

Romana Jarosova, Ph.D.

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POSITIONS

Assistant Research Professor University of Kansas, Chemistry Department	May 2022 – present
Postdoctoral Researcher University of Cincinnati, Chemistry Department Advisor: Dr. Ashley E. Ross	2021 – 2022
Postdoctoral Researcher University of Kansas, Chemistry Department Advisor: Dr. Michael A. Johnson	2019 – 2021

EDUCATION

Ph.D. in Analytical Chemistry, Michigan State University (East Lansing, MI) Dissertation: Electrochemistry of Nanostructured Carbon Electrodes in Room-Temperature Ionic Liquids Advisor: Prof. Greg M. Swain	2016 - 2019
Visiting Research Student, Michigan State University (East Lansing, MI) Advisor: Prof. Greg M. Swain	2014 - 2015
Ph.D. in Analytical Chemistry, Charles University (Prague, Czech Republic) Dissertation: Utilization of Large-Area Carbon Electrodes for Determination of Biologically-Active Organic Compounds Advisor: Prof. RNDr. Jiří Zima, CSc.	2013 - present (thesis defense – spring 2023)
M.S. in Analytical Chemistry, Charles University (Prague, Czech Republic) Thesis: Electrochemical Determination of Carboxin Using Carbon Paste Electrode Advisor: Prof. RNDr. Jiří Zima, CSc. and Hana Dejmková, Ph.D.	2011 - 2013
B.S. in Clinical and Toxicological Analysis, Charles University (Prague, Czech Republic) Thesis: Determination of Vanillin Using Carbon Paste Electrode Advisor: Prof. RNDr. Jiří Zima, CSc.	2007 - 2011

AWARDS

• Undergraduate Research Mentor Award Winner, University of Kansas	2020
• All University Teaching Excellence finalist, Michigan State University	2018
• Teaching Award, Department of Chemistry, Michigan State University	2018
• Teaching Award, Department of Chemistry, Michigan State University	2017
• Second Prize in the Student Scientific Contest, Slovak University of Technology, Slovakia	2012
• Outstanding Student Scholarship (GPA: 4/4), Charles University, Czech Republic	2012

PATENTS

Electrically tunable ionic liquids optics - U.S. Application No. 16/285,729, filed with the U.S. Patent and Trademark Office (USPTO)

TEACHING EXPERIENCE

- Teaching Assistant, Department of Chemistry, Michigan State University 2016 - 2018
- Molecular Spectroscopy (CEM 495, lab course)
 - Advanced Analytical Chemistry (CEM 435, lab course)
- Teaching Assistant, Department of Chemistry, Charles University, Czech Republic 2013 - 2014
- Advanced Analytical Chemistry (lab course)

PUBLICATIONS

1. **Jarosova R.**, Ostertag BJ., Ross AE. Graphene Oxide Fiber Microelectrodes with Controlled Sheet Alignments for Sensitive Neurotransmitter Detection. Submitted, 2022.
2. **Jarosova, R.**, Woolfolk, S. K., Martinez-Rivera, N., Jaeschke, M. W., Rosa-Molinar, E., Tamerler, C., Johnson, M. A. Spatiotemporal Imaging of Zinc Ions in Zebrafish Live Brain Tissue Enabled by Fluorescent Bionanoprobes. *Molecules*, 2023, 28, 2260.
3. Hettiarachchi R., Niyangoda P., **Jarosova R.**, Johnson MA. Dopamine Release Impairments Accompany Locomotor and Cognitive Deficiencies in Rotenone-Treated Parkinson's Disease Model Zebrafish. *ACS Chemical Research in Toxicology*, 2022, 35, 1974-1982.
4. **Jarosova R***, Niyangoda P., Hettiarachchi R., Johnson MA*. Impaired Dopamine Release and Latent Learning in Alzheimer's Disease Model Zebrafish. *ACS Chemical Neuroscience*, 2022, 13, 2924-2931. *Corresponding author.
5. Li Y.; **Jarosova R.**, Weese-Myers ME., Ross AE. Graphene-Fiber Microelectrodes for Ultrasensitive Neurochemical Detection. *Analytical Chemistry*, 2022, 94, 4803-4812.
6. **Jarosova R***, Douglass AD, Johnson MA. Optimized Sawhorse Waveform for the Measurement of Oxytocin Release in Zebrafish. *Analytical Chemistry*, 2022, 94, 2942-2949. *Corresponding author.
7. **Jarosova R.**, Irikura K., Rocha-Filho R., Swain GM. Detection of Pyocyanin with a Boron-Doped Diamond Electrode Using Flow Injection Analysis with Amperometric Detection and Square Wave Voltammetry. *Electroanalysis*, 2022, 34, 1-12.
8. **Jarošová R.**, Kaplan S., Field T., Givens R., Seaheera S., Johnson MA. In situ Electrochemical Monitoring of Caged Compound Photochemistry: An Internal Actinometer for Substrate Release. *Analytical Chemistry*, 2021, 93, 2776-2784.
9. Wang Y., Parvis F., Iqbal Hossain MD., Ma K., **Jarošová R.**, Swain GM., and Blanchard GJ. Local and Long-Range Organization in Room Temperature Ionic Liquids. *Langmuir*, 2021, 37, 605-615.
10. **Jarošová R.**, Bhardwaj K., Swain GM. Temperature Dependence of the Heterogeneous Electron-Transfer Rate Constant for Ferrocene Carboxylic Acid in Room Temperature Ionic Liquids at Microstructurally Distinct Carbon Electrodes. *Journal of Electroanalytical Chemistry*, 2020, 875.
11. Wang J., **Jarošová R.**, Swain GM., Blanchard GJ. Characterizing the Magnitude and Structure-Dependence of Free Charge Density Gradients in Room-Temperature Ionic Liquids. *Langmuir*, 2020, 36, 3038-3045.
12. **Jarošová R.**, McClure ES., Gajda M., Jović M., Girault HH., Lesch A., Maiden M., Waters Ch., Swain GM. Inkjet-Printed Carbon Nanotube Electrodes for Measuring Pyocyanin and Uric Acid in a Wound Fluid Simulant and Culture Media. *Analytical Chemistry*, 2019, 91, 8835-8844.
13. Ma K., **Jarošová R.**, Wang Y., Swain GM., Blanchard GJ. Ionic Liquids. A Unique and Useful Class of Materials. *The Chemical Educator*, 2018, 23, 265 – 272.
14. Espinoza E., Qui J., Castiaux A., **Jarošová R.**, Swain GM. HPLC-EC Analysis of Estrogenic Compounds Using Tetrahedral Amorphous Carbon Thin-Film Electrodes. *Electroanalysis*, 2018, 30, 1575-1582 (Special Issue).

15. Ma K., **Jarošová R.**, Swain GM., Blanchard GJ. Modulation of an Induced Charge Density Gradient in the Room Temperature Ionic Liquid BMIM⁺BF₄⁻. *The Journal of Physical Chemistry C*, 2018, 122, 7361-7367.
16. Koudelkova B., **Jarošová R.**, Koukol O. Are Endophytic Fungi from Rhododendron Tomentosum Preadapted for its Essential Oil? *Biochemical Systematics and Ecology*, 2017, 75, 21-26.
17. **Jarošová R.**, Sanchez S., Haubold L., Swain GM. Isatin Analysis Using Flow Injection Analysis with Amperometric Detection: Comparison of Tetrahedral Amorphous Carbon and Diamond Electrode Performance. *Electroanalysis*, 2017, 29, 2147-2154.
18. Ma K., **Jarošová R.**, Swain GM., Blanchard GJ. Charge-Induced Long-Range Order in a Room Temperature Ionic Liquid. *Langmuir*, 2016, 32, 9507-9512.
19. **Jarošová R.**, Rutherford J., Swain GM. Evaluation of Nitrogen-Incorporated Tetrahedral Amorphous Carbon Thin-Film for the Detection of Tryptophan and Tyrosine Using Flow Injection Analysis with Amperometric Detection. *Analyst*, 2016, 141, 6031-6041.
20. **Jarošová R.**, De Sousa Bezerra PM., Munson C., Swain GM. Assessment of Heterogeneous Electron-Transfer Rate Constants for Soluble Redox Analytes at Tetrahedral Amorphous Carbon, Boron-Doped Diamond, and Glassy Carbon Electrodes. *Physica Status Solidi A: Applications and Material Science*, 2016, 213, 2087-2098.
21. Wachter N., Munson C., **Jarošová R.**, Berkun I., Hogan T., Rocha-Filho R., Swain GM. Structure, Electronic Properties, and Electrochemical Behavior of a Boron-Doped Diamond/Quartz Optically Transparent Electrode. *ACS Applied Materials and Interfaces*, 2016, 8, 28325-28337.
22. **Jarošová R.**, Swain GM. Rapid Preparation of Room Temperature Ionic Liquids with Low Water Content as Characterized with a ta-C:N Electrode. *Journal of the Electrochemical Society*, 2015, 162, H507-H511.
23. **Jarošová R.**, Berek J., Zima J., Dejmková H. Voltammetric, Amperometric, and Chronopotentiometric Determination of Submicromolar Concentrations of Carboxin. *Electroanalysis*, 2015, 28, 445-451.

CONFERENCE CONTRIBUTIONS

Oral Presentations

1. **Jarošová R.**, Kaplan S., Field T., Givens R., Senadheera SN., Johnson MA. *In situ Electrochemical Monitoring of Caged Compound Photochemistry: An Internal Actinometer for Substrate Release*. University of Kansas Analytical Seminar. Lawrence, KS, 2020.
2. **Jarošová R.**, Kaplan S., Field T., Givens R., Senadheera SN., Johnson MA. *In situ Electrochemical Monitoring of Caged Compound Photochemistry*. Pittcon, Chicago, IL, 2020.
3. **Jarošová R.**, Swain GM. *Electroanalytical Performance of Nitrogen-Incorporated Tetrahedral Amorphous Carbon Thin-Films in Room Temperature Ionic Liquids*. ACS Fall Meeting, Boston, MA, 2018.
4. **Jarošová R.**, Espinosa EKA., Swain GM. *Nitrogen-Incorporated Tetrahedral Amorphous Carbon Thin-Films – A New Electrode for the HPLC-EC of Biological and Environmental Analytes*. HPLC Symposium, Prague, Czech Republic, 2017.
5. **Jarošová R.**, Gajda M., Lesch A., Swain GM. *The Electrochemical Characterization of Ink-Jet Printed Carbon Nanotubes Electrodes*. Pittcon, Chicago, IL, 2017.
6. **Jarošová R.**, Espinosa EKA., Swain GM. *Electroanalytical Performance of Nitrogen-Containing Tetrahedral Amorphous Carbon Thin-Film Electrodes*. Association of Analytical Chemists Symposium, Livonia, MI, 2017.
7. **Jarošová R.**, Munson C., Swain GM. *The Electrochemical Properties of Diamond and Tetrahedral Amorphous Carbon Electrodes in Room temperature Ionic Liquid*. 227th Electrochemical Society Meeting, Chicago, Illinois, 2015.
8. **Jarošová R.**, Zima J., Berek J., Dejmková H. *Chronopotentiometric Determination of Organic Pollutants Using Reticulated Vitreous Carbon Electrode*. XXIV. Modern Electrochemical Methods, Jetrichovice, Czech Republic, 2014.

9. **Jarošová R.**, Barek J., Zima J., H. Dejmková. *Voltammetric and Amperometric Determination of Carboxin Using Carbon Paste Electrode*. 14th Student Scientific Conference Bratislava, Slovakia 2012. This presentation won second place in the Electrochemistry category.
10. Němcová L., Fahnrichová B., **Jarošová R.**, Zima J., Barek J. *Determination of Natural Antioxidants at a Carbon Paste Electrode*. XXX. Modern Electrochemical Methods, Jetrichovice, Czech Republic, 2010.

Posters

1. **Jarošová R.**, Swain GM. *The Electrochemical Behavior of Boron-Doped Diamond and Nitrogen-Incorporated tetrahedral Amorphous Carbon Thin-Film Electrodes in Ionic Liquid*. ACS Central Regional Meeting, Covington, Kentucky, 2016.
2. **Jarošová R.**, Swain GM. *Heterogeneous Electron-Transfer Rate Constants for Inorganic Redox Systems at Carbon Electrodes in Aqueous Solutions and Room-Temperature Ionic Liquids*. ElectroChemOhio, Columbus, Ohio, 2014.
3. **Jarošová R.**, Zima J., Barek J., Dejmková H. *Chronopotentiometric Determination of Nitrophenols Using Reticulated Vitreous Carbon Electrode*. 15th International Conference of Electroanalysis, Malmö, Sweden, 2014.
4. **Jarošová R.**, Barek J., Zima J., Dejmková H. *Electrochemical Determination of Carboxin*. 56. Zjazd Polskiego Towarzystwa Chemicznego I Stowarzyszenia Inżynierów I Techników Przemysłu Chemicznego, Siedlce, Poland, 16th-20th September 2013. Poster S04P60. ISBN 978-83-60988-15-2.

LIST OF REFERENCES

Greg Swain, Ph.D. – graduate school advisor

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Heather Desaire, Ph.D. – mentor

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