Rui Li

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EDUCATION

Sept 2016 - present **Chu Kochen Honors College**[1]**, Zhejiang University**, China

- Major: Chemistry
- GPA: 3.85/4.0 (88.34/100)
- Ranking: **Top 5%** (90 in total)
- Supervisor: Prof. Zhoupeng Li (`https://person.zju.edu.cn/en/0005009`)
  Prof. Linjun Wang (`https://person.zju.edu.cn/en/linjunwang#766272`)

Jul 2019 - Dec 2019 **School of Chemistry, University of Bristol**, United Kingdom

- Summer research project
- Supervisor: Prof. Fred Manby (`http://www.bris.ac.uk/chemistry/people/fred-r-manby/`)
  Prof. Neil Allan (`http://www.bris.ac.uk/chemistry/people/person/5360`)

PUBLICATION

- **R. Li**, Y.J. Ge, L.T. Dou, B.H. Liu and Z.P. Li,
  Prevention of active-site destruction during the synthesis of high performance non-Pt cathode catalyst for fuel cells,
  RSC Adv., 2017, 7, 6622
- Issoufou A.M. Ousmane, **R. Li**, C. Wang, G.R. Li, W.L. Cai, B.H. Liu and Z.P. Li,
  Fabrication of oriented-macroporous-carbon incorporated with γ-Al_2O_3 *for high performance lithium-sulfur battery*,
  Microporous and Mesoporous Materials, 2018, 266, 276-282
- Q.Q. Wang, J.J. Xu, **R. Li**, Z. Lin, B.H. Liu and Z.P. Li,
  A strategy to deposit nano metals in multi-layer graphene for scalable synthesis of high performance anode materials in lithium ion battery,
  Journal of Alloys and Compounds, 2018, 731, 739-744

UNPUBLISHED RESEARCH EXPERIENCE

Jul. 2019 - Present **entos**

- An *ab initio* molecular dynamics package led by Prof. Fred Manby and Prof. Tom Miller
- Major Implementation and Contribution:
  - molecular GFN0-xTB method
  - sTDA-xTB method
  - periodic GFN1-xTB method
- visit `https://www.entos.info` for more details

Jul. 2019 - Present **Cristobalite and Borate Cristobalite**

- Exploration of ultra-flexible low-energy forms of Cristobalite and Borate Cristobalite
- Supervised by Prof. Neil Allan
- Relevant reference: `https://doi.org/10.1039/C8FD00052B`

Oct. 2018 - Present **Semi-Classical Moyal Dynamics in multivariate system**

- A semi-classic time-dependent dynamics method based on expectations of observables
- Supervised by Prof. Linjun Wang
- Relevant reference: `https://doi.org/10.1063/1.5067005`

[1] **Chu Kochen Honors College** admits top 5% students in Zhejiang University.

WORK EXPERIENCE

Oct. 2016 - Dec. 2016 **Voluntary tutoring for Yucai Elementary School students**

Jul. 2018 - Oct. 2018 **Voluntary tutoring for Xuejun High School students**

Sept. 2018 - Jan. 2019 **Teaching Assistant of *General Chemistry***

- in Department of Chemistry, Zhejiang University

OTHER NOTABLE PROGRAMS

Jul. 2019 - Oct. 2019 **Restricted Hartree-Fock Program**

- Supports all basis sets and arbitrary number of atoms
- The integrations are based on Obara - Saika scheme
- The only dependency is GSL (GNU Scientific Library)
- The results are comparable to the quantum chemistry packages, such as gaussian 16
- Repository: `https://github.com/Walter-Feng/Hartree-Fock`

Mar. 2019 - Apr. 2019 **Time Dependent Discrete Variable Representation in 1D**

- Supports input of arbitrary combination of elementary functions
- Based on uniform-grid scheme
- The only dependency is GSL (GNU Scientific Library)
- Repository: `https://github.com/Walter-Feng/SincDVR`

HONORS AND AWARDS

2017 • Zhejiang Province Government Scholarship

2017 • Research and Innovation Award at Zhejiang University

2017, 2018 • First-Class Scholarship for Top-notch Students of Basic Disciplines at Zhejiang University

2018 • Third-Class Scholarship for Outstanding Merits at Zhejiang University

ABILITY

- **Language**: Japanese (native), Chinese (native), English (fluent)
- **Programming Language**: C, C++, Julia, Python, Mathematica
- **Notable softwares**: LaTeX, entos, GAUSSIAN 16, PySCF, CP2K, CASTEP, CRYSTAL17
- **Standardized Tests**: TOEFL (110 = Listening 30 + Speaking 23 + Reading 30 + Writing 27)
  GRE General Test (324 = Verbal 154 + Quantitative 170, Analytical Writing 3.5)
  GRE Chemistry Subject Test (860, 93%)
- **GitHub Account**: `https://github.com/Walter-Feng`