Qingsong Lei

163 Xianlin Avenue, Qixia District, Nanjing City, Jiangsu Province, China

• +86-18008178739 • Qingsong_Lei@smail.nju.edu.cn

EDUCATION

NANJING UNIVERSITY — **NANJING, CHINA**
College of Engineering and Applied Sciences
Bachelor of New Energy Science and Engineering — *Sep.2018-June.2022*

SHANGHAI JIAO TONG UNIVERSITY — **SHANGHAI, CHINA**
Exchange Student — *Jul.2019-Aug.2019*

HARVARD UNIVERSITY — **CAMBRIDGE, MASSACHUSETTS**
Research Trainee Advisor: Prof. Hadi Shafiee — *Jan.2022-Jun.2022 (Expected)*

EXPERIENCE

Prof. Huigang Zhang's Laboratory — **NANJING, CHINA**
Learning use of laboratory equipment — *August 2020 – October 2020*

- Project: ***Gold-supported nitrogen-doped strontium titanate for photocatalytic degradation of VOCs***
  - Prepared gold-loaded nitrogen-doped strontium titanate
  - Characterize structure and morphology

Prof. Ye Zhang's Group — **NANJING, CHINA**
Basic operation & Own project — *September 2020 –*

- Project: ***Enabling stable zinc anode via in situ deposition on CNT-based thin films***
  - Material preparation, literature review, experimental data recording, instrument control and operation
  - Made the CNT tube into a network structure as a polar fluid
  - Plasma treatment of electrodes to obtain hydrophilicity
  - Preparation of electrolytes with different concentration gradients
  - Tested the battery performance and measured cyclability and stability
- Project: ***Engineering polymer glue towards 90% zinc utilization for 1,000 hours to make high-performance Zn-ion batteries***
  - Prepared polymer glue, producing a viscous and glutinous texture and coated it on Zn foil
  - Tested galvanostatic charge-discharge of symmetric batteries based on polymer glue-coated and bare Zn foils at the current density of 5 $mA \cdot cm^{-2}$ under 90% Zn utilization rate and achieved cycles more than 1000 hours
- Project: ***Gel-based brain-computer interface (Ongoing research)***
  - Prepared a gel-based brain-computer interface based on the Utah array and implanted in the skull of a mouse and detected electrical signals

HONORS

- State grants — *Sep.2019*
- National Inspirational Scholarship — *Oct.2019*
- American Alumni Fund (1%) — *Nov.2019*
- Outstanding Class Leader (one only) — *May.2020*
- People's Scholarship — *Nov.2020*

ACTIVITIES

- Served as leader of the New Energy Science and Engineering major — *2019-2020*
- Organized a society research to Liangshan, Xichang — *2019*
- Participated in the defense of Zheng Gang's overseas scholarship — *2020*

LANGUAGES & SKILLS

- Languages: English (Fluent), IELTS 7.0
- Highly proficient in Microsoft Office, Land, Auto CAD, Origin, Adobe Photoshop, Adobe Illustrator
- Good at sports and music and represent the college in the competition as an athlete

PUBLICATIONS

- Yiding Jiao, Fangyan Li, Xin Jin, **Qingsong Lei** et al. "Engineering Polymer Glue towards 90% Zinc Utilization for 1000 Hours to Make High-Performance Zn-Ion Batteries", ***Adv. Funct. Mater.*** 2021, 2107652.
- Yuchen Liu, **Qingsong Lei**, Huanli Zhu. "Research on the mechanism of reflow furnace temperature curve based on steady-state heat conduction equation", ***Encyclopedia Forum.*** 2021 Oct ISSN2096-3661.