Curriculum Vitae

Jian Guo, Ph.D. candidate Email: jian@chem.ubc.ca

EDUCATION

- Ph.D., Analytical Chemistry, the University of British Columbia, 2018 - present
  Research topics: study and development of data acquisition mode, development of bioinformatic tools for metabolic feature extraction and evaluation, single cell omics (Advisor: Dr. Tao Huan)
- M.S., Chemical Engineering, University of Alberta, 2012 - 2014
  Thesis: design, synthesis, characterization of a new pH-responsive copolymer and its application in oil sands tailings treatment
- B.S., Materials Engineering, Zhejiang University, 2008 – 2012
  Thesis: waste water treatment utilizing an innovative thermal-responsive polymer flocculant

PUBLICATIONS

1. **Guo, J.**; Shen, S.; Huan, T., Paramounter: Direct Measurement of Universal Parameters to Process Metabolomics Data in a "White Box". *Analytical Chemistry*, **2022,**

2. **Guo, J.**; Shen, S.; Liu, M.; Wang, C.; Low, B.; Chen, Y.; Hu, Y.; Xing, S.; Yu, H.; Gao, Y.; Fang, M.; Huan, T., JPA: Joint Metabolic Feature Extraction Increases the Depth of Chemical Coverage for LC-MS-Based Metabolomics and Exposomics. *Metabolites* **2022,** *12* (3), 212.

3. **Guo, J.**; Shen, S.; Xing, S.; Chen, Y.; Chen, F.; Porter, E.; Yu, H.; Huan, T., EVA: Evaluation of Metabolic Feature Fidelity Using a Deep Learning Model Trained with Over 25000 Extracted Ion Chromatograms. *Analytical Chemistry* **2021,** *93* (36), 12181-12186.

4. **Guo, J.**; Shen, S.; Xing, S.; Yu, H.; Huan, T., ISFrag: De Novo Recognition of In-Source Fragments for Liquid Chromatography–Mass Spectrometry Data**.** *Analytical Chemistry* **2021,** *93* (29), 10243–10250.

5. **Guo, J.**; Shen, S.; Xing, S.; Huan, T., DaDIA: Hybridizing Data-Dependent and Data-Independent Acquisition Modes for Generating High-Quality Metabolomic Data. *Analytical Chemistry* **2021,** *93* (4), 2669-2677.

6. **Guo, J.**; Huan, T., Comparison of Full-Scan, Data-Dependent, and Data-Independent Acquisition Modes in Liquid Chromatography–Mass Spectrometry Based Untargeted Metabolomics. *Analytical Chemistry* **2020,** *92* (12), 8072-8080.

7. **Guo, J.**; Huan, T., Evaluation of Significant Features Discovered from Different Data Acquisition Modes in Mass Spectrometry-based Untargeted Metabolomics. *Analytica Chimica Acta* **2020,** *1137*, 37-46.

8. Oh, T. G.; Kim, S. M.; Caussy, C.; Fu, T.; **Guo, J.**; Bassirian, S.; Singh, S.; Madamba, E. V.; Bettencourt, R.; Richards, L.; Yu, R. T.; Atkins, A. R.; Huan, T.; Brenner, D. A.; Sirlin, C. B.; Downes, M.; Evans, R. M.; Loomba, R., A Universal Gut-Microbiome-Derived Signature Predicts Cirrhosis. *Cell Metabolism* **2020,** *32* (5), 878-888.e6.

9. Chen, Y.; **Guo, J.**; Xing, S.; Yu, H.; Huan, T., Global-Scale Metabolomic Profiling of Human Hair for Simultaneous Monitoring of Endogenous Metabolome, Short- and Long-Term Exposome. *Frontiers in chemistry* **2021,** *9* (281).

10. Dong, Y.; Arif, A. A.; **Guo, J.**; Ha, Z.; Lee-Sayer, S. S. M.; Poon, G. F. T.; Dosanjh, M.; Roskelley, C. D.; Huan, T.; Johnson, P., CD44 Loss Disrupts Lung Lipid Surfactant Homeostasis and Exacerbates Oxidized Lipid-Induced Lung Inflammation. *Frontiers in Immunology* **2020,** *11* (29).

11. Tang, X.; Kudo, Y.; Baker, J. L.; LaBonte, S.; Jordan, P. A.; McKinnie, S. M. K.; **Guo, J.**; Huan, T.; Moore, B. S.; Edlund, A., Cariogenic Streptococcus mutans Produces Tetramic Acid Strain-Specific Antibiotics That Impair Commensal Colonization. *ACS Infectious Diseases* **2020,** *6* (4), 563-571.6.

12. **Guo, J.**; Li, Z.; Li, Y.; Liu, Q.; Yan, C.; Xu, Z., Synthesis and characterization of tunable dual pH-switchable zwitterionic copolymers. *Macromolecular Chemistry and Physics* **2016,** 217: 1614-1619.

13. Ren, T.; Mao, Z.; **Guo, J.**; Gao, C., Directional migration of vascular smooth muscle cells guided by a molecule weight gradient of poly(2-hydroxyethyl methacrylate) brushes. *Langmuir* **2013,** 29: 6386-6395.

CONFERENCE

- Poster presentation in ASMS annual conference 2022, Processing Metabolomics Data in a "White Box" via Direct Measurement of Universal Parameters
- Oral presentation in ASMS annual conference 2020, Comparison of Data Acquisition Modes in Mass Spectrometry-Based Untargeted Metabolomics.
- Oral presentation in Paste annual conference 2014, Enhancing Densification by pH-switchable Polymer for Tailings Treatment.

AWARDS AND SCHOLARSHIP

- ASMS Graduate Student Travel Award, American Society for Mass Spectrometry, 2022
- Arthur S. Hawkes Scholarship in Chemistry, University of British Columbia, 2021
- Award for Graduate Research Excellence, University of British Columbia, 2021
- NSERC Doctoral Scholarship, University of British Columbia, 2020 - 2023
- Four Year Fellowships (FYF) For PhD Students, University of British Columbia, 2020 – 2023
- Gladys Estella Laird Research Fellowship, University of British Columbia, 2020 - 2023
- President's Academic Excellence Initiative PhD Award, University of British Columbia, 2020 – 2023
- Captain Thomas Farrell Greenhalgh Memorial Graduate Scholarship, University of Alberta, 2012
- National Scholarship, Zhejiang University, 2009 – 2012