BIOGRAPHICAL SKETCH

NAME
Kaixiang Huang

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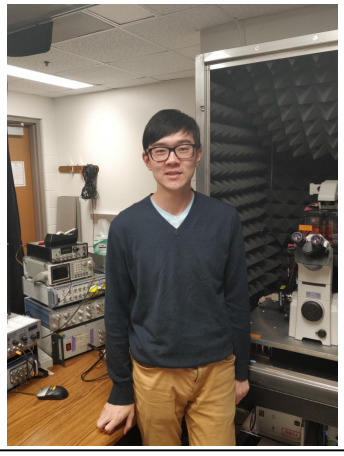

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	MM/YY	FIELD OF STUDY
Indiana University, Bloomington, IN	Ph.D.	08/2016 – Present	Analytical Chemistry
Fudan University, Shanghai, China	B.S.	09/2012 – 06/2016	Chemistry

A. Personal Statement

I received my bachelor's degree of chemistry in Fudan University. My undergraduate research was about designing new catalyst for gas phase reactions, as well as analyze the surface properties of catalysts using inverse gas chromatography. I joined the Baker Group in Fall 2016 to pursue a Ph.D. degree, focusing on extending the applications of scanning ion conductance microscopy (SICM) to biosystems and nano-chemical analysis. My current project is studying the transport properties of epithelium under the modification of extracellular conditions with Potentiometric SICM. This is promising in providing visual interpretation on the mechanisms of drugs effect on cells. I also have interest in developing instrumentation to improve analysis of SICM, and bioengineering in making tissue barriers such as blood-brain barrier for nanoscale ion transport studies.

B. Positions and Honors

Professional Employment

2018 Fall – present Research Assistant, Indiana University, Department of Chemistry
2018 Summer Student Mentor, Research Experiences for Undergraduates (REU) program
2016 Fall – present Associate Instructor, Indiana University, Department of Chemistry

Honors and Awards

2016 IU Chemistry Graduate Fellowship
2015 Outstanding Student, Fudan University

Professional Activities

2019 – present	Member – American Heart Association
2019 – present	Member – Electrochemical Society
2018 – present	Member – IU Student Chapter of the Electrochemical Society
2018 – present	Member – American Chemical Society
2016 – 2017	Member – Materials Research Society Indiana University Student Chapter

C. Publications

2. Huang, K.; Zhou, L.; Alanis, K.; Hou, J.; Baker, L. A., Imaging effects of hyperosmolality on individual tricellular junctions. *Chem. Sci.* **2020**, Advance article. (DOI: 10.1039/c9sc05114g)
1. Qian, L.; Huang, K.; Wang, H.; Kung, M.; Kung, H.; Li, J.; Chen, G.; Du, Q., Evaluation of the catalytic surface of Ni impregnated meso-microporous silica KIT-6 in CH_4 dry reforming by inverse gas chromatography. *Micropor. Mesopor. Mat.* **2017**, *243*, 301-310. (DOI: 10.1016/j.micromeso.2016.11.029)

D. Presentations

Oral

1. Huang, K.; Castiaux, A.; Martin, S.; Baker, L. A., "Building a Better Blood-Brain Barrier (BBB) Model". The Pittsburgh Conference on Analytical Chemistry, Chicago, IL, Feb. 2020.

Posters

5. Huang, K.; Castiaux, A.; Martin, S.; Baker, L. A., "A Paper-based 2D+3D Cell Culture Platform for Building Blood-Brain Barrier (BBB) Model". 6th Materials Symposium, Indiana University, Bloomington, IN, Jul. 2019.
4. Huang, K.; Hou, J.; Baker, L. A., "Monitoring the Response of Epithelial Cells to Basolateral Hyperosmolality with Potentiometric Scanning Ion Conductance Microscopy". 254th National American Chemical Society, Boston, MA, Aug. 2018.
3. Huang, K.; Baker, L. A., "A Paper-based Blood-Brain Barrier (BBB) Model for the Study of Transport Across Brain Vessels". 5th Materials Symposium, Indiana University, Bloomington, IN, Jul. 2018.
2. Huang, K.; Zhou, L.; Hou, J.; Baker, L. A., "Monitoring the Response of Epithelial Cells to Sodium Caprate with Potentiometric Scanning Ion Conductance Microscopy". The Pittsburgh Conference on Analytical Chemistry, Orlando, FL, Feb. 2018.
1. Huang, K.; Zhou, L.; Hou, J.; Baker, L. A., "Monitoring Ion Transport across Membranes with Potentiometric Scanning Ion Conductance Microscopy". Turkey Run Analytical Chemistry Conference, Marshall, IN, Sep. 2017.