Qiushi Miao

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EDUCATION

School of Materials Science and Engineering, Shanghai Jiao Tong University Aug 2016 - present

International Education Experimental Class - 27 students selected from all admitted students

Major: Materials Science and Engineering; **Major grades: 89.18/100**; **Ranking: 6/106**

Core courses: Advanced mathematics (A) (2)(94)/Probability and Statistics (99)/College Physics (A) (1) (98)/College Physics (A) (2)(96)/Thermodynamics of Materials (93)/Materials Physics (94)

Second Major in Computer Science Feb 2018 - present

Core courses: Discrete Mathematics, Data Structure, Software Engineering, Operating System, Compiling Principle

TOEFL:92(Reading25 Listening26 Speaking 20 Writing21)

RESEARCH EXPERIENCES

Self-Supported Electrocatalyst Design for Water Splitting NRR and CO2RR

| Shanghai Jiao Tong University | Research Assistant Nov 2018 - present

Advisor: Jianbo Wu , Associate Professor at School of Materials Science and Engineering, Shanghai Jiao Tong University

- Grew MoS_2 on CuNi foam by CVD, which has an overpotential of 180 mV for HER in alkaline environment
- In-situ growth of NiOOH nanosheet array on Ni wire array substrate with hydrothermal method and electrooxidation method.
- Sulfuration of ZnO nanoarray to ZnO@ZnS core-shell structure for electrochemical reduction of CO_2 to CO and H_2.
- Synthesis of Ni single atom catalyst supported in MOF array structure.

Cation effect on NRR| University of Illinois at Urbana-Champaign | Summer Intern July 2019- Oct 2019

Advisor: Yingjie Zhang, Assistant Professor at Department of Materials Science and Engineering, UIUC

- Investigating the cation effect of ionic liquid in electrolyte on NRR and HER

Radiative-cooling materials Design | Shanghai Jiao Tong University | Research Assistant Oct 2017- Dec 2018

Advisor: Han Zou, Associate Professor at School of Materials Science and Engineering, Shanghai Jiao Tong University

- Used FDTD simulation to get a model with radiative-cooling property based on the bionic structure of cactus spines
- Discovered the radiative-cooling usage of BPO_4, test the cooling property, and explained it with the phonon spectrum.
- synthesized the material in sol-gel method, and test its cooling property with a container on the roof

PUBLICATION

Qian Xiang[&], Jiale Wang[&], **Qiushi Miao[&]** et al. "Recent Process in Self-supported Nanoarray Electrocatalysts for Water-splitting with Diverse Substrates" to be submitted to Materials Today Nano

Xiang, Qian[&], Li, Fan, Wang, Jiale, Chen, Wenlong, **Miao, Qiushi** et al. "Heterostructured Catalyst with Highly Enhanced Edge Surface for Efficient CO_2 Electrochemical Reduction to CO" submitted to AFM.

ACTIVITIES

Special Olympics | Shanghai Special Care Foundation| Project member Oct 2018 - Nov 2018

- Facilitated the kids with mental illness to finish the training for the Special Olympics
- Visited and trained with the kids once a week until the final competition

AWARDS

College Scholarship provided by Shanghai Institute of Silicate, Chinese Academy of Sciences (5/108) Oct 2018

Third-class Prize in Mathematics contest for University Students division in Shanghai Jan 2018

Academy Excellence Scholarship Dec 2017, Nov 2018

SKILLS

FDTD simulation, Common chemical synthesis skills, HER,OER,ORR,CO_2RR,NRR test experience, Programing skills