

Curriculum Vitae

DIHUA VICTORIA XUE

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Education

- PhD, University of Nebraska - Lincoln, Lincoln, Nebraska, United States. Chemistry, Chemical Education Research May 2020
Dissertation/Thesis Title: Exploring and Characterizing Students' Understanding of Resonance Hybrid as well as How Faculty Teach the Concept
Advisor: Marilyne Stains
- MS, University of Nebraska - Lincoln, Lincoln, Nebraska, United States. Chemistry, Chemical Education Research December 2017
Dissertation/Thesis Title: Applying the Diffusion of Innovation Theory to Characterize STEM Faculty Attending Professional Development Programs
Advisor: Marilyne Stains
- BS, University of Wyoming, Laramie, Wyoming, United States. Chemistry August 2013
- BS, Shanghai Normal University, Shanghai, Shanghai, China. 2012
Chemistry, Teacher Training
Minor: English
Advisor: Xiaoli Deng

Academic Appointments

- University of Minnesota Rochester
Center for Learning Innovation: Senior Lecturer August 2024 - Present
Courses Taught:
General Chemistry I + II
Organic Chemistry I + II
- University of Minnesota Rochester
Center for Learning Innovation: Lecturer: Dihua (Victoria) Xue August 2020 - July 2024
Courses Taught:
General Chemistry I & II including labs
Organic Chemistry I& II including labs
- University of Nebraska - Lincoln
Arts and Science, Chemistry: Graduate Teaching Assistant July 2014 - May 2020
Courses Taught:
General Chemistry for majors and non-majors students
Organic chemistry for non-major students

Consulting

- Program External Evaluator, Academic, North Dakota State August 2017 - August 2019

University
Fargo, North Dakota, United States

HONORS AND RECOGNITION

University of Minnesota

UMR Outstanding Service Award, University of Minnesota Rochester <i>Nominated</i> Nominated as team award	May 2025
2023-2024 Outstanding Innovation Award, University of Minnesota Rochester	May 30, 2024
Outstanding Faculty Service Award Winner, University of Minnesota Rochester	May 2023
Teaching Certificate, University of Minnesota	May 2021
Teaching Certificate, University of Minnesota The certificate is for highlighting dedication to student learning	December 2020

External Sources

Outstanding Graduate Teaching Assistant Awards, University of Nebraska-Lincoln	2019
Travel Award, ACS Nebraska Local Section A \$200 Travel Award	2018
Travel Award, "Poster competition (1st place) for Physical Science at Research Fair", University of Nebraska-Lincoln, A \$400 travel award	2017

RESEARCH, SCHOLARSHIP, AND CREATIVE WORK

Publications

Asterisk() - indicates co-first author*

Underline - indicates student author

Peer-Reviewed Journal Article

Xue, D., & Stains, M. (Corresponding Author) (2020). Exploring Students' Understanding of Resonance and Its Relationship to Instruction. *Journal of Chemical Education*, 97(4), 894–902. [doi: https://doi.org/10.1021/acs.jchemed.0c00066](https://doi.org/10.1021/acs.jchemed.0c00066)

Velasco, J. B., Knedeisen, A., Xue, D., Vickrey, T. L., Abebe, M., & Stains, M. (Corresponding Author) (2016). Characterizing Instructional Practices in the Laboratory: The Laboratory Observation Protocol for Undergraduate STEM. [doi: https://doi.org/10.1021/acs.jchemed.6b00062](https://doi.org/10.1021/acs.jchemed.6b00062)

Book Chapter

Atieh, E. L., Mitchell-Jones*, J. K., Xue, D., & Stains, M. (Corresponding Author) (2022). Variations in the Teaching of Resonance—An Exploration of Organic Chemistry Instructors' Enacted Pedagogical Content Knowledge. *Student Reasoning in Organic Chemistry* 195 - 213. [doi: https://doi.org/10.1039/9781839167782-00195](https://doi.org/10.1039/9781839167782-00195)

Invited Presentations, Posters, and Exhibits

Underline - indicates student presenter

Presentation/Talk

Xue, D. V., (Presenter), Metzger, K. J., (Presenter), Erdmann, R., (Presenter) "How do I know that

it worked? An orientation to methods in research on learning," MnSTA Conference Minnesota Science Teachers Association, Rochester, Minnesota, United States. (November 10, 2023).

Invited.

URL: <https://www.mnsta.org/cgi/page.cgi/MnCOSE23.html>

<http://z.umn.edu/MNSTA>

In this session, participants will generate questions that may arise when revising content and incorporating new pedagogical approaches. We will then consider some approaches from Discipline-Based Education Research (DBER) and the Scholarship of Teaching and Learning (SoTL) that can be used to investigate such questions, using some examples from recent or ongoing learning research taking place at the University of Minnesota Rochester.

Presentations, Posters, and Exhibits

Underline - indicates student presenter

Poster

- Xue, D. V., (Author & Presenter), Shibazaki, H.** "Incorporating MCAT Practice into General Chemistry: Evaluating Student Preparedness and Perceptions," ASBMB Transforming Undergraduate Education in the Molecular Life Sciences Macalester College, St. Paul, Minnesota. (July 24, 2025).
- Xue, D. V., (Author & Presenter)** "Explore Students' Thoughts on Gaining Undergraduate Teaching Experience in a Primarily Undergraduate Institution," Biennial Conference on Chemical Education University of Kentucky, Lexington, Kentucky, United States. (July 2024).
- Xue, D. V.** "Exploring Organic Chemistry Instructors' Pedagogical Content Knowledge of Resonance," Gordon Research Conference on Chemistry Education Research, Lewiston, Maine, United States. (June 2019).
- Xue, D. V.** "Beyond Drawing Resonance, To What Extent do Students Understand the Underlying Concepts?," Annual poster session at Department of Chemistry University of Nebraska-Lincoln, Lincoln, Nebraska, United States. (August 2018).
- Xue, D. V.** "Who is Attending Pedagogical Workshops? Applying Innovation Diffusion to Characterize Faculty Attendees.," CER Graduate Student & Post-Doc Professional Development Miami University, Oxford, Ohio, United States. (June 2017).

Presentation/Talk

- Xue, D. V.** "Embedding Analogy in Formative Assessment to Enhance Student Understanding of Resonance," American Chemical Society National Conference ACS, Orlando, Florida, United States. (March 2019).
- Xue, D. V.** "What do Students Pay attention to When Explaining Resonance? An Exploratory Study of Students' Understanding of Resonance," American Chemical Society Regional Conference ACS, Ames, Iowa, United States. (October 2018).
- Xue, D. V.** "Embedding Analogy in Formative Assessment," American Chemical Society National Conference ACS, New Orleans, Louisiana, United States. (March 2018).

PROFESSIONAL DEVELOPMENT ACTIVITIES

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| Conference/Professional Meeting Attendance, "ASBMB Transforming Undergraduate Education in the Molecular Life Sciences," Macalester College, St. Paul, Minnesota, United States | July 24, 2025 - July 27, 2025 |
| Conference/Professional Meeting Attendance, "Biennial Conference on Chemical Education," Division of Chemical Education (DivCHED) of the American Chemical Society (ACS), Lexington, Kentucky, United States | July 2024 - August 2024 |

Conference/Professional Meeting Attendance, "AAC&U 2024 HIPS Institute," AAC&U, Online	June 2024
Conference/Professional Meeting Attendance, "The Grading Conference 2024," The Center for Grading Reform, Online	June 2024
University Teaching/Learning Program, "Internationalizing Teaching and Learning (ITL) Faculty Cohort Program," Global Programs and Strategy Alliance, Minnesota, Minnesota, United States	September 2023 - January 2024
Workshop, "Building Authentic University-Community Partnerships to Conduct Mutually Beneficial Work," University of Minnesota Extension, Office for Public Engagement, the Clinical Translational Science Institute, and the Liberal Arts Engagement Hub, Saint Paul, Minnesota, United States	July 2023
Conference/Professional Meeting Attendance, "Biennial Conference on Chemical Education," Division of Chemical Education (DivCHED) of the American Chemical Society (ACS), West Lafayette, Indiana, United States	July 2022 - August 2022