Qingsong Lei

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EDUCATION

UNIVERSITY OF CAMBRIDGE **CAMBRIDGE, UNITED KINGDOM**
Major: Micro and Nanotechnology Enterprise *Oct. 2023 – Jan. 2025*
Master of Philosophy (MPhil) *Advisor: Prof. Cate Ducati and Prof. Michaël De Volder*

NANJING UNIVERSITY **NANJING, CHINA**
Major: New Energy Science and Engineering *Sep. 2018 – Jun. 2022*
Bachelor of Engineering

WORKING EXPERIENCE

HUAWEI TECHNOLOGIES CO., LTD. **SHENZHEN, CHINA**
HiSilicon Semiconductor Division *Position: Chips & Semiconductor* *Apr. 2025 – Jan. 2026*

OTHER EXPERIENCE

PEKING UNIVERSITY **BEIJING, CHINA**
Research Assistant *Aug. 2022-Aug. 2023*

NATIONAL UNIVERSITY OF SINGAPORE **SINGAPORE**
Research Intern *Aug. 2022-Aug. 2023*

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

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

RESEARCH

Prof. Ye Zhang's Group (*Sep. 2020 – Jan. 2022*) NANJING, CHINA
- Project: ***Achieving stable zinc anodes through In-situ deposition on CNT films***
- Fabricated carbon nanotubes into a network structure as current collectors, assembled batteries and conducted electrochemical testing and characterization.

Prof. Hadi Shafiee's Group (*Jan. 2022 - Jun. 2022*) CAMBRIDGE, MASSACHUSETTS
- Project: ***Deep learning-assisted detection of fentanyl using a bubbling-microchip***
- Developed microfluidic chips using laser cutting and 3D printing and synthesized nanoparticles for drug detection.

Dr. Adrian Stevenson's (Electrical Engineering) Group (*Nov. 2023 – May. 2024*) CAMBRIDGE, UNITED KINGDOM
- Project: ***Wireless MEMS sensors based on sputtered magnetic material***
- Integrated antennas with FBAR to create wireless sensors and enhanced performance using magnetic thin films.

Prof. Michaël De Volder's Group (*May. 2024 –Aug. 2024*) CAMBRIDGE, UNITED KINGDOM
- Project: ***Micro-structured electrodes for redox flow batteries***
- Conducted micro/nano fabrication, EIS fitting, COMSOL and MATLAB simulations, and machine learning applications.

HONORS

State grants (Sep. 2019), American Alumni Fund (Nov. 2019), Outstanding Class Leader (May. 2020), People's Scholarship (twice, Nov. 2020), Alishan Scholarship (4 only from NJU, Dec. 2021), The First Shanghai Yangpu Tour for Outstanding University Students (50 participants nationwide, Aug. 2024).

SKILLS

- Computer Skills: Matlab, Python, C language, Comsol Multiphysics, AutoCAD, C4D
- Cleanroom micro/nanofabrication, Semiconductor and battery manufacturing, Electrochemical synthesis, Nanomaterials synthesis, Patch clamp techniques, Optical instruments and lasers, Materials characterization techniques, Micro-Electro-Mechanical Systems, Microcontroller development, Computational modeling, Basic circuit design

PUBLICATIONS

• Hui Chen, **Qingsong Lei** et al. "Cryopreservation in Assisted Reproduction" (Book chapter published by ***Springer Nature***), 2024 (eBook ISBN 978-3-031-58214-1).

• Hui Chen, Sungwan Kim, ..., **Qingsong Lei**, Gi Won Cho, and Hadi Shafiee, “Deep learning-assisted sensitive detection of fentanyl using a bubbling-microchip”, ***Lab on a chip***. 2022, 4531-4540.
• 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.