**Jiazhen Gu**

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**education**

**College of Chemistry and Molecular Engineering, Peking University, Beijing, China** Sept 2017 - Present

B.S. in Chemistry, GPA: 3.64/4.0 (Ranking: Top ~40%)

Standard English Tests: TOEFL: Total 94 (Reading 27, Listening 28, Speaking 21, Writing 18)

GRE Subject Test(Chemistry): Scaled Score 920, Percentile 99%

Core Courses: **Theoretical** **Chemistry:** Structural Chemistry (90.5) / Physical Chemistry (I:86, II:89) / Inorganic Chemistry (88)

Fundamentals of Life Chemistry (89) / Fundamentals of Chemical Engineering (90)

Comprehensive Analytical Chemistry (87)

**Experimental** **Chemistry:** Physical Chemistry Lab (98) / Comprehensive Organic Chemistry Lab (95)

Inorganic Chemistry Lab (88) / Quantitative Chemical Analysis Lab (88) / General Chemistry Lab (87)

**Physics**: General Physics (I:93.5, II:84.5)

**research experiences**

**Photoluminescence and Electroluminescence of Deuterium-Substituted Dysprosium Complex**

Peking University | Research Assistant Sept 2019 – Present

Advisor: Zuqiang Bian, professor of Department of Inorganic Chemistry, Peking University

* Designed the synthesis route of the ligand CPMIP (1-(4-cyanophenyl)-3-methyl-4-isobutyryl-pyrazolone).
* Conducted the first several steps of the synthesis and optimized the reaction condition.
* Characterized the product by 1H-NMR.
* Currently learning the preparation and characterization of electroluminescence semiconductor devices

**SELECTED COURSE PROJECTS**

**Synthesis of α-DDB (4,4’-dimethoxy-5,6,5’,6’-dimethylenedioxy-2,2’-dimethoxycarbonylbiphenyl)**

Comprehensive Organic Chemistry Lab Sept 2018 – Dec 2018

Advisor: Qihan Zhang, assistant professor at College of Chemistry and Molecular Engineering, Peking University

* Synthesized α-DDB through a six-step total synthesis with an overall yield of 0.96%.
* Purified the intermediate product by silica gel chromatography and characterized the product by 1H-NMR.

**Fabrication of UV-Vis spectrometer and the examination of one-dimensional infinite square potential well model** | Course: Physical Chemistry Lab Dec 2019

Advisor: Zhongyun Wu, assistant professor at College of Chemistry and Molecular Engineering, Peking University

* Built and calibrated a UV-Vis spectrometer using deuterium lamp, optical grating and CCD detector.
* Measured the absorption spectrum of a series of conjugated molecules.
* Calculated the theoretical absorption spectrum of these molecules by Gaussian 09w.
* Examined the one-dimensional infinite square potential well model by analyzing the length of the conjugated system calculated by Gaussian and the absorption wavelength measured by the spectrometer.

**HONORS & AWARDS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* Award for Academic Diligence Jan 2019
* First Prize at the 30th National High School Chemistry Competition (Preliminary Contest) (top 70 of 300000) Sept 2016

**Skills\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Extensive self-learning on knowledge of material chemistry and semiconductor devices, especially electroluminescence devices

Organic synthetic skills, including the usage of glovebox and Schlenk line

Experience of operating analytical instruments including 1HNMR, UV-Vis and IR spectrometer, electrochemistry system, MS, HPLC, etc

Basic knowledge of computational chemistry tools (Gaussian 09w)

Data processing applications: Microsoft Office, Origin