Yung Chak Anson Tsang

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Education

Georgia Institute of Technology (*GPA: 3.57/4*) **Atlanta, GA**
B.Sc. in Mechanical Engineering, Minor in Scientific and Engineering Computing *Expected Spring 2023*

Work & Research Experience

Hatzell Lab **Atlanta, GA**
Undergraduate Research Assistant *Aug 2022 – Current*
• Currently working on electrochemical nitrogen reduction in aqueous electrolytes

Tesla Inc **Palo Alto, CA**
Battery Engineering Intern *May 2022 – August 2022*
• Mechanical design and analysis for structural battery pack program
• Directly responsible for many structural calculations and data analysis for passive propagation resistance testing
• Spearheaded various cost-down mechanical redesigns with potential savings of >20 million for FY23

Apple Inc **Cupertino, CA**
Display Hardware Intern *May 2021 – August 2021*
• Developed a conjugate heat transfer model for the Apple Watch Ultra display module, utilizing it to investigate various design strategies to maximize screen brightness

Chen Research Group **Hong Kong University of Science and Technology, HKSAR**
Research Assistant *August 2020 – May 2021*
• Designed a patent pending "thick" bi-continuous nano-porous zinc anode for applications in secondary batteries
• Investigated structural properties of nanoporous metals through various microscopic/tomographic techniques and electrochemical impedance spectroscopy from custom electrochemical test cells

AMPD Energy **Hong Kong Science & Technology Park, HKSAR**
Mechanical Engineering Intern *May – August 2020*
• Created multi-physics and conjugate CFD thermal models to analyze and optimize cooling system design
• Root-caused and resolved various production/launch related issues with OEMs
• Spearheaded various mechanical re-designs, reducing overall weight by >200kg
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Environmental Process Modelling Centre **Nanyang Environmental and Water Research Institute, SG**
Research Assistant *May - August 2019*
- Conducted large scale molecular dynamics simulation to study nanoscale kinetics of interfacial water evaporation
- Utilized drone mounted hyperspectral imaging to acquire field data used for remote water quality monitoring

KT Lucid LLC – Signet/Championship Rings Manufacturer and Retailer **Shrewsbury, MA**
Co-Founder *October 2017 – May 2020*
- Developed a set of products to reduce manufacturing costs by leveraging suppliers and manufacturers in China

Relevant Projects and Leadership

HyTech Racing **Atlanta, GA**
President (Previous: Lead Electric Drives Engineer 2019-2021) *June 2021 – May 2022*
• Lead a team of 120 undergraduate/graduate students to develop, build and test a fully electric race car, achieving 3rd overall at Formula Michigan 2022
• Previously spearheaded the development of a custom 300V $LiCoO_2$ battery pack with 120kwh/kg specific energy and 60kW of peak power

Hong Kong Student Association **Atlanta, GA**
Founding President *Aug 2018 – May 2019*
• Provided assistance for all incoming/exchanging student from Hong Kong and Macau SAR as well as hosted various social events

Publications

- Kieu, H., **Tsang, Y.C.A.**, Zhou, K. *et al.* Evaporation Kinetics of Nano Water Droplets using Coarse-Grained Molecular Dynamic Simulations. *International Journal of Heat and Mass Transfer* **156**, 119884 (2020)
- Li, L., **Tsang, Y.C.A.**, Xiao, D. *et al.* Phase-transition tailored nanoporous zinc metal electrodes for rechargeable alkaline zinc-nickel oxide hydroxide and zinc-air batteries. *Nat Commun* **13,** 2870 (2022)
- Zheng, Yiting, Yuen Tsz Cheung, Lixin Liang, Huiying Qiu, Lei Zhang, **Anson Tsang**, Qing Chen, and Rongbiao Tong. "Electrochemical Oxidative Rearrangement of Tetrahydro-β-Carbolines in a Zero-Gap Flow Cell." *Chemical Science* **13**, no. 35 (2022): 10479–85
- Wang, Congcheng, **Anson Tsang**, Diwen Xiao, Yuan Xu, Shida Yang, Qiang Zheng, Pan Liu, Hai-Jun Jin, and Qing Chen. "The Microstructural Dependence of Ionic Transport in Bi- Continuous Nanoporous Metal," *arXiv:2108.11529 [physics.app-ph]*, (2021)