursework in addition to the required courses for the Bachelor of Science in chemistry degree:
1. Cell biology
2. Genetics
3. Biochemistry I
4. Biochemistry II
5. Biochemical Techniques

Affiliations:
The Electrochemical Society - Member
The Society for Electroanalytical Chemistry - Member

Professional Publications:
Jones, B. J.; Korzeniewski, C.; Franco, J. H.; Minteer, S. D.; Fritsch, I., Spatially Directed Functionalization by Co-electropolymerization of Two 3,4-ethylenedioxythiophene Derivatives on Microelectrodes within an Array. Journal of the Electrochemical Society 2020, 167 (16), 166511.

References:

Name	Employer	Title	Phone	Email
Ingrid Fritsch*	University of Arkansas	Professor	(479) 575-6499	ifritsch@uark.edu
Julie Stenken*	University of Arkansas	21st Century Chair in Proteomics & Professor	(479) 575-7081	jstenken@uark.edu
Chris Mazzanti*	University of Arkansas	Director of Teaching Laboratories	(479) 575-2101	cmazzan@uark.edu
Jackson Taylor	US Coast Guard	Chief Petty Officer	(479) 387-8682	jackson.j.taylor@uscg.mil

**Indicates professional reference.*

Additional Information:

My Ph.D. research was focused on electroanalytical chemistry.

Dissertation Title: Thiophene Derivative Monomers Co-electropolymerized on Microelectrodes Within Arrays for Tailored Surface Chemistry and Electrochemical Properties

Spectroscopy Techniques:
NMR
ATR-FTIR
AAS
UV/VIS Absorption
XPS
LC-ESI-MS

Electrochemical Techniques:
Cyclic Voltammetry

Chronoamperometry
Differential Pulse Voltammetry
Conductive Polymer Electrodeposition

Chromatography Techniques:
Column
Thin-layer
HPLC
GC

Lithography Techniques:
Photolithography
Wet Etch
Dry Etch
Stripping
Wafer dicing

Electron Microscopy:
TEM
SEM

Awards:
2012 A.W. Cordes Teaching Award Recipient

Computer Language:
Python language in terminal and Jupyter Notebook environments

Computer Software Proficiency:
CH Instrument Software
Lab Solutions Software (Shimadzu)
Bruker TopSpin NMR Software
CasaXPS Software (XPS analysis)
AutoCAD
Adobe Creative Suite
Microsoft Office