Sian Xiao

Gender: Male
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EDUCATION:

Beijing University of Chemical Technology *Sep.2015 - Jun.2019*

Bachelor of Engineering in Polymer Materials and Engineering (Experimental Class of Science)
First two years in Experimental Class of Science (Selected from top 1% of the whole university)
Last year in The University of Akron (Senior project, bachelor defense and master course, research)

- Overall GPA: **88.0**/100 **Rank: top 10% (in department), 4/44 (in Experimental Class)**
- The first prize of Wuxi Boton Tech Co., Ltd. (Social scholarship) *Nov. 2018*
- China Scholarship Council (CSC) scholarship under the State Scholarship Fund *May. 2018*
- Outstanding student of College of Materials Science and Engineering *Nov.2017*
- First Prize of Mathematical Modeling Contest of Beijing University of Chemical Technology *May.2017*
- Outstanding student of College of Science *Nov.2016*
- Outstanding student of Beijing University of Chemical Technology *Sep.2015*

The University of Akron *Aug.2018 - Jun.2020*

Master of Science in Polymer Engineering (Unfinished)

- Overall GPA: **3.88**/ 4.00

STANDARDIZED TEST RESULTS:

- TOEFL: 94 (Reading 27, Speaking 20, Listening 22, Writing 25) *Feb.2018*
- GRE: 324 + 3.0 (Verbal 154, Quantitative 170, Analytic Writing 3.0) Nov. 2019

RESEARCH EXPERIENCE:

Research on CNTs-PDA-POSS Multi-dimensinally Reinforced Epoxy Composites *Oct.2015 - May.2016*

Advanced Composites Center, State Key Laboratory of Organic-Inorganic Composites, BUCT
Advisor: Prof. Gang Sui

- Tried to have an experience of scientific research under seniors' help
- Aimed to demonstrate the feasibility and mechanism of multi-dimensionally structure design of nanocomposites
- Grafted POSS onto the dopamine-coated carbon nanotubes, and conducted the Schiff base reaction using toluene as a solvent, and seperated the water produced in the reaction by manifold
- Confirmed the POSS grafting by XPS and FTIR and characterized material properties
- Wrote the content of experimental procedure in the paper and won the second prize of 12th Mengya Cup Technology Innovation and Academic Paper Contest as a three-person team

Research on Ni/Fe Layered Double Hydroxides grafted MoS_2 as HER catalyst *Sept.2016 - Jun.2018*

Nano Chem Research Group, State Key Laboratory of Chemical Resource Engineering, BUCT
Advisor: Prof. Xiaoming Sun

- Led a team of four as the teamleader, arranged work and designed the project
- Consulted papers on the preparation of Layered Double Hydroxides on Ni Foam and raised idea to use microwave-assisted hydrothermal reaction to prepare Layered Double Hydroxides
- Tuned the composition of the metals in Layered Double Hydroxides and looked for new transition metals for doping, such as Co, Cr and Mn, to prepare ternary system
- Analyzed the microstructure and catalytic properties of the synthesized materials via XRD, XPS, SEM and Electrochemical workstation
- Finish the process through opening report, mid-term review and concluding defense, submit the academic essay as the research result to the university

Research on Grain Boundary Passivation of Perovskite Solar cells by Carbon Nanoparticles *Jan.2019 - May.2019*

Laboratory of Organic and Organic/Inorganic Hybrid Materials and Electronics, UAkron, OH, USA
Advisor: Prof. Xiong Gong

- Learned to design and conduct experiments individually
- Individually come up with the idea of grain boundary passivation as my research direction of senior project and part of the master project
- Learn and modify the fabrication methods of perovskite solar cells, tune the composition of mixed perovskite, incorporate fnctionalized carbon nanoparticles to modify perovskite solar cells through grain boundary passivation
- Tested optoelectric properties of the devices by J-V characteristics, EQE spectrum, Impedence, capacitance-voltage, etc

OTHERS:

- **Programming language &Software:** C, Chemdraw, Origin, Matlab
- **Professional skills:** Good knowledge of polymer science and engineering, fundmental characterization knowledge and skills