
Personal Information

Name Yuan Zhang
E-Mail yz895@drexel.edu
Date of birth / -Place 11,09,1990, China
ORCID ID 0000-0002-4083-0928



Research and relevant activities

June. 2019 – 2020

MXene-CDI (PR-1173/11) DFG project

- Aqueous electrochemistry of MXenes
- Electrochemical desalination with MXene
- Data analysis and mechanism studies

June. 2021 – May. 2022

Lithium-recovery from mine water project (RAG-Stiftung)

- Cation-specific electrosorption studies
- Ion-selectivity quantification via online ICP-OES
- Material synthesis and characterization
- Data analysis and mechanism studies

Teaching activities

Winter term. 2019/2020

Lab Pratikum ENTV, Universität des Saarlandes
Cyclic voltammetry, galvanostatic cycling with the potential limitation

*Summer term.
2020*

Lab Protocol NBM-P, Universität des Saarlandes
Electrochemical energy storage

Apr. 2020 – Dec. 2020

Mentoring Master Student
Study ion-exchange membrane coating technique for membrane capacitive deionization applications

Jan. 2021 – Jul. 2021

Master student thesis

- *Title: Influence of materials and operation parameters on the performance of capacitive deionization with nanoporous carbon*

Poster Presentation

Nov. 2019

Ph.D. Student Day of Saarland University, Saarbrücken (Germany)

- *Electrochemical stability of sodium chloride in H₂O and D₂O in nanoporous carbon electrodes*

- Oral Presentations**
- Sep. 2019
7th German-Japanese Symposium on the Development and Technology of Carbon Materials, Würzburg.
- *Title: Electrochemical stability of sodium chloride in H₂O and D₂O in nanoporous carbon electrodes. Nanoporous carbon electrodes.*
- Apr. 2021
29th Topical ISE Meeting, online (due to COVID-19)
- *Title: Sub-nanometer carbon confinement: pore size effect on ion permselectivity and selectivity*

Education

Jun. 2018 – May.2022

Ph.D. student

Leibniz Institute für neue Materialien
Universität des Saarlandes, Germany

- *Explore new materials for electrochemical water desalination*
- *Study materials for selective ion removal*
- *Research and development of the electrocatalytic water desalination techniques*

Aug. 2017 – Apr. 2018

Hiwi student

Helmholz Institute Ulm, Germany

- *Electrochemical study of Mg deposition applying in-situ EQCM characterization*
- *Nanoporous V₂O₅ synthesis for Li-ion battery application*

Oct. 2014 – Apr. 2017

Master of Science

Universität Ulm, Germany
Energy Science and Technology program

- *Electrochemical study of Li deposition applying in-situ EQCM characterization*

Sep. 2010 – Jun. 2014

Bachelor of Engineering

Central South University, School of thermal energy and engineering,
Changsha, China

- *Development of configuration software and automation of the energy system for electrolytic aluminum production*

Scientific qualifications and expertise

Characterization skills

Gas sorption analysis, online ICP-OES, thermogravimetric analysis, in-situ dilatometry, in-situ EQCM, scanning electron microscopy, X-ray diffraction, Raman spectroscopy, and electrochemical characterization techniques

Language skills

English

Fluent (C1)

German

Intermediate (B1)

Mandarin

Mother language (C2)