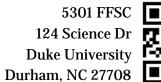
Lianjun (Ellie) Zheng

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EDUCATION

Duke University, Durham, NC	
Ph.D., Computational Chemistry	expected 05/2019
Certificate in College Teaching	expected 05/2019
Graduate Certificate in Nanoscience	expected 05/2019
Peking University, Beijing, China	
B.S., Chemistry	06/2013
RESEARCH EXPERIENCE	
Department of Chemistry, Duke University, Durham, NC	
Graduate Research Assistant, Adviser: Dr. David N. Beratan	
o Introducing extra bias to the compounds filtering step in the property- optimizing ACSESS algorithm, a framework to develop diversity oriented molecular libraries, for rational design of chromophores.	2018 – present
o Investigating the mechanism of charge transports in self-assembled	2017 – present
cyclic peptide nanotubes.	
cyclic peptide nanotubes.Designed linear light absorbers based on the quantum-optical analogy.	2015 - 2017
• • •	2015 – 2017

College of Chemistry and Molecular Engineering, Peking University, Beijing, China

Undergraduate Research Assistant, Adviser: Dr. Kai Wu

0	Synthesized highly ordered Sn ₂ O ₃ nanowire and Ta ₂ O ₅ nanotube arrays	2012 - 2013
	via template-assisted CVD and anodic oxidation.	
0	Improved a template-assisted method to synthesizing single crystalline	2011 - 2012
	nanowire arrays of high-aspect-ratio.	

TEACHING EXPERIENCE

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Duke Kunshan University, Kunshan, Jiangsu, China	
Teaching Assistant , to be determined	09/2018 – 12/2018
Department of Chemistry, Duke University, Durham, NC	
Teaching Assistant, Biophysical Chemistry	01/2018 - 05/2018
Course Development Assistant, Biophysical Chemistry	09/2017 - 12/2017
Teaching Assistant (peer reviewed), Biophysical Chemistry	01/2017 - 05/2017
Undergraduate Student Supervisor, Research Independent Study	09/2016 - 05/2017
Teaching Assistant , Modern Applications of Chemical Principles – Lab	01/2014 - 04/2014
Teaching Assistant , Core Concepts in Chemistry – Lab	09/2013 – 12/2013
COMPUTER SCIENCE EXPERIENCE	
WheePin – A Web Application	06/2018 – present
Developing a web application that users could make posts that pinned to their current locations, using the Java Spring framework. A group project.	
PhilistineHome – A Small Internet Forum	05/2018 - 06/2018
Built a small Internet forum where users could share their thoughts on anime, music, and life. Used by my friends and families (~10 users).	
Athena – An iOS App	10/2017 – 12/2017
Project for the <i>Mobile App Development</i> course at Duke (Grade: A +)	
Wrote an iOS app called "Athena" using Swift, which helps the users find sport players with matched skill levels and schedule games. Available at the Duke App Store.	
"Baby" Command Shell using C++	10/2016 – 12/2016
Project for the <i>Programming, Data structure & Algorithms in C++</i> course at Duke (Grade: A+)	
Wrote a C++ program package that has the basic Linux shell functions, free of warnings and memory leak, coded defensively.	
GPU Optimization for Stencil-Based Hemodynamics Simulation	10/2015 - 12/2015
Group project for the <i>Parallel Computing</i> course, collaborated with Dr. Amanda Randles's lab at Duke University (Grade: A +)	
Exploited and analyzed parallelism in the stencil-based computational model of blood flow simulation using GPU. Achieved a speedup up to 20.	

TECHNICAL SKILLS

Computational Chemistry

NWChem, Gaussian (quantum mechanics) NAMD, VMD (molecular dynamics)

Mathematica, Origin, Latex

Data Science

Machine learning

(using Python pandas and scikit-learn)

Materials Science

Chemical vapor deposition

Scanning electron microscopy

X-Ray diffraction

Programming

C/C++, Python, Swift, Unix shell script HTML/CSS, iOS app development

Git

Parallel Computing

OpenMP, CilkPlus, TBB, MPI, CUDA

(based on C/C++)

Languages

Chinese (native)

English (full professional proficiency)

Japanese (limited working proficiency)

AWARDS

Duke Kunshan University, Jiangsu, China

Graduate Teaching Fellowship Award

(2018)

Duke University, Durham, NC

Graduate Travel Award (2016)

GPNano Fellowship (2014)

Peking University, Beijing, China

Honors Students (2012)

Pan Gu Scholarship (2012)

Academic Excellence Award (2011)

Wusi Scholarship (2010&2011)

Excellent Freshmen (2009)

PUBLICATIONS & CONFERENCES

- L. Zheng, N. F. Polizzi, A. R. Dave, A. Migliore, D. N. Beratan. Where Is the Electronic Oscillator Strength? Mapping Oscillator Strength across Molecular Absorption Spectra. *J. Phys. Chem. A.*, 2016, 120 (11), 1933.
- J. Shang, B. Huang, J. Yu, Y. Wang, H. Song, J. Dai, C. Chen, **L. Zheng**, K. Wu, et al. Morphological Evolution of In₂O₃ Crystallites by Metallothermal Reaction Growth: A Unified Elucidation. *J. Clust Sci.*, **2017**, 28 (5), 2733.
- **L. Zheng**, A. Migliore, D. N. Beratan. Significant Enhancement of Polyene Light Absorption Induced by Electrostatic Fields. In preparation.
- **L. Zheng**, S. Roy, O. Silberbush, A. Migliore, N. Ashkenasy, D. N. Beratan. The Enormous Influence of Side Chain Flexibility on Intermolecular Proton Transfer in Self-Assembled Peptide Nanotubes. In preparation.

- **L. Zheng**, A. Migliore, D. N. Beratan. Significant Enhancement of Polyene Light Absorption Induced by Electrostatic Fields. Presented at the third Annual Duke Chemistry Graduate Research Symposium, *Duke University, Durham, NC* (September, 2017).
- **L. Zheng**, A. Migliore, D. N. Beratan. Significant Enhancement of Polyene Light Absorption Induced by Electrostatic Fields. Presented at the American Conference on Theoretical Chemistry, *Boston University*, *Boston*, *MA* (July, 2017).
- L. Zheng, N. F. Polizzi, A. R. Dave, A. Migliore, D. N. Beratan. Where Is the Electronic Oscillator Strength in Molecules? Toward Strategies for Oscillator Strength Focusing. Presented at the Gordon Research Conferences: Solar Energy Conversion, *Hong Kong University of Science and Technology, Hong Kong, China* (July, 2016).
- **L. Zheng**, N. F. Polizzi, A. R. Dave, A. Migliore, D. N. Beratan. Investigations of Oscillator Strength Focusing. Presented at the annual meeting of the Southeast Theoretical Chemistry Association, *University of Central Florida, Orlando, FL* (May, 2015)