

# Changyu Deng

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## EDUCATION

- Aug.2018– **University of Michigan, Ann Arbor**  
present PhD Candidate, Mechanical Engineering, Focus: Battery design and modeling GPA: 4.00/4.00
- Aug.2014– **Xi'an Jiaotong University (China)**  
Jun.2018 B. Eng., Energy and Power Engineering & B. Eco., Economics GPA: 4.01/4.30 Ranking: 1/113

## PUBLICATIONS

- Article **C. Deng** et al., Integrating Machine Learning with Human Knowledge, *iScience* (minor revision)
- Abstract **C. Deng** and W. Lu, Doping Phosphorus in Carbon Xerogel via Vaporization for Sodium Ion Batteries, *238th Electrochemical Society Meeting*, Honolulu, Hawaii, USA, 2020
- Article **C. Deng** and W. Lu, Measuring Consistent Diffusivity from Galvanostatic Intermittent Titration Technique and Electrochemical Impedance Spectroscopy, *J of Power Sources*, 2020, 473, 228613
- Proceeding **C. Deng** and W. Lu, Geometry Optimization of Porous Electrode for Lithium-Ion Batteries, *ECS Transactions*, 2020, 97(7), 249
- Preprint **C. Deng**, et al., Deep-Learning-Enabled Simulated Annealing for Topology Optimization, arXiv:2002.01927
- Article **C. Deng**, et al., Numerical Study on Equilibrium Stability of Objects in Fluid Flow — A Case Study on Constructal Law, *Case Studies in Thermal Engineering*, 2019, 100539
- Article M. Li, Z. Qin, Y. Cui, C. Yang, **C. Deng**, et al., Ultralight and Flexible Monolithic Polymer Aerogel with Extraordinary Thermal Insulation by A Facile Ambient Process, *Advanced Materials Interfaces*, 2019, 1900314
- Preprint **C. Deng**, et al., Thermal Conductivity of 1,2-Ethanediol and 1,2-Propanediol Binary Aqueous Solutions at Temperature from (253 to 273) K, arXiv:1711.07189
- Article **C. Deng**, et al., Development of a Vapor Pressure Measuring Apparatus for Experimental Teaching, *Research and Exploration in Laboratory*, 2018, 37(07):69-71+86

## EXTRA-CURRICULAR ACTIVITIES

- Jan.2019– **Prestigious Member of Tau Beta Pi Engineering Honor Society**  
present Led and participated in teaching K-12 kids, tutoring undergraduate students and assisting a shelter center supporting those impacted by domestic violence or sexual assault.
- Jun.2016– **Vice President of Table Tennis Association**  
Jun.2017 In charge of income and expenditure of the association; organized several matches.
- Jun.2015– **Head of Social Service Department of Student Union**  
Jun.2016 Organized service events, managed volunteers' database, and protected the benefits of volunteers; personally participated in about 300 hours of service activities.

## SKILLS

- Experimental Electrode preparation, Coin cell assembly, CVD, Characterization: SEM, XRD, EDS, EIS, GITT
- Software COMSOL (li-ion battery, electrochemistry, optimization), MATLAB, SolidWorks, AutoCAD, L<sup>A</sup>T<sub>E</sub>X
- Programming Python (PyTorch for machine learning), C, Fortran