

Justin C. Wedal, Ph.D.

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Professional Experience

2026–Present Assistant Professor, **Florida International University** Miami, FL

2022–2026 Postdoctoral Associate, **Yale University** New Haven, CT
Advisor: Professor Nilay Hazari

Education

2017–2022 M.Sc., Ph.D. **University of California, Irvine** Irvine, CA
Advisor: Professor William J. Evans

2013–2017 B.Sc. with Honors Chemistry and Physics. **University of Wisconsin-La Crosse** La Crosse, WI
Advisor: Professor Kendric J. Nelson

Honors and Awards

2026 **CAS Future Leaders Top 100**, Chemical Abstract Services
2025 **Carbon Future Young Investigator Award**, Tsinghua University, *Honorable Mention*
2022 **Edward K. C. Lee Award for Most Outstanding Graduate Student**
2022 **Most Promising Future Faculty Award**, UCI, *Honorable Mention*
2022 **Dean's Dissertation Fellowship**, UCI
2021 **Pacificchem Bursary**, US Department of Energy, Office of Isotope R&D and Production
2020 **Chemistry Department Travel Grant**, UCI
2020–2022 **Associated Graduate Students Travel Grant**, UCI
2016 **Outstanding Student in Inorganic Chemistry**, UWL

Publications

[†]Denotes co-first authorship. Undergraduate coauthors underlined. See [Google Scholar](#) for full list.

27. Seoyeon Kim, Xiaofan Jia, Nilay Hazari, Devi Oniani, and **Justin C. Wedal** "Synthesis of Tetrakis(amino)ethylene-Derived Organic Reductants via Thermal Decomposition of Tris(amino)methanes" *Org. Lett.* **2026**, 28, 3880–3884. ChemRxiv preprint: [10.26434/chemrxiv.10001994/v](https://doi.org/10.26434/chemrxiv.10001994/v).

26. **Justin C. Wedal**,[†] Kyler B. Virtue,[†] Wesley H. Bernskoetter, Nilay Hazari, Brandon Q. Mercado, and Nicole Piekut "Improving Productivity and Stability for CO₂ Hydrogenation by using Pincer-Ligated Mn Complexes with Hemilabile Ligands" *Chem* **2026**, 12, 102833. *Highlighted by Yale News*: "[Manganese gets its moment as a potential fuel cell catalyst](#)." *Highlighted by STLE*: "[More sustainable approach to hydrogen production](#)."

25. Julia B. Curley, Clayton Hert, Wesley H. Bernskoetter, Nilay Hazari, Brandon Q. Mercado, and **Justin C. Wedal** "Ir Complexes with a PhN(CH₂CH₂PⁱPr₂)₂ Pincer Ligand for Reversible CO₂ Hydrogenation" *Organometallics* **2025**, 44, 1358–1361.

24. Devi Oniani, Xiaofan Jia, Emily L. Mane, David J. Charboneau, Jasmine L. Chow, Nilay Hazari, Haotian Huang, Maizie Lee, Brandon Q. Mercado, Mycah R. Uehling, and **Justin C. Wedal** "Ni/Ti Dual Catalyzed Cross-Electrophile Coupling between Unactivated Alkyl Chlorides and Aryl Halides" *ACS Catal.* **2025**, 15, 11726–11738.
23. Young Hyun Hong,[†] Xiaofan Jia,[†] Eleanor Stewart-Jones,[†] Abhishek Kumar, **Justin C. Wedal**, Jose L. Alvarez-Hernandez, Carrie L. Donley, Albert Gang, Noah J. Gibson, Nilay Hazari, Madison Houck, Sungho Jeon, Jongbeom Kim, Hyeongjun Koh, James M. Mayer, Brandon Q. Mercado, Hannah S. Nedzbala, Nicole Piekut, Christine Quist, Eric Stach, and Yihui Zhang "Photoelectrocatalytic Reduction of CO₂ to Formate using Immobilized Molecular Manganese Catalysts on Oxidized Porous Silicon" *Chem* **2025**, 11, 102462. *Highlighted by Yale News* "[Yale chemists discover a new method for reducing carbon dioxide.](#)"
22. **Justin C. Wedal**, Kyler B. Virtue, Wesley H. Bernskoetter, Nilay Hazari, and Brandon Q. Mercado "Iron Catalysts Supported by a PNP Ligand with an Additional Hemilabile Donor for CO₂ Hydrogenation" *ACS Catal.* **2024**, 14, 13903–13914.
21. Lauren M. Anderson-Sanchez,[†] Ahmadreza Rajabi,[†] **Justin C. Wedal**,[†] Filipp Furche, and William J. Evans "Surprising Syntheses of Reduced-Arene Inverse Sandwich Complexes of Thorium: [Cp''₂Th]₂(μ-η⁶:η⁶-C₆H₅R) [R = H, Me; Cp'' = C₅H₃(SiMe₃)₂]" *Organometallics* **2024**, 43, 2027–2035.
20. Joseph Q. Nguyen, **Justin C. Wedal**, Joseph W. Ziller, Filipp Furche, and William J. Evans "Investigating Steric and Electronic Effects in the Synthesis of Square Planar 6d¹ Th(III) Complexes" *Inorg. Chem.* **2024**, 63, 6217–6230.
19. **Justin C. Wedal**, William N. G. Moore, Wayne W. Lukens, and William J. Evans "Perplexing EPR Signals from 5f³6d¹ U(II) Compounds" *Inorg. Chem.* **2024**, 63, 2945–2953.
18. **Justin C. Wedal**,[†] Lauren M. Anderson-Sanchez,[†] Colin Gould, Megan T. Dumas, María J. Beltrán-Leiva, Cristian Celis-Barros, Dayán Páez-Hernández, Joseph W. Ziller, Jeffrey R. Long, and William J. Evans "Synthesis and Crystallographic Characterization of a Reduced Bimetallic *Ansa*-Metallocene Hydride Complex, [K(crypt)][(μ-Cp^{An})Y(μ-H)]₂ (Cp^{An} = Me₂Si[C₅H₃(SiMe₃)-3]₂), with a 3.4 Å Yttrium–Yttrium Distance" *J. Am. Chem. Soc.* **2023**, 145, 10730–10742.
17. **Justin C. Wedal**,[†] Jesse Murillo,[†] Joseph W. Ziller, Brian L. Scott, Andrew J. Gaunt, and William J. Evans "Synthesis of Trimethyltriazacyclohexane (Me₃tach) Sandwich Complexes of Uranium, Neptunium, and Plutonium Triiodides: (Me₃tach)₂AnI₃" *Inorg. Chem.* **2023**, 62, 5897–5905. [Selected for front cover art.](#)
16. **Justin C. Wedal**, Joseph W. Ziller, and William J. Evans "Trimethyltriazacyclohexane Coordination Chemistry of Simple Rare-Earth Metal Salts" *Dalton Trans.* **2023**, 52, 4787–4795.
15. William N. G. Moore, Jessica R. K. White, **Justin C. Wedal**, Filipp Furche, and William J. Evans "Reduction of Rare-Earth Metal Complexes Induced by γ Irradiation" *Inorg. Chem.* **2022**, 61, 17713–17718.
14. **Justin C. Wedal**, Joseph W. Ziller, and William J. Evans "Identification of the U(V) Complex (C₅Me₅)₂U^{VI}(=NSiMe₃) in the Reaction of (C₅Me₅)₂U^{III}I(THF) with N₃SiMe₃" *Dalton Trans.* **2022**, 51, 12804–12807.

13. **Justin C. Wedal**, Joseph W. Ziller, and William J. Evans "Expanding Bismuth Trihalide Coordination Chemistry with Trimethyltriazacyclohexane and Trimethyltriazacyclononane" *Inorg. Chem.* **2022**, *61*, 11766–11774.
12. **Justin C. Wedal**, Joseph W. Ziller, Filipp Furche, and William J. Evans "Synthesis and Reduction of Heteroleptic Bis(cyclopentadienyl) Uranium(III) Complexes" *Inorg. Chem.* **2022**, *61*, 7365–7376.
11. **Justin C. Wedal**, Nathalia Cajiao, Michael L. Neidig, and William J. Evans "Anion-Included Disproportionation of Th(III) Complexes to Form Th(II) and Th(IV) Products" *Chem. Commun.* **2022**, *58*, 5289–5291. *Selected as a HOT Article of 2022.*
10. **Justin C. Wedal**, Joseph W. Ziller, and William J. Evans "Exploring the Use of Pentaphenylcyclopentadienyl Ligand in Reductive f-Block Chemistry. The Crystal Structure of (C₅Ph₅)U₂(THF)₂" *Aust. J. Chem.* **2022**, *79*, 581–586.
9. Conrad A. P. Goodwin, Jing Su, Lauren M. Stevens, Frankie D. White, Nickolas H. Anderson, John D. Auxier II, Thomas E. Albrecht-Schönzart, Enrique R. Batista, Sasha F. Briscoe, Justin N. Cross, William J. Evans, Alyssa N. Gaiser, Andrew J. Gaunt, Michael R. James, Michael T. Janicke, Tener F. Jenkins, Zachary R. Jones, Stosh A. Kozimor, Brian L. Scott, Joseph. M. Sperling, **Justin C. Wedal**, Cory J. Windorff, Ping Yang, and Joseph W. Ziller "Isolation and Characterization of a Californium Metallocene" *Nature* **2021**, *599*, 421–424.
8. **Justin C. Wedal** and William J. Evans "A Rare-Earth Metal Retrospective to Stimulate All Fields" *J. Am. Chem. Soc.* **2021**, *143*, 18354–18367.
7. **Justin C. Wedal**, Filipp Furche, and William J. Evans "DFT Analysis of the Importance of Coordination Geometry for 5f³6d¹ vs 5f⁴ Electron Configurations in U(II) Complexes" *Inorg. Chem.* **2021**, *60*, 16316–16325.
6. Michael T. Trinh, **Justin C. Wedal**, and William J. Evans "Evaluating Electrochemical Accessibility of 4fⁿ5d¹ and 4fⁿ⁺¹ Ln(II) Ions in (C₅H₄SiMe₃)₃Ln and (C₅Me₄H)₃Ln Complexes" *Dalton Trans.* **2021**, *50*, 14384–14389.
5. **Justin C. Wedal**, Jeffrey M. Barlow, Joseph W. Ziller, Jenny Y. Yang, and William J. Evans "Electrochemistry of Tris(cyclopentadienyl) Actinide Complexes in the +2, +3, and +4 Oxidation State" *Chem. Sci.* **2021**, *12*, 8501–8511.
4. Megan T. Dumas, Tener F. Jenkins, **Justin C. Wedal**, Joseph W. Ziller, Filipp Furche, and William J. Evans "Synthesis of a 2-Isocyanophenolate Ligand, [2-CNC₆H₄O]¹⁻, by Ring-Opening of Benzoxazole with Rare-Earth Metal Complexes" *Organometallics* **2021**, *40*, 735–741.
3. **Justin C. Wedal**, Cory J. Windorff, Daniel N. Huh, Austin J. Ryan, Joseph W. Ziller, and William J. Evans "Structural Variations in Cyclopentadienyl Uranium(III) Iodide Complexes" *J. Coord. Chem.* **2020**, *74*, 74–91.
2. **Justin C. Wedal**, Samuel Bekoe, Joseph W. Ziller, Filipp Furche, and William J. Evans "C–H Bond Activation via U(II) in the Reduction of Heteroleptic Bis(trimethylsilyl)amide Uranium Complexes" *Organometallics* **2020**, *39*, 3425–3432.
1. **Justin C. Wedal**, Samuel Bekoe, Joseph W. Ziller, Filipp Furche, and William J. Evans "In Search of Tris(trimethylsilyl)cyclopentadienyl Thorium" *Dalton Trans.* **2019**, *48*, 16633–16640.

Patents

- Nilay Hazari, Wesley Bernskoetter, and **Justin Wedal** “Improved Productivity and Stability for CO₂ Hydrogenation Using Pincer Ligated Mn Complexes with Hemilabile Ligands” U.S. Provisional Patent Application #63/934,550.

Selected Invited Talks

- **BNL@Yale Day**, Yale University, April 2026.
- **Friday Synthesis Symposium**, Columbia University, February 2023.
- **Metal Mania LIV**, Yale University, September 2022.
- **Angular Momentum seminar series**, Virtual, July 2021.

Selected Presentations

- **Organometallic Chemistry Gordon Research Conference**, Newport, RI, July 2024.
- **ACS National Meeting**, San Francisco, CA, August 2023.
- **ACS National Meeting**, San Diego, CA, March 2022.
- **ACS National Meeting**, Virtual, August 2021. Chair of session.
- **University of California Chemical Symposium**, Virtual, April 2021.
- **ACS National Meeting**, Virtual, August 2020.
- **National Conference on Undergraduate Research**, Memphis, TN, April 2017.
- **Celebration of Student Research & Creativity**, University of Wisconsin-La Crosse, April 2017.

Community Activities

2022–2026	Yale Chemistry Magic Show
2017–2022	LEAPS Outreach program at UC Irvine
2016–2017	UWL Peer Tutor
2014–2017	UW-La Crosse Chemistry Club
2017	Alpha Phi “Mr. Chemistry”

Courses Taught

Fall 2026	CHM4611/5620 Advanced Inorganic Chemistry
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