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## BIOGRAPHICAL SKETCH

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NAME:

**Cody Wesley Leasor**

POSITION TITLE:

**Graduate Student (2019-Present)**

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### **EDUCATION**

<b>INSTITUTION</b>	<b>DEGREE</b>	<b>Start-Finish (MM/YYYY)</b>	<b>FIELD OF STUDY</b>
Indiana State University	Bachelor's of Science	(08/2012)-(05/2017)	Chemistry
Ball State University	Master's of Science	(08/2017)-(07/2019)	Chemistry
Indiana University	Ph.D.	(08/2019)-(12/2021)	Analytical Chemistry
Texas A&M University		(01/2022)-Present	

### **A. Personal Statement**

I received my American Chemical Society certified Bachelor's of Science degree in Chemistry from Indiana State University (ISU) in Terre Haute, Indiana. During my five years at ISU, I worked for Dr. Stephen Wolf in the development of an upper level undergraduate analytical chemistry lab with the use of a Nitrate specific Ion Selective Electrode, additionally, I worked for Dr. Robert Noll in the development of an educational chemistry smart phone application to serve as tool for students and professors. I received my Master's of Science degree in Chemistry from Ball State University (BSU) in

Muncie, Indiana. During my two years at BSU, I worked for Dr. Zhihai Li in an electrochemical study focused on the adsorption of aromatic organic molecules interacting with Au(111) with the use of Cyclic Voltammetry and Electrochemical Scanning Tunneling Microscopy (STM) while also fabricating, through mechanical cutting and electrochemical etching, and insulating STM probes. Additionally, while at BSU I trained and worked with undergraduate students on Atomic Force Microscopy in an attempt to image proteins, gold nanoparticles, solar cell electrodes, and semiconductor nanomaterials (NiWO<sub>4</sub>). Presently, I am a third year graduate student in Dr. Lane Baker's research group, where I joined at Indiana University and continue with the group at Texas A&M University. My recent project includes the study of the epithelial model, MDCKII-WT cells, with the use of Potentiometric Scanning Ion Conductance Microscopy to explore the cadherin functionality under specified conditions.

## B. Honors

- Graduate Assistantship, Texas A&M University, January 2022-Present.
- Nano Scientific Symposium, Committee Choice Poster Award, 2020.
- Graduate Assistantship, Indiana University, August 2019-2021.
- Outstanding Graduate Student in Teaching Award, Ball State University, 2019.
- Midwestern Universities Analytical Chemistry Conference (MUACC) travel grant, 2018.
- Graduate Assistantship, Ball State University, August 2017-July 2019.

## C. Publications

6. Choi, M.; Leasor, C.W.; Baker, L.A. *Analytical Applications of Scanning Ion Conductance Microscopy: Measuring Ions and Electrons*. In: . Bioanalytical Reviews. Springer, Berlin, Heidelberg, 2021. [https://doi.org/10.1007/11663\\_2021\\_9](https://doi.org/10.1007/11663_2021_9)
5. Wade, J.; Leasor, C.; Chen, K. H.; Hinkle, A.; Dailey, C. D.; Li, Z. Molecular Imaging of Viologen Adlayers and In Situ Monitoring Structural Transformations at Electrode-Electrolyte Interfaces. *ACS Sens.* **2021**, 6, 2, 493-501.
4. Leasor, C.; Chen, K. H.; Goshinsky, K.; Li, Z. Unique Two-Dimensional Multiple Phase Transition of Single-Anchored Aromatic Carboxylic Acids at Electrified Interfaces. *J. Phys. Chem. C.* **2020**, 124, 1, 567-572.
3. Leasor, C. Molecular self-assembly of aromatic hydrocarbon derivaives at solid-liquid interfaces. M.S. Thesis, Ball State University, Muncie, IN, 2019.
2. Leasor, C.; Chen, K. H.; Closson, T.; Li, Z. Revealing Structural Complex of Adsorption and Assembly of Benzoic Acids at Electrode-Electrolyte Interfaces Using Electrochemical Scanning Tunneling Microscopy. *J. Phys. Chem. C.* **2019**, 123, 13600-13609.
1. Leasor, C.; Goshinsky, K.; Chen, K. H.; Li, Z. Probing Molecular Nanostructures of Aromatic Terephthalic Acids Triggered by Intermolecular Hydrogen Bonds and Electrochemical Potential. *Langmuir.* **2019**, 35, 13259-13267.

## D. Presentations

### Posters:

6. Poster Presentation: Cody Leasor, Kaixiang Huang and Lane A. Baker, "Permeability and Breakdown of Tight Junctions in MDCKII Cell Monolayers" Turkey Run Analytical Chemistry Conference, Turkey Run State Park, Indiana (Sept. 24-25, 2021).
5. Poster Presentation: Cody Leasor, Kaixiang Huang and Lane A. Baker, "Conductance Imaging of Epithelial Cell Tight Junctions Effected by Chelating Agents on a Nano-porous Membrane" Pittcon Conference & Expo Virtual Event (March 8-12, 2021).
4. Poster Presentation: Cody Leasor, Kaixiang Huang and Lane A. Baker, "Quantitive Conductive

Permeability Effects of EGTA on MDCKII-WT Cell Tight Junctions” Nano Scientific Symposium, online (Oct. 14-15, 2020).

3. Poster Presentation: Cody Leasor and Zhihai Li, “Electrochemical scanning tunneling microscopy and application on the adsorption and assembly of molecules at electrode/electrolyte interfaces” Midwestern Universities Analytical Chemistry Conference (MUACC), East Lansing, Michigan, (Nov. 15-17, 2018).
2. Poster Presentation: Cody Leasor and Zhihai Li, “Tunneling Microscopy Study of Surface Assembly of Benzoic Acids at Au(111) Electrode/Electrolyte” ACS Indiana Section 2016 Poster Session at IUPUI, Indianapolis, Indiana (April 17, 2018).
1. Poster Presentation: Cody Leasor, Zhihai Li\*, “Adsorption and Self-assembly of Benzoic Acids at Au(111) Electrode/Electrolyte Interfaces”, Indiana Academy of Science 133rd Annual Meeting, Indianapolis, IN (March 24, 2018).

**Orals:**

2. Oral Presentation: Cody Leasor and Zhihai Li “Adsorption of Benzoic Acids at Au(111) Electrode/Electrolyte Interfaces”, OHIO Inorganic Weekend (OIW) conference, Athens, OHIO (Nov. 9-10, 2018).
1. Oral Presentation: Cody Leasor, Zhihai Li, “Surface Assembly and Two Dimensional Nanostructures of Benzoic Acids at Au(111) Electrode/Electrolyte Interfaces”, Replacement of 49th ACS Central Regional Meeting (CERM) -Glass City Chemistry Conference, Toledo, OH (June 15-16, 2018).