

JUDY I. WU

Department of Chemistry
University of Houston
Houston, TX 77204-5003

Office: 713-743-7719, SERC 5024
Email: jiwu@central.uh.edu
<http://jiwu.chem.uh.edu>

EDUCATION

- 2005–2011 Ph.D. University of Georgia (Athens, GA, USA)
Dissertation title: "Quantification of Virtual Chemical Properties: Strain, Hyperconjugation, Conjugation, and Aromaticity"
Advisor: Professor Paul von Ragué Schleyer
- 2000–2004 B.S. Tung-Hai University (Taichung, Taiwan)

PROFESSIONAL EXPERIENCE

- | | | |
|--------------|---|-----------------------|
| 2025–present | Thomas A. Albright Professor of Chemistry | University of Houston |
| 2021–2025 | Associate Professor | University of Houston |
| 2015–2021 | Assistant Professor | University of Houston |
| 2013–2015 | Research Scientist | University of Georgia |
| 2011–2013 | Postdoctoral Associate | University of Georgia |

POSITIONS

- | | | |
|--------------|------------------------|--|
| 2025–present | Editorial Board Member | <i>Journal of Computational Chemistry</i> |
| 2020–present | Advisory Board Member | <i>Organic & Biomolecular Chemistry</i> |
| 2020–present | Editorial Board Member | <i>Chemical Communications</i> |
| 2020–present | Associate Editor | <i>Journal of Physical Organic Chemistry</i> |

HONORS AND AWARDS

- 2025 John. C. Butler Excellence in Teaching Award
2025 NIH-Maximizing Investigators' Research Award (MIRA)
2023 Tunghai University Distinguished Alumni Award
2021 Thieme Chemistry Journals Award 2021
2021 Award for Excellence in Research, Scholarship, and Creative Activity (UH)
2020 Alfred P. Sloan Research Fellowship
2019 NIH-Maximizing Investigators' Research Award (MIRA)
2018 NSF-CAREER Award
2012 IUPAC-Solvay Prize for Young Chemist

PUBLICATIONS (*produced from work performed at UH, post-tenure*)

126. Khan, M. U. G.; Młodzikowska-Pieńko K.; Gershoni-Poranne, R.*; Wu, J. I.* "Three Wrongs Make a Right: A Computational Investigation of $[4n]$ - $[4n]$ - $[4n]$ Fused π -Systems" *Chem. Sci.* **2026** (in press).
125. Hwang, J.; Kim, H.; Schober, J. V.; Khan, M. U. G.; Barker, J. E.; Villarde, M. D.; Ni, X. Dickie, D.; Wu, J. I.*; Gilliard, R.* "Redox- and Protonation-Tunable Diboraheptacenes" *J. Am. Chem. Soc.* **2026**, *148*, 9754–9762. DOI:10.1021/jacs.5c21449

124. Phan, S. N. T.; Schober, J. V.; Wu, J. I.; Teets, T. S.* "Synthesis and Photoluminescence of Iridium(III) Arylacetylide Complexes with Acetylide-Localized Emissive Excited States" *Dalton Trans.* **2026**, 55, 2499–2508. DOI:10.1039/D5DT02734A
123. Kajikawa K.; Martins, F.; Murata, R.; Kayahara, E.; Yamago, S.*; Wu, J. I.*; Abe, M.* "Carbenes Embedded in Cyclic Paraphenylenes: Detection, Ground State Spin-Multiplicity, and Möbius Aromaticity" *J. Am. Chem. Soc.* **2026**, 148, 6544–6550. DOI:10.1021/jacs.5c20997
122. Herman R. J.; Jalife, S.; LeBlanc, A. G.; Khan, M. U. G.; Stewart, M. L.; Njoroge, S. W.; Tanha, S. R. Fronczek, F. R.; Wu, J. I.; Lee, S.* "Selective Strain-Promoted Reactivity of a Fluorene-Derived [6]Cycloparaphenyleneacetylene Carbon Nanohoop" *Chem. Commun.* **2026**, 62, 243–246. DOI:10.1039/D5CC05493A
121. Martins, F. A.; Wu, J. I.* "Modulating the Thermal Isomerization Barriers of Quadricyclane to Norbornadiene Through Cross-Conjugative Patterns" *Chem. Commun.* **2025**, 61, 19253–19256. DOI:10.1039/D5CC05209B (2025 Pioneering Investigators issue).
120. Wu, J. I.* "The Human Story of Benzene" *Nature Chemistry* **2025**, 17, 1621–1623. DOI:10.1038/s41557-025-01976-9
119. Martins, F. A.; Viesser, R. V.; Schober, J. V.; Herges, R.*; Wu, J. I.* "Triplet Spin Delocalization and Temperature Dependence for Adiabatic and Non-Adiabatic *Z-E* Isomerization Pathways in Azoarenes" *J. Am. Chem. Soc.* **2025**, 147, 35493–35500. DOI:10.1021/jacs.5c09852
118. Laconsay, C. J.; Jain, I.; Schleif, T.*; Karney, W. L.*; Wu, J. I.* "Geminal Hyperconjugation as a Driving Force for C–C Bond Shortening in Heavy-Atom Tunnelling" *Chem. Sci.* **2025**, 16, 17444–17449. DOI: 10.1039/D5SC02914G
117. Dos Santos, N. R.; Wu, J. I.; Alabugin, I. V.* "Photocyclization of Alkenes and Arenes: Penetrating Through Aromatic Armor with the Help of Excited State Antiaromaticity" *Chemistry* **2025**, 7, 79. DOI: 10.3390/chemistry7030079
116. Jalife, S.; Wu, J. I.* "How do Heteroatom Placements Affect the Paratropcities of Heteroaromatic-Fused Indacenes" *J. Org. Chem.* **2025**, 90, 4012–4017. DOI: 10.1021/acs.joc.4c03116
115. Dos Santos, N. R.; Schober, J. V.; Laconsay, C.; Palazzo, A.; Kuhn, L.; Chu, A.; Hanks, B.; Hanson, K.; Wu, J. I.*; Alabugin, I.* "Assembly of Pyrenes Through a Quadruple Photochemical Cascade: Blocking Groups Allow Diversion from the Double Mallory Path to a New Photocyclization at the Bay Region" *J. Am. Chem. Soc.* **2024**, 147, 1074–1091. DOI: 10.1021/jacs.4c14486
114. Warren, G.; Młodzikowska-Pieńko, K.; Jalife, S.; Demachkie, I. S.; Wu, J. I.; Haley, M. M.; Gershoni-Poranne, R.* "Effects of Benzoheterocyclic Annulation on the *s*-Indacene Core: A Computational Analysis" *Chem. Sci.* **2024**, 16, 575–583. DOI:10.1039/D4SC06812B
113. Schober, J. V.*; Laconsay, C. J.; Wu, J. I.* "Is Aromaticity Loss Necessary for Transition-Metal Promoted Arene-Alkene Cycloadditions" *Chem. Sci.* **2024**, 15, 18093–10898. DOI:10.1039/D4SC05337K
112. Ruiz de Castilla, L. C.; Ganguly, T.; Tahmouresilerd, B.; Laconsay, C. J.; Wu, J. I. Do, L. H.* "Optimizing the Cation Binding Pocket in Nickel Phenoxyimine Catalysts Improves Ethylene Polymerization Efficiency" *Organometallics* **2024**, 43, 2643–2650. DOI:10.1021/acs.organomet.4c00260
111. Nguyen, H. D.; Laconsay, C. J.; Jana, R. D.; Ganguly, T.; Hoang, S. T.; Kaushal, K.; Wu, J. I. Do, L. H.* "Understanding Structural Isomerism in Organoiridium Picolinamidate Complexes and its Consequences on Reactivity and Biological Properties" *Inorg. Chem. Front.* **2024**, 11, 7407–7415. DOI:10.1039/D4QI01955E
110. Seeman, J. I.*; Wu, J. I.* "Eureka Moments Shared by Chemists. Hint's at Enhancing One's Own Creativity (and Even One's Joy)" *ACS Cent. Sci.* **2024**, 10, 1980–1996. DOI: 10.1021/acscentsci.4c00802

109. Karki, S.; Jalife, S.; Wang, X.; Wu, J. I.*; Miljanic, O. Š.* "Columnar Organization of Nonalternant Fluorinated Dehydrobenzannulenes?" *Chem. Eur. J.* **2024**, *30*, e202402913. DOI:10.1002/chem202402913
108. Viesser, R. V.; Donald, C. P.; May, J. A.; Wu, J. I.* "Can Twisted Double Bonds Facilitate Stepwise [2+2] Cycloadditions?" *Org. Lett.* **2024**, *26*, 3778–3783. DOI: 10.1021/acs.orglett.4c00879
107. Daženović, J.; Laconsay, C. J.; Došlić, N.*; Wu, J. I.*; Basarić, N.* "Excited-State Antiaromaticity Relief Drives Facile Photoprotonation of Carbons in Aminobiphenyls" *Chem. Sci.* **2024**, *15*, 5225–5237. DOI:10.1039/D4SC00642A
106. Jalife, S.; Tsybizova, A.; Gershoni-Poranne, R.*; Wu, J. I.* "Modulating Paratropicity in Heteroarene Fused Expanded Pentalenes" *Org. Lett.* **2024**, *26*, 1293–1298. DOI: 10.1021/acs.orglett.4c00188
105. Trung, N. T.; Chiu, C. H.; Cuc, T. T. K.; Khang, T. M.; Jalife, S.; Nhien, P. Q.; Hue, B. T. B.; Wu, J. I.; Li, Y. K.; Lin, H. C.* "Tunable Nano-Bending Structures of Loosened/Tightened Lassos with Bi-Stable Vibration-Induced Emissions for Multi-Manipulations of White-Light Emissions and Sensor Applications" *Adv. Mater.* **2024**, *36*, 2311789. DOI: 10.1002/adma.202311789
104. Karas, L. J.; Jalife, S.; Viesser, R. V.; Soares, J. V.; Haley, M. M.*; Wu, J. I.* "Two Teams are Better Than One: Where Theory and Experiment Successfully Interact" *Angew. Chem. Int. Ed.* **2024**, *63*, e202317561. DOI: 10.1002/anie.202317561
103. Karas, L. J.; Jalife, S.; Viesser, R. V.; Soares, J. V.; Haley, M. M.*; Wu, J. I.* "Tetra-*tert*-butyl-*s*-indacene is a Bond Localized C_{2h} Structure and a Challenge for Computational Chemistry" *Angew. Chem. Int. Ed.* **2023**, *62*, e202307379. DOI: 10.1002/anie.202307379
102. Meng, J.; Robles, A.; Jalife, S.; Ren, W.; Zhang, Y.; Zhao, L.; Liang, Y.; Wu, J. I.*; Miljanic, O. S.*; Yao, Y.* "Cyclotetrazene Derivatives for Electrochemical Lithium-Ion Storage" *Angew. Chem. Int. Ed.* **2023**, *62*, e202300892. DOI: 10.1002/anie.202300892
101. Nguyen, Y. H.; Dang, V. Q.; Soares, J. V.; Wu, J. I.; Teets, T. S.* "Efficient Blue-Phosphorescent *trans*-Bis(acyclic diaminocarbene)platinum(II) Acetylide Complexes" *Chem. Sci.* **2023**, *14*, 4857–4862. DOI: 10.1039/D3SC00712J
100. Merino, G.*; Sola, M.*; Fernandez, I.*; Foroutan-Nejad, C.*; Lazzaretti, P.*; Frenking, G.*; Anderson, H. L.; Sundholm, D.; Cossio, F. P.; Petrukhina, M. A.; Wu, J.; Wu, J. I.; Restrepo, A. "Aromaticity: Quo Vadis" *Chem. Sci.* **2023**, *14*, 5569–5576. DOI: 10.1039/D2SC04998H
99. McNeill, J. N.; Kascoutas, M. A.; Karas, L. J.; Zakharov, L. N.; Wu, J. I.; Haley, M. M.*; D. Johnson* "Impact of Internal Charge Transfer on the Photophysical Properties of Pyridine-Fused Phosphorus-Nitrogen Heterocycles" *Chem. Eur. J.* **2023**, *29*, e202203918. DOI: 10.1002/chem.202203918
98. Khang, T. M.; Nhien, P. Q.; Cuc, T. T. K.; Wu, C. H.; Hue, B. T. B.; Wu, J. I.; Li, Y. K.; Lin, H. C.* "Dual and Sequential Locked/Unlocked Photo-switching Effects on FRET Processes by Tightened/Loosened Nano-Loops of Diarylethene-Based [1]Rotaxanes" *Chem. Commun.* **2023**, *59*, 466–469. DOI: 10.1039/D2CC06285B
97. Kang, T. M.; Nhien, P. Q.; Cuc, T. T. K.; Weng, C. C.; Wu, C. H.; Hue, B. T. B.; Wu, J. I.; Li, Y. K.; Lin, H. C.* "Dual and Sequential Locked/Unlocked Photochromic Effects on FRET Controlled Singlet Oxygen Processes by Contracted/Extended Forms of Diarylethene-Based [1]Rotaxane Nanoparticles" *Small* **2022**, *19*, 2205597. DOI: 10.1002/sml.202205597
96. Gouda, C.; Pham, B. N.; Nhien, P. Q.; Cuc, T. T. K.; Weng, C. C.; Wu, C. H.; Wu, J. I.; Li, Y. K.; Lin, H. C.* "Supramolecular [2]Pseudo-Rotaxane Polymer Containing Blue Anthracene Donor Guest and Green Naphthalimide Acceptor Host as a FRET-ON Sensor for Hydrogen Sulfide Detection" *Dyes and Pigments.* **2022**, *208*, 110873. DOI: 10.1016/j.dyepig.2022.110873

95. Nhien, P. Q.; Chang, H. K.; Cuc, T. T. K.; Khang, T. M.; Wu, C. H.; Hue, B. T. B.; Wu, J. I.; Lin, H. C.* "Multi-Stimuli Responsive Fluorescence Switching Behaviors of AIE Polymers for Acid-Base Vapor Sensing and Highly Sensitive Ferric Ion Detection" *Sens. Actuators B Chem.* **2022**, *372*, 132634. DOI: 10.1016/j.snb.2022.132634
94. Karas, L. J.*; Wu, J. I.* "Baird's Rules at the Tipping Point" *Nat. Chem.* **2022**, *14*, 723–725. DOI: 10.1038/s41557-022-00988z
93. Wang, Y. T.; Jalife, S. J.; Robles, A.; Miloš, D. Wu, J. I., Watchareeya, K.; Miljanic, O.*; Chen, T. H.* "Efficient CO₂/CO Separation by Pressure Swing Adsorption Using an Intrinsically Nanoporous Molecular Crystal" *ACS Appl. Nano. Mat.* **2022**, *5*, 14021–14026. DOI: 10.1021/acsnm.2c01535
92. Nguyen, Y. H.; Soares, J. V.; Nguyen, S. H.; Wu, Y.; Wu, J. I.; Teets, T. S.* "Platinum(II)-Substituted Phenylacetylide Complexes Supported by Acyclic Diaminocarbene Ligands" *Inorg. Chem.* **2022**, *61*, 8498–8508. DOI: 10.1021/acs.inorgchem.2c00510
91. Ho, F. C.; Huang, K. H.; Cheng, H. W.; Huang, Y. J.; Nhien, P. Q.; Wu, C. H.; Wu, J. I.; Chen, S. Y.; Lin, H. C.* "Controllable FRET Processes Towards Ratiometric Fe³⁺ Ion Sensor of Pseudo[3]Rotaxane Containing Naphthalimide-Based Macrocyclic Host Donor and Multi-Stimuli Responsive Rhodamine-Modified Guest Acceptor" *Dyes and Pigments* **2022**, *197*, 109907. DOI: 10.1016/j.dyepig.2021.109907
90. McNeill, J. N.; Karas, L. J.; Bard, J. P.; Fabrizio, K.; Zakharov, L. N.; MacMillan, S. N.; Brozek, C. K.; Wu, J. I.; Johnson, D. W.*; Haley, M. M.* "Controlling Tautomerization in Pyridine-Fused Phosphorus-Nitrogen Heterocycles" *Chem. Eur. J.* **2022**, *28*, e202200472. DOI: 10.1002/chem.202200472
89. Wen, Z.; Karas, L. J.; Wu, J. I.* "Hydrogen Bonding Interactions Can Decrease Clar Sextet Character in Acridone Pigments" *Org. Biomol. Chem.* **2021**, *19*, 9619–9623. DOI: 10.1039/D1OB01720A
88. Karas, L. J.*; Wu, C. H.; Wu, J. I.* "Barrier-Lowering Effects of Baird Antiaromaticity in Photoinduced Proton-Coupled Electron Transfer (PCET) Reactions" *J. Am. Chem. Soc.* **2021**, *143*, 17970–17974. DOI: 10.1021/jacs.1c09324
87. Barker, J. E.; Price, T. W.; Karas, L. J.; Kishi, R.; MacMillan, S. N.; Zakharov, L. N.; Gomez-Garcia, C. J.; Wu, J. I.; Nakano, M.; Haley, M. M.* "A Tale of Two Isomers: Enhanced Antiaromaticity/Diradical Character Versus Deleterious Ring-Opening of Benzofuran-Fused *s*-Indacenes and Dicyclopenta[*b,g*]Naphthalenes" *Angew. Chem. Int. Ed.* **2021**, *60*, 22385–22392. DOI: 10.1002/anie.202107855
86. Nhien, P. Q.; Wu, P. H.; Wu, C. H.; Wu, J. I.; Hue, B. T. B.; Du, B. W.; Ko, F. H.; Weng, C. C.; Li, Y. K.; Lin, H. C.* "Multi-Stimuli Responsive Fluorescence of Amphiphilic AIEgen Copolymers for Ultrafast, Highly Sensitive and Selective Copper Ion Detection in Water" *Sens. Actuators B Chem.* **2021**, *344*, 130241. DOI: 10.1016/j.snb.2021.130241

(produced from work performed at UH, pre-tenure)

85. Canada, L.; Kölling, J.; Wen, Zhili; Wu, J. I.; Teets, T.* "Cyano-Isocyanide Iridium (III) Complexes with Pure Blue Phosphorescence" *Inorg. Chem.* **2021**, *60*, 6391–6402. DOI: 10.1021/acs.inorgchem.1c00103
84. McHale, C.; Karas, L.; Wang, X.; Wu, J. I.*; Miljanic, O.* "Cyclobenzoin Esters as Hosts for Thin Guests" *Org. Lett.* **2021**, *23*, 2253–2257. DOI: 10.1021/acs.orglett.1c00383
83. Ho, F. C.; Huang, K. H.; Cheng, H. W.; Huang, Y. J.; Nhien, P. Q.; Wu, C. H.; Wu, J. I.; Chen, S. Y.; Lin, H. C.* "FRET Processes of Bi-Fluorophoric Sensor Material Containing Tetraphenylethylene Donor and Optical-Switchable Merocyanine Acceptor for Lead Ion (Pb²⁺) Detection in Semi-Aqueous Media" *Dyes and Pigments* **2021**, *189*, 109238. DOI: 10.1016/j.dyepig.2021.109238
82. Karas, L. J.; Wu, J. I.* "Chapter 10: Antiaromaticity: A Brief History, Concepts, and Applications" in *Aromaticity: Modern Computational Methods and Applications*, Elsevier. **2021**.

81. Saez Talens, V.; Davis, J.; Wu, C. H.; Wen, Z.; Lauria, F.; Gupta, K. B. S. S.; Rudge, R.; Boraghi, M.; Hagemeyer, A.; Trinh, T.; Englebienne, P.; Voets, I.; Wu, J. I.*; Kieltyka, R.* "Thiosquaramide-Based Supramolecular Polymers: Aromaticity Gain in a Switched Mode of Self-Assembly" *J. Am. Chem. Soc.* **2020**, *142*, 19907–19916. DOI: 10.1021/jacs.0c02081
80. Ho, F. C.; Huang, Y. J.; Weng, C. C.; Wu, C. H.; Li, Y. K.; Wu, J. I., Lin, H. C.* "Efficient FRET Approaches toward Copper(II) and Cyanide Detections via Host-Guest Interactions of Photo-Switchable [2]Pseudo-Rotaxane Polymers Containing Naphthalimide and Merocyanine Moieties" *ACS Appl. Mater. Interfaces.* **2020**, *12*, 53257–53273. DOI: 10.1021/acsami.0c15049
79. Jones, G. R.; Alhan, H. E. B.; Karas, L. J.; Wu, J. I.; Harth, E.* "Switching the Reactivity of Palladium Diimines with 'Ancillary' Ligand to Select for Olefin Polymerization, Branching Regulation, or Olefin Isomerization" *Angew. Chem. Int. Ed.* **2020**, *60*, 1635–1640. DOI: 10.1002/anie.202012400
78. Nhien, P. Q.; Cuc, T. T. K.; Khang, T. M.; Wu, C. H.; Hue, B. B.; Wu, J. I.; Mansel, B. W.; Chen, H. L.; Lin, H. C.* "Highly Efficient FRET Modulations of Dual-AIEgens between Tetraphenylethylene Donor and Merocyanine Acceptor in Photo-Switchable [2]Rotaxanes and Reversible Photo-Patterning Applications" *ACS Appl. Mater. Interfaces.* **2020**, *12*, 47921–47938. DOI: 10.1021/acsami.0c12726
77. Karas, L. J.; Campbell, A. T.; Alabugin, I. V.; Wu, J. I.* "Antiaromaticity Gain Activates Tropone and Non-Benzenoid Aromatics as Normal-Electron-Demand Diels–Alder Dienes" *Org. Lett.* **2020**, *22*, 7083–7087. DOI: 10.1021/acs.orglett.0c02343
76. Karas, L. J.; Wu, C. H.*; Ottosson, H.*; Wu, J. I.* "Electron-Driven Proton Transfer Relieves Excited-State Antiaromaticity in Photoexcited DNA Base Pairs" *Chem. Sci.* **2020**, *11*, 10071–10077. DOI: 10.1039/D0SC02294B
75. Tran, T.; Karas, L. J.; Wu, J. I.; Do, L. H.* "Elucidating Secondary Metal Cation Effects on Nickel Olefin Polymerization Catalysts" *ACS Catal.* **2020**, *10*, 10760–10772. DOI: 10.1021/acscatal.0c02949
74. Dressler, J. J.; Barker, J. E.; Karas, L. J.; Hashimoto, H. E.; Kishi, R.; Zakharov, L. N.; MacMillan, S. N.; Gomez-Garcia, C. J.; Nakano, M.; Wu, J. I.; Haley, M. M.* "Late-Stage Modification of Electronic Properties of Antiaromatic and Diradicaloid Indeno[1,2-*b*]fluorene Analogues via Sulfur Oxidation" *J. Org. Chem.* **2020**, *85*, 10846–10857. DOI: 10.1021/acs.joc.0c01387
73. Wu, Y.; Wen, Z.; Wu, J. I.; Teets, T. S.* "Efficient Deep Blue Platinum Acetylide Phosphors with Acyclic Diaminocarbene Ligands" *Chem. Eur. J.* **2020**, *26*, 16028–16035. DOI: 10.1002/chem.202002775
72. Paudel H. R.; Karas, L. J.; Wu, J. I.* "On the Reciprocal Relationship Between σ -Hole Bonding and (Anti)aromaticity Gain in Ketocyclopolynes" *Org. Biomol. Chem.* **2020**, *18*, 5125–5129. DOI: 10.1039/D0OB01076F
71. Karas, L. J.; Wu, C. H.; Das, R.; Wu, J. I.* "Hydrogen Bond Design Principles" *WIREs Comput. Mol. Sci.* **2020**, *10*, e1477. DOI: 10.1002/wcms.1477
70. Wen, Z.; Karas, L. J.; Wu, C. H.; Wu, J. I.* "How Does Excited-State Antiaromaticity Affect the Acidity Strengths of Photoacids?" *Chem. Commun. (Emerging Investigators Issue 2020)* **2020**, *56*, 8380–8383. DOI: 10.1039/D0CC02952A
69. Nhien, P. Q.; Chou, W. L.; Cuc, T. T. K.; Khang, T. M.; Wu, C. H.; Thirumalaivasan, N.; Hue, B. B.; Wu, J. I.; Wu, S. P.; Lin, H. C.* "Multi-Stimuli Responsive FRET Processes of Bifluorophoric AIEgens in an Amphiphilic Copolymer and Its Application to Cyanide Detection in Aqueous Media" *ACS Appl. Mater. Interfaces.* **2020**, *12*, 10959–10972. DOI: 10.1021/acsami.9b21970
68. Paudel, H.; Das, R.; Wu, C. H.; Wu, J. I.* "Self-Assembling Purine and Pteridine Quartets: How Do π -Conjugation Patterns Affect Resonance-Assisted Hydrogen Bonding" *Org. Biomol. Chem.* **2020**, *18*, 1078–1081. DOI: 10.1039/C9OB02412C

67. Wen, Z.; Wu, J. I.* "Antiaromaticity Gain Increases Potential for *n*-Type Charge Transport Behavior in Hydrogen-Bonded π -Conjugated Cores" *Chem. Commun.* **2020**, 56, 2008–2011. DOI: 10.1039/C9CC09670A
66. Mu, G.; Wen, Z.; Wu, J. I.; Teets, T. S.* "Azo-Triazolide Bis-Cyclometalated Ir(III) Complexes via Cyclization of 3-Cyanodiarylformazanate Ligands" *Dalton Trans.* **2020**, 49, 3775–3785. DOI: 10.1039/C9DT03914G
65. Karas, L. J.; Wu, C. H.; Wu, J. I.* "Computational Organic Chemistry" *Elsevier: Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*, **2019**. DOI: 10.1016/B978-0-12-409547-2.10835-2
64. Uddin, M. N.; Knight, J. D.; Rastelli, E. J.; Soubra-Ghaoui, C.; Albright, T. A.; Wu, J. I.*; Coltart, D. M.* "On the Mechanism of the Asymmetric Aldol Addition of Chiral *N*-Amino Cyclic Carbamate Hydrazones: Evidence of Non-Curtin-Hammett Behavior" *Chem. Eur. J.* **2019**, 25, 16037–16047. DOI: 10.1002/chem.201902388
63. Parida, R.; Das, S.; Karas, J. L.; Wu, J. I.; Roymahapatra, G.*; Giri, S.* "Superalkali Ligands as a Building Block for Aromatic Trinuclear Cu(I)-NHC Complexes" *Inorg. Chem. Front.* **2019**, 6, 3336–3344. DOI: 10.1039/C9QI00873J
62. Wu, C. H.; Karas, L. J.; Ottosson, H.; Wu, J. I.* "Excited-State Proton Transfer Relieves Antiaromaticity in Molecules" *Proc. Natl. Acad. Sci.* **2019**, 116, 20303–20308. DOI: 10.1073/pnas.1908516116
61. Das, R.; Vázquez-Montelongo, E. A.; Cisneros, G. A.; Wu, J. I.* "Ground State Destabilization in Uracil DNA Glycosylase: Let's Not Forget "Tautomeric Strain" in Substrates" *J. Am. Chem. Soc.* **2019**, 141, 13739–13743. DOI: 10.1021/jacs.9b06447
60. Zhang, Z.; Lieu, T.; Wu, C. H.; Wang, X.; Wu, J. I.; Daugulis, O.; Miljanic, O. S.* "Solvation-Dependent Switching of Solid-State Luminescence of a Fluorinated Aromatic Tetrapyrazole" *Chem. Commun.* **2019**, 55, 9387–9390. DOI: 10.1039/c9cc03932e
59. Na, H.; Cañada, L. M.; Wen, Z.; Wu, J. I.; Teets, T. S.* "Mixed-Carbene Cyclometalated Iridium Complexes with Saturated Blue Luminescence" *Chem. Sci.* **2019**, 10, 6254–6260. DOI: 10.1039/c9sc01386e
58. Wu, J. I.*; van Eikema Hommes, N. J. R.; Lenoir, D.; Bachrach, S. M.* "The Quest for a Triplet Ground State Alkene: Highly Twisted C=C Double Bonds" *J. Phys. Org. Chem.* **2019**, 32, e3965. DOI: 10.1002/poc.3965
57. Keyes, A. C., Jr.; Dau, H.; Basbug Alhan H. E.; Ha, U.; Ordonez, E.; Jones, G.; Liu, Y. S.; Tsogtgerel, E.; Loftin, B.; Wen, Z.; Wu, J. I.*; Beezer, D.*; Harth, E. M.* "Metal-Organic Insertion Light Initiated Radical (MILRad) Polymerization: Photo-initiated Radical Polymerization of Vinyl Polar Monomers with Various Palladium Diimine Catalysts" *Polym. Chem.* **2019**, 10, 3040–3047. DOI: 10.1039/c8py01556b
56. Zhang, Y.; Xie, Y.*; Schaefer, H. F.*; Wu, J. I. "Stabilizing Borinium Cations [X–B–X]⁺ Through Conjugation and Hyperconjugation Effects" *Inorg. Chem.* **2019**, 58, 243–249. DOI: 10.1021/acs.inorgchem.8b02316
55. Zhang, Y.; Wu, C. H.; Wu, J. I.* "Why Do A•T and G•C Self-Sort? Hückel Aromaticity as a Driving Force for Electronic Complementarity in Base Pairing" *Org. Biomol. Chem.* **2019**, 17, 1881–1885. DOI: 10.1039/c8ob01669k
54. Zhang, Z.; Hashim, M.; Wu, C. H.; Wu, J. I.; Miljanic, O. S.* "Discrimination of Dicarboxylic Acids via Assembly-Induced Emission" *Chem. Commun.* **2018**, 54, 11578–11581. DOI: 10.1039/c8cc06689b
53. Mu, G.; Cong, L.; Wen, Z.; Wu, J. I.; Kadish, K. M.; Teets, T. S.* "Homoleptic Platinum Azo-iminate Complexes via Hydrogenative Cleavage of Formazans" *Inorg. Chem.* **2018**, 57, 9468–9477. DOI: 10.1021/acs.inorgchem.8b01456

52. Uddin, M. N.; Wu, C. H.; Wu, J. I.; Coltart, D. M.* "A Mismatch-Free Strategy for the Diastereoselective alpha-Alkylation of Chiral Nonracemic Methyl Ketones" *Org. Lett.* **2018**, *20*, 3723–3727. DOI: 10.1021/acs.orglett.8b01146
51. Rittikulsittichai, S.; Park, C. S.; Jamison, A. C.; Frank, T.; Wu, C. H.; Wu, J. I.; Lee, T. R.* "Inhibiting Reductive Elimination as an Intramolecular Disulfide Dramatically Enhances the Thermal Stability of SAMs on Gold Derived Bidentate Adsorbents" *Langmuir* **2018**, *34*, 6645–6652. DOI: 10.1021/acs.langmuir.7b03973
50. Wu, C. H.; Zhang, Y.; van Rickley, K.; Wu, J. I.* "Aromaticity Gain Increases the Association Strengths of Multipoint Hydrogen Bonded Arrays" *Chem. Commun.* **2018**, *54*, 3512–3515. DOI: 10.1039/c8cc00422f
49. Wu, J. I.* "Chapter 9: Modern Treatments of Aromaticity" in *Applied Theoretical Organic Chemistry* World Scientific Publishing Europe Ltd. **2018**, pp. 273–288. DOI: 10.1142/9781786344090_0009
48. Hashim, M.; Le, H.; Chen, T. H.; Chen, Y. S.; Daugulis, O.; Hsu, C. W.; Jacobsen, A.; Kaveevivitchai, W.; Liang, X.; Makarenko, T.; Miljanic, O.*; Popovs, I.; Tran, H. V.; Wang, X.; Wu, C. H.; Wu, J. I. "Dissecting Porosity in Molecular Crystals: Influence of Geometry, Hydrogen Bonding, and $[\pi \dots \pi]$ Stacking on the Solid-State Packing of Fluorinated Aromatics" *J. Am. Chem. Soc.* **2018**, *140*, 6014–6026. DOI: 10.1021/jacs.8b02869
47. Wu, C. H.; Ito, K.; Buytendyk, A.; Bowen, K. H.; Wu, J. I.* "Enormous Hydrogen Bond Strength Enhancement Through π -Conjugation Gain: Implications for Enzyme Catalysis" *Biochemistry* **2017**, *56*, 4318–4322. DOI: 10.1021/acs.biochem.7b00395
46. Kakeshpour, T.; Bailey, J. P.; Jenner, M. R.; Howell, D. E.; Staples, R. J.; Holmes, D.; Wu, J. I.*; Jackson, J. E.* "High-Field NMR Spectroscopy Reveals Aromaticity-Modulated Hydrogen Bonding (AMHB) in Heterocycles" *Angew. Chem. Int. Ed.* **2017**, *56*, 9842–9846. DOI: 10.1002/ange.201705023
45. Kakeshpour, T.; Wu, J. I.*; Jackson, J. E.* "AMHB: (Anti)aromaticity-Modulated Hydrogen Bonding" *J. Am. Chem. Soc.* **2016**, *138*, 3427–3432. DOI: 10.1021/jacs.5b12703
44. Kabir, E.; Wu, C. H.; Wu, J. I.; Teets, T. S.* "Heteroleptic Complexes of Cyclometalated Platinum with Triarylformazanate Ligands" *Inorg. Chem.* **2016**, *55*, 956–963. DOI: 10.1021/acs.inorgchem.5b02595
43. Anand, M.; Fernandez, I.*; Schaefer, H. F.; Wu, J. I.* "Hydrogen Bond-Aromaticity Cooperativity in Self-Assembling 4-Pyridone Chains" *J. Comput. Chem.* **2016**, *37*, 59–63. DOI: 10.1002/jcc.23976
42. Buytendyk, A. M.; Graham, J. D.; Collins, K. D.; Bowen, K. H.*; Wu, C. H.; Wu, J. I. "The Hydrogen Bond Strength of Phenol-Phenolate Anionic Complex: A Computational and Photoelectron Spectroscopic Study" *Phys. Chem. Chem. Phys.* **2015**, *17*, 25109–25113. DOI: 10.1039/C5CP04754D
41. Vogt-Geisse, S.*; Wu, J. I.; Schleyer, P. v. R.; Schaefer, H. F. "Bonding, Aromaticity, and Planar Tetracoordinated Carbon in Si_2CH_2 and Ge_2CH_2 " *J. Mol. Model.* **2015**, *21*, 2736–2738. DOI: 10.1007/s00894-015-2736-8

(produced from work prior to UH appointment)

40. Jalife S.; Wu, J. I.; Martínez-Guajardo, G.; Schleyer, P. v. R.*; Fernandez-Herra M. A.*; Merino, G.* "The Homocubyl Cation Rearrangement Revisited" *Chem. Commun.* **2015**, *51*, 5391–5393. DOI: 10.1039/c4cc08071h
39. Berionni, G.*; Wu, J. I.*; Schleyer, P. v. R.* "Aromaticity Evaluations of Planar [6]Radialenes" *Org. Lett.* **2014**, *16*, 6116–6119. DOI: 10.1021/ol5029699
38. Wu, J. I.*; Jackson, J. E.; Schleyer, P. v. R. "Reciprocal Hydrogen Bonding-Aromaticity Relationships" *J. Am. Chem. Soc.* **2014**, *136*, 13526–13529. DOI: 10.1021/ja507202f

37. Wu, J. I.;* Wang, C.; McKee W. C.; Schleyer, P. v. R.; Wei, W.; Mo, Y.* "On the Large σ -Hyperconjugation in Alkanes and Alkenes" *J. Mol. Model.* **2014**, *20*, 2228. DOI: 10.1007/s00894-014-2228-2
36. Schleyer, P. v. R.; Wu, J. I.; Cossio F. P.;* Fernandez, I.* "Aromaticity in Transition Structures" *Chem. Soc. Rev.* **2014**, *43*, 4909–4921. DOI: 10.1039/c4cs00012a
35. Zhu, C.; Luo, M.; Zhu, Q.; Schleyer, P. v. R.; Wu, J. I.; Lu, X.; Xia H.* "Planar Möbius Aromatic Pentalenes Incorporating 16 and 18 Valence Electron Osmiums" *Nat. Commun.* **2014**, *5*, 3265. DOI: 10.1038/ncomms4265
34. Wu, C. H.; Galabov, B.;* Wu, J. I.;* Ilieva, S.; Schleyer, P. v. R.; Allen, W. D.* "Do π Conjugative Effects Facilitate S_N2 Reactions?" *J. Am. Chem. Soc.* **2014**, *136*, 3118–3126. DOI: 10.1021/ja4111946
33. Wu, J. I.;* Schleyer, P. v. R. "Hyperconjugation in Hydrocarbons: Not Just a "Mild Sort of Conjugation"" *Pure Appl. Chem. (Invited contribution to the Young Chemist Prize Collection)* **2013**, *85*, 921–940. DOI: 10.1351/PAC-CON-13-01-03
32. Wu, J. I.;* Fernandez, I.; Schleyer, P. v. R.* "Description of Aromaticity in Porphyrinoids" *J. Am. Chem. Soc.* **2013**, *135*, 315–321. DOI: 10.1021/ja309434t
31. Sokolov, A.;* Magers, B. D.; Wu, J. I.; Allen, W. D.;* Schleyer, P. v. R.; Schaefer, H. F. "Free Cyclooctatetraene Dianion: Planarity, Aromaticity, and Theoretical Challenges" *J. Chem. Theory Comput.* **2013**, *9*, 4436–4443. DOI: 10.1021/ct400642y
30. McKee, W. C.;* Wu, J. I.; Rzepa, H. S.; Schleyer, P. v. R.* "A Hückel Theory Perspective on Möbius Aromaticity" *Org. Lett.* **2013**, *15*, 3432–3435. DOI: 10.1021/ol401491s
29. Fernandez, I.;* Wu, J. I.;* Schleyer, P. v. R.* "Substituent Effects on "Hyperconjugative" Aromaticity and Antiaromaticity in Planar Cyclopolyenes" *Org. Lett.* **2013**, *15*, 2990–2993. DOI: 10.1021/ol401154r
28. Zhang, G. H.; Zhao, Y. F.;* Wu, J. I.; Schleyer, P. v. R.* "Why are S_N4 ($n=1-4$) Species "Missing?" Answers in a Broader Theoretical Context of Binary S–N Compounds" *Inorg. Chem.* **2012**, *51*, 13321–13327. DOI: 10.1021/ic3020095
27. McKee, W. C.; Wu, J. I.; Hofmann, M.; Berndt, A.;* Schleyer, P. v. R.* "Why do Two π Electron Four-Membered Hückel Rings Pucker?" *Org. Lett.* **2012**, *14*, 5712–5715. DOI: 10.1021/ol302726c
26. Miyakae, H.; Sasamori, T.;* Wu, J. I.; Schleyer, P. v. R.; Tokitoch, N.* "The 4,5,6-Triphospha[3]radialene Dianion: A Phosphorous Analog of the Deltate Dianion. A NICS(0) $_{\pi zz}$ Examination of Their Aromaticity" *Chem. Commun.* **2012**, *48*, 11440–11442. DOI: 10.1039/c2cc35978b
25. Chen, Z. F.;* Wu, J. I.; Corminboeuf, C.; Bohmann, J.; Lu, X.; Hirsch, A.; Schleyer, P. v. R.* "Is C_{60} Buckminsterfullerene Aromatic?" *Phys. Chem. Chem. Phys.* **2012**, *14*, 14886–14891. DOI: 10.1039/c2cp42146a
24. Mosley, J. D.; Ricks, A. M.; Schleyer, P. v. R.; Wu, J. I.; Duncan, M. A.* "IR Spectroscopy of Alpha- and Beta- Protonated Pyrrole via Argon Complex Photodissociation" *J. Phys. Chem. A* **2012**, *116*, 9689–9695. DOI: 10.1021/jp307631n
23. Braddock, D. C.;* Roy, D.; Lenoir, D.; Moore, E.; Rzepa, H. S.; Wu, J. I.; Schleyer, P. v. R.* "Verification of Stereospecific Dyotropic Racemisation of Enantiopure *d*- and *l*-1,2-Dibromo-1,2-Diphenylethane in Non-polar Media" *Chem. Commun.* **2012**, *48*, 8943–8945. DOI: 10.1039/c2cc33676f
22. Wu, J. I.;* Mo, Y.; Evangelista, F. A.; Schleyer, P. v. R.* "Is Cyclobutadiene Really Highly Destabilized by Antiaromaticity?" *Chem. Commun.* **2012**, *48*, 8437–8439. DOI: 10.1039/c2cc33521b

21. Gilmore, K.; Manoharan, M.; Wu, J. I.; Schleyer, P. v. R.; Alabugin, I. V.* "Aromatic Transition States in Non-Pericyclic Reactions: Anionic 5-Endo Cyclizations as Aborted Sigmatropic Shifts" *J. Am. Chem. Soc.* **2012**, *134*, 10584–10594. DOI: 10.1021/ja303341b
20. Wu, J. I.; Fernandez, I.; Mo, Y.; Schleyer, P. v. R.* "Why Cyclooctatetraene is Highly Stabilized: The Importance of "Two-Way" (Double) Hyperconjugation" *J. Chem. Theory Comput.* **2012**, *8*, 1280–1287. DOI: 10.1021/ct3000553
19. Shakib, F. A.*; Momeni, M. R.; Wu, J. I.; Schleyer, P. v. R.*; Azizi, Z.; Ghambarian, M. "[n]Imperilene: Stacked [n]Trannulene Separated by Planar Cycloalkane Rings" *Org. Lett.* **2011**, *13*, 3600–3603. DOI: 10.1021/ol201216d
18. Fernandez, I.*; Duvall, M.; **Wu, J. I.**; Li, Q. S.; Schleyer, P. v. R.*; Frenking, G.* "Aromaticity in Group 14 Homologues of the Cyclopropenylum Cation" *Chem. Eur. J.* **2011**, *17*, 2215–2224. DOI: 10.1002/chem.201001392
17. Wu, Y. B.; Jiang, J. L.; Lu, H. G.; Wang, Z. X.*; Perez-Peralta, N.; Islas, R.; Contreras, M.; Merino, G.*; Wu, J. I.; Schleyer, P. v. R.* "Starlike Aluminium-Carbon Aromatic Species" *Chem. Eur. J.* **2011**, *17*, 714–719. DOI: 10.1002/chem.201001266
16. Wang, H. J.; Schleyer, P. v. R.; Wu, J. I.; Wang, Y.; Wang, H. J.* "A Study of Aromatic Three Membered Rings" *Int. J. Quant. Chem.* **2011**, *111*, 1031–1038. DOI: 10.1002/qua.22453
15. Wang, Y.; Fernandez, I.*; Duvall, M.; Wu, J. I.; Li, Q. S.; Frenking, G.*; Schleyer, P. v. R.* "Consistent Evaluation of Aromaticity in Methylenecyclopropene Analogs" *J. Org. Chem.* **2010**, *75*, 8252–8257. DOI: 10.1021/jo1020097
14. Wang, Y.; Wu, J. I.; Li, Q. S.*; Schleyer, P. v. R.* "Aromaticity and Relative Stabilities of Azines" *Org. Lett.* **2010**, *12*, 4824–4827. DOI: 10.1021/ol102012d
13. Wu, J. I.; Evangelista, F. A.; Schleyer, P. v. R.* "Why are Perfluorocyclobutadiene and Some Other (CF)_n Rings Non-Planar?" *Org. Lett.* **2010**, *12*, 768–771. DOI: 10.1021/ol902866n
12. Wang, Y.; Wu, J. I.; Li, Q. S.*; Schleyer, P. v. R.* "Why are Some (CH)₄X₆ and (CH₂)₆X₄ Polyheteroadamantanes So Stable?" *Org. Lett.* **2010**, *12*, 1320–1323. DOI: 10.1021/ol1002187
11. Steinmann, S. N.; Jana, D. F.; Wu, J. I.; Schleyer, P. v. R.; Mo, Y.; Corminboeuf, C.* "Direct Assessment of Electron Delocalization Using NMR Chemical Shifts" *Angew. Chem. Int. Ed.* **2009**, *121*, 10012–10017. DOI: 10.1002/anie.200905390
10. Koleva, G.; Galabov, B.*; Wu, J. I.; Schaefer, H. F.; Schleyer, P. v. R. "Electrophile Affinity: a Reactivity Measure for Aromatic Substitution" *J. Am. Chem. Soc.* **2009**, *131*, 14722–14727. DOI: 10.1021/ja902194y
9. Wu, W.*; Ma, B.; Wu, J. I.; Schleyer, P. v. R.*; Mo, Y.* "Is Cyclopropane Really the σ -Aromatic Paradigm?" *Chem. Eur. J.* **2009**, *15*, 9730–9736. DOI: 10.1002/chem.200900586
8. Zhang, G. H.; Zhao, Y. F.*; Wu, J. I.; Schleyer, P. v. R.* "Ab initio Study of the Geometry, Stability and Aromaticity of Cyclic S₂N₃⁺ Cation Isomers and Their Isoelectronic Analogs" *Inorg. Chem.* **2009**, *48*, 6773–6780. DOI: 10.1021/ic900718t
7. Wu, J. I.; Wannere, C. S.; Mo, Y.; Schleyer, P. v. R.*; Bunz, U. H. F.* "4n π Electrons but Stable: N,N-Dihydrodiazapentacenes" *J. Org. Chem.* **2009**, *74*, 4343–4349. DOI: 10.1021/jo900684c
6. Wu, J. I.; Pühlhofer, F. G.; Schleyer, P. v. R.*; Puchta, R.; Kiran, B.; Mauksch, M.; Hommes, N. J. R. v. E.; Alkorta, I.*; Elguero, J. "The Effect of Perfluorination on the Aromaticity of Benzene and Heterocyclic Six-Membered Rings" *J. Phys. Chem. A* **2009**, *113*, 6789–6794. DOI: 10.1021/jp902983r

5. Wu, J. I.; Dobrowolski, M. A.; Cyranski, M. K.;* Merner, B. L.; Bodwell, G. J.; Mo, Y.; Schleyer, P. v. R. "On the Aromatic Stabilization Energy of the 4N π Electron Pyrene" *Mol. Phys.* **2009**, *107*, 1177–1186. DOI: 10.1080/00268970902784918
4. Chen, Z. F.;* Jiao, H.; Wu, J. I.; Herges, R.; Zhang, S. B.; Schleyer, P. v. R.* "Homobenzene: Homoaromaticity and Homoantiaromaticity in Cycloheptatrienes" *J. Phys. Chem. A.* **2008**, *112*, 10586–10594. DOI: 10.1021/jp802496m
3. Dobrowolski, M. A.; Cyranski, M. K.;* Merner, B. L.; Bodwell, G. J.; Wu, J. I.; Schleyer, P. v. R. "Interplay of π -Electron Delocalization and Strain in [n](2,7)Pyrenophanes" *J. Org. Chem.* **2008**, *27*, 8001–8009. DOI: 10.1021/jo8014159
2. Miao, S.; Brombosz, S. M.; Schleyer, P. v. R.; Wu, J. I.; Barlow, S.; Marder, S. R.; Hardcastle, K. I.; Bunz, U. H. F.* "Are N,N-Dihydrodiazatetracene Derivatives Antiaromatic?" *J. Am. Chem. Soc.* **2008**, *130*, 7339–7344. DOI: 10.1021/ja077614p
1. Miao, S.; Schleyer, P. v. R.; Wu, J. I.; Hardcastle, K. I.; Bunz, U. H. F.* "A Thiadiazole-Fused N,N-Dihydroquinoxaline: Antiaromatic but Isolable" *Org. Lett.* **2007**, *9*, 1073–1076. DOI: 10.1021/ol070013i

INVITED CONFERENCE TALKS

1. American Society for Photobiology Webinar; June 4, 2026
2. ACS Green Chemistry, San Antonio, TX; June 15–19, 2026
3. CSC Toronto; May 24–28, 2026
4. Pacifichem 2025: Designed π -Systems—Syntheses, Properties, Theory, and Function, Honolulu, HI, USA; December 15–20, 2025
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
5. Pacifichem 2025: Chemical Concepts from Theory and Computation, Honolulu, HI, USA; December 15–20, 2025
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
6. Solvay Institutes Workshop: Aromaticity: Celebrating Benzene 200 Years, Brussels, Belgium; December 8–10, 2025
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
7. Chemistry World Webinars: 200 years of benzene, the peculiar molecular that defined classification (online); November 11, 2025
"Celebrating 200 Years of Benzene: The Human Story of Benzene"
8. Royal Institution Public Discourse, London, UK; July 4, 2025
"Celebrating 200 Years of Benzene: From Whale Oil to Aromaticity"
9. Aromaticity–2025, Merida, Mexico; January 27–30, 2025
"Finding Ways of Cheating Transition State Theory Better in Chemical Reactions"
10. Workshop on Magnetically Induced Currents (MAGIC), Chiemsee, Germany; September 9–13, 2024
"Finding Ways of Cheating Transition State Theory Better in Chemical Reactions"
11. International Conference on Excited-State Aromaticity and Antiaromaticity (ICESAA3), Dubrovnik, Croatia; July 7–10, 2024
"Finding Ways of Cheating Transition State Theory Better in Chemical Reactions"
12. Chemical Concepts from Theory and Computations, Lyon, France; December 10–13, 2023
"Antiaromaticity—The Fuzzier Brother? Historical Developments, Opportunities, and Challenges"

13. The Beilstein Organic Chemistry Symposium: π -Conjugated Molecules and Materials, Limburg, Germany; November 7–9, 2023
"Antiaromaticity—The Fuzzier Brother? Historical Developments, Opportunities, and Challenges"
14. Fall ACS: Symposium for "Chemical Bonding—Perspectives from Valence Bond Theories, San Francisco; August 13–17, 2023
"Antiaromaticity: The Fuzzier Brother? Historical Developments, Opportunities, and Challenges"
15. 3rd From Carbon-Rich Molecules to Carbon-Based Materials, Riviera Maya, Mexico; May 7–10, 2023
"A Carbon-Rich Buffet Talk"
16. Macrocyclic and Supramolecular Chemistry Early Career Virtual Symposium; March 30, 2023
"Molecules in a Hurry to Escape Antiaromaticity"
17. ACS Southwest Regional Meeting, Baton Rouge, LA, USA; November 6–9, 2022
"Molecules in a Hurry to Escape Antiaromaticity"
18. International Symposium on Novel Aromatic Compounds (ISNA), Warsaw, Poland; July 3–8, 2022
"Molecules in a Hurry to Escape Antiaromaticity"
19. Canadian Chemistry Conference and Exhibition (CCCE), Calgary, Canada; July 3–8, 2022
"Molecules in a Hurry to Escape Antiaromaticity"
20. International Symposium of Macrocyclic and Supramolecular Chemistry (ISMSC), Eugene, OR, USA; June 19–24, 2022
"Molecules in a Hurry to Escape Antiaromaticity"
21. Reaction Mechanisms Conference (RMC), Denver, CO, USA; June 12–15, 2022
"Molecules in a Hurry to Escape Antiaromaticity"
22. Pacifichem 2020: New Horizon of Main Group and Transition Metal Aromatics, Honolulu, HI, USA; December 16–21, 2020
"Molecules in a Hurry to Get Rid of Antiaromaticity"
23. Pacifichem 2020: Designed π -Electron Systems: Synthesis, Properties, Theory and Function, Honolulu, HI, USA; December 16–21, 2020
"Heteroatoms Here and There: Why it Matters for Designing π -Electronic Systems"
24. Fall ACS: Symposium on Orbital Models in Electronic Structure Theory, Atlanta, GA, USA; August 22–26, 2021
"Molecules in a Hurry to Get Rid of Antiaromaticity"
25. RSC Desktop Seminar with ChemComm Emerging Investigators (online); November 17, 2020
"Molecules in a Hurry to Get Rid of Antiaromaticity"
26. International Conference on Horizons in Hydrogen Bond Research (HBOND19), Amsterdam, The Netherlands; September 24–27, 2019
"Excited-State Proton Transfer: Molecules in a Hurry to Get Rid of Antiaromaticity"
27. International Conference on Excited-State Aromaticity and Antiaromaticity, Sigtuna, Sweden; July 29–August 2, 2019
"Excited-State Proton Transfer: Molecules in a Hurry to Get Rid of Antiaromaticity"
28. GRC—Physical Organic Chemistry, Holderness, NH, USA; June 23–28, 2019
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
29. Aromaticity—2018, Riviera Maya, Mexico; November 28–December 1, 2018
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"

30. European Symposium on Chemical Bonding, Oviedo, Spain; September 3–7, 2018
"Aromaticity-Modulated Noncovalent Interactions"
31. International Conference on Horizons in Hydrogen Bond Research (HBOND17), Jyväskylä, Finland; September 10–14, 2017
"Aromaticity-Modulated Hydrogen Bonding"
32. World Association of Theoretical and Computational Chemists (WATOC) Satellite Meeting: The Chemical Bonds in the 21st Century, Aachen, Germany; September 2–4, 2017
"Aromaticity-Modulated Hydrogen Bonding"
33. Female Excellence in Theoretical Chemistry, Putten, The Netherlands; June 22–25, 2017
"Aromaticity-Modulated Hydrogen Bonding"
34. International Symposium of Chemical Sciences Houston, TX, USA; January 19–21, 2017
"Achieving Short, Strong Hydrogen Bonds Through π -Conjugation Gain"
35. Congress of the International Society of Theoretical and Chemical Physics 2016 Conference, Grand Forks, ND, USA; July 17–22, 2016
"How do Enzymes Turn "Weak Acids" into Strong Proton Donors?"
36. Solvay Meeting: Conceptual Quantum Chemistry, Brussels, Belgium; April 4–8, 2016
"How Can Weak Acids Be Strong Hydrogen Bond Donors?"
37. Theory and Experiment: A Meeting at the Interface, Erlangen, Germany; March 30–April 1, 2016
"Low-Barrier Hydrogen Bonding in Enzyme Catalysis"
38. Accelerating Organic Reaction Discovery, Telluride, CO, USA; July 24–31, 2015
"Tuning Hydrogen Bonds with Aromaticity"
39. International Conference on Chemical Bonding, Kauai, HI, USA; July 2–6, 2015
"Aromaticity Tomorrow: Concepts and Design in Silico"
40. Southeastern Theoretical Chemistry Association Conference, Orlando, FL, USA; May 14–6, 2015
"Reconsidering Textbook Concepts of Carbocation Chemistry"

INVITED SEMINAR TALKS

1. Harvey Mudd College, Claremont, CA, USA; March 3, 2026
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
2. University of Texas, Dallas, TX, USA; February 4, 2026
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
3. University of Geneva, Geneva, Switzerland; December 4, 2025
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
4. University of Zurich, Zurich, Switzerland; December 1, 2025
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
5. Light as a Reagent and Product (Online lecture series); March 15, 2025
"Finding Ways of Cheating Transition State Theory Better in Chemical Reactions"
6. Rice University, Houston, TX, USA; October 23, 2024
"Finding Ways of Cheating Transition State Theory Better in Chemical Reactions"
7. Dartmouth College, Hanover, NH, USA; October 17, 2024
"Finding Ways of Cheating Transition State Theory Better in Chemical Reactions"

8. University of New South Wales, Sydney, Australia; March 16, 2023
"Molecules in a Hurry to Get Rid of Antiaromaticity"
9. Hope College, Holland, MI, USA; November 4, 2022
"Molecules in a Hurry to Get Rid of Antiaromaticity"
10. Calvin University, Grand Rapids, MI, USA; November 3, 2022
"Molecules in a Hurry to Get Rid of Antiaromaticity"
11. The University of Akron, Akron, OH, USA; April 26, 2022
"Molecules in a Hurry to Get Rid of Antiaromaticity"
12. Universidade Federal de São Carlos, São Carlos, Brazil; March 17, 2022
"Molecules in a Hurry to Get Rid of Antiaromaticity"
13. University of New Mexico, Albuquerque, NM, USA; April 16, 2021
"Molecules in a Hurry to Get Rid of Antiaromaticity"
14. University of South Carolina, Columbia, SC, USA; March 19, 2021
"Molecules in a Hurry to Get Rid of Antiaromaticity"
15. University of Pittsburg, Pittsburg, PA, USA; February 25, 2021
"Molecules in a Hurry to Get Rid of Antiaromaticity"
16. Auburn University, Auburn, AL, USA; January 21, 2021
"Molecules in a Hurry to Get Rid of Antiaromaticity"
17. Ohio State University, Columbus, OH, USA; January 11, 2021
"Molecules in a Hurry to Get Rid of Antiaromaticity"
18. University of Campinas, Campinas, São Paulo, Brazil; August 20, 2020
"Molecules in a Hurry to Get Rid of Antiaromaticity"
19. Iowa State University, Ames, IA, USA; March 6, 2020
"Excited-State Proton Transfer: Molecules in a Hurry to Get Rid of Antiaromaticity"
20. Swarthmore College, Swarthmore, PA, USA; February 6, 2020
"Excited-State Proton Transfer: Molecules in a Hurry to Get Rid of Antiaromaticity"
21. National Taiwan University, Center for Condensed Matter Sciences, Taipei, Taiwan; March 29, 2019
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
22. National Chiao-Tung University, Hsinchu, Taiwan; March 27, 2019
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
23. Emory University, Atlanta, GA, USA; March 6, 2019
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
24. University of Georgia, Athens, GA, USA; March 5, 2019
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
25. University of Memphis, Memphis, TN, USA; November 16, 2018
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
26. University of California, Los Angeles, Los Angeles, CA, USA; November 2, 2018
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
27. University of Oregon, Eugene, OR, USA; October 31, 2018
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"

28. University of California, Davis, Davis, CA, USA; October 30, 2018
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
29. University of North Texas, Denton, TX, USA; October 19, 2018
"Aromaticity-Modulated Noncovalent Interactions: When Counting Electrons Matter"
30. University of Houston, Houston, TX, USA; Jan. 31, 2018
"Finding Magic Numbers in Chemistry—The Picasso Way"
31. Leiden University, Leiden, The Netherlands; June 21, 2017
"Aromaticity-Modulated Hydrogen Bonding"

CONTRIBUTED TALKS

1. Pacifichem 2025: Programmed Self-Assembly of π -Conjugated Materials and Polymers, Honolulu, HI, USA; December 15–20, 2025
"Benzene in the Excited-State: A Playground for Photochemical Transformations"
2. International Conference on Horizons in Hydrogen Bond Research (HBOND15), Wrocław, Poland; September 13–18, 2015
"On the Nature of Low Barrier Hydrogen Bonds in Enzyme Catalysis"

RESEARCH FUNDING

1. PI: Judy I. Wu
"Unlocking Biologically-Relevant Opportunities Through Applications of Excited-State Aromaticity and Antiaromaticity"
Sponsor: National Institutes of Health (MIRA, R35) Funding period: 10/01/2025–09/30/2029
Amount: \$1,937,500
2. PI: Judy I. Wu
"Real-World Applications of the Antiaromaticity Concept: Assemblies, Synthetic Strategies, and Functional Properties"
Sponsor: National Science Foundation Funding period: 08/01/2023–07/31/2026
Amount: \$539,999
3. PI: Judy I. Wu
"Computational Explorations of Unconventional Approaches to Control Noncovalent Interactions"
Sponsor: National Institutes of Health (MIRA, R35) Funding period: 09/15/2019–07/31/2024
Amount: \$1,868,641
4. PI: Judy I. Wu
"CAREER: Computational Studies of Aromaticity-Modulated Interactions in Supramolecular Chemistry"
Sponsor: National Science Foundation Funding period: 03/01/2018–02/28/2023
Amount: \$585,012
5. PI: Judy I. Wu
Sponsor: Alfred P. Sloan Research Fellowship Funding period: 09/01/2020–08/31/2022
Amount: \$75,000

MENTORED STUDENTS AND POSTDOCS

Postdoctoral Researchers

1. Francisco Martins Summer 2023–present
2. Said Jalife Summer 2021–Summer 2025

3. Croix J. Laconsay Fall 2022–Fall 2024
4. Renan Viesser Summer 2021– Fall 2024
5. Lucas Karas Fall 2021–Fall 2022
6. Chia-Hua Wu Fall 2015–Summer 2020
7. Ranjita Das Spring 2017–Fall 2020

Graduate Students

1. Ume Salma Fall 2025–present
2. Muhammad U. Khan Fall 2023–present
3. João Schober Fall 2021–Fall 2025
Ph.D. dissertation: "Aromaticity Across States: A Framework for Reactivity and Structure in Organic Systems"
4. Lucas Karas Fall 2017–Summer 2021
Ph.D. dissertation: "Molecules in a Hurry to Get Rid of Antiaromaticity"
5. Zhili Wen Fall 2016–Summer 2021
Ph.D. dissertation: "A Renaissance of the (Anti)Aromaticity Concept in Modern Applications of Organic Chemistry"
5. Siyeon Im Fall 2018–Summer 2021
M.S. thesis: "Tuning Molecular Properties with External Stimuli: The Photochemistry of BODIPY and the Effect of Oriented-Electric Fields on Sigma Holes"
6. Hari R. Paudel Spring 2016–Summer 2020
Ph.D. dissertation: "Aromaticity-Modulated Interactions in Small Organic Molecules"
7. Mahsa Boraghi Spring 2017–Fall 2019
M.S. thesis: "Computational Studies of Self-Assembling Squaramide and Urea Derivatives "
8. Yu Zhang Fall 2016–Fall 2019
M.S. thesis: "The Effects of Aromaticity Gain in Multipoint Hydrogen-Bonded Arrays"

Undergraduate Students

1. Krista van Rickley Fall 2015–Spring 2016
2. Cindy Vasquez Fall 2015–Spring 2016
3. Khanh Nguyen Fall 2016–Spring 2017

High School Students

1. Michelle Lee Summer 2019
2. Emily Gaw Summer 2017

ACCOMPLISHMENTS OF MENTEES

- Muhammad Usama Gul Khan
College of NSM Conference Travel Award 2025
- Francisco A. Martins
Lindau Nobel Laureate Meeting in Chemistry selected attendee 2025
Merck Award for Underrepresented Chemists of Color 2024
- João V. Soares
Jay K. Kochi Graduate Fellowship 2025
Best Poster Award at ICESAA-3 2024
Best Poster Award at PhotoIUPAC-2024 2024
Cullen Graduate Fellowship Travel Grant 2023
College of NSM Conference Travel Award 2023
Poster Award at 11th Young Researcher's Conference 2023
- Said Jalife
Elected co-Chair for Gordon Research Seminar (GRS) –Physical Organic Chemistry 2025
2024 Research Corporation for Science Advancement (RCSA) Fellow 2024
Poster Award at LatinXChem 2023
- Croix J. Laconsay
ACS CAS Future Leaders 2023
- Lucas J. Karas
Best Dissertation Award (UH, Department of Chemistry) 2021
Jay K. Kochi Graduate Fellowship 2020
NSM Graduate Student Profile 2020
Graduate School Research Incentive Award 2018
- Chia-Hua Wu
Eby Nell McElrath Postdoctoral Fellowship 2018
Best poster prize at the Second European Symposium of Chemical Bonding 2018

COURSES TAUGHT

- CHEM 4364: *Advanced Organic Chemistry*
Fall 2025, Fall 2024, Fall 2023, Fall 2022, Fall 2021, Fall 2020, Fall 2019, Fall 2017, Fall 2016
- CHEM 6312: *Bonding*
Fall 2025, Fall 2024, Fall 2023, Fall 2022, Fall 2021, Fall 2020, Spring 2020, Fall 2017, Fall 2016, Fall 2015

TEACHING EVALUATION SUMMARY

Scoring is out of 5, with a score of 5 being the highest.

Numbers in parenthesis () are the average values for comparable chemistry courses in the department.

Semester	Course	Students Enrolled	Students Responses	Mean Score for “Teaching Effectiveness”	Mean Overall Score
Fall 2025	CHEM 6312: <i>Bonding</i>	18	13	4.62 (4.58)	4.73 (4.65)
Fall 2025	CHEM 4364: <i>Advanced Organic Chemistry</i>	7	5	4.40 (4.17)	4.40 (4.27)
Fall 2024	CHEM 6312:	16	13	4.46 (4.42)	4.65 (4.55)

	<i>Bonding</i>				
Fall 2024	CHEM 4364: <i>Advanced Organic Chemistry</i>	16	8	5.00 (3.62)	4.96 (3.85)
Fall 2023	CHEM 6312: <i>Bonding</i>	16	9	4.89 (4.24)	4.86 (4.41)
Fall 2023	CHEM 4364: <i>Advanced Organic Chemistry</i>	17	8	4.88 (3.97)	4.84 (4.10)
Fall 2022	CHEM 6312: <i>Bonding</i>	17	10	4.80 (4.38)	4.85 (4.49)
Fall 2022	CHEM 4364: <i>Advanced Organic Chemistry</i>	6	4	4.75 (3.74)	4.75 (3.86)
Fall 2021	CHEM 6312: <i>Bonding</i>	9	5	5.00 (4.22)	4.95 (4.35)
Fall 2021	CHEM 4364: <i>Advanced Organic Chemistry</i>	6	3	5.00 (3.26)	4.92 (3.41)
Fall 2020	CHEM 6312: <i>Bonding (online)</i>	9	5	4.48 (4.43)	4.57 (4.50)
Fall 2020	CHEM 4364: <i>Advanced Organic Chemistry (online)</i>	14	5	3.80 (2.93)	3.90 (3.21)
Spring 2020	CHEM 6312: <i>Bonding</i>	28	23	4.48 (4.43)	4.57 (4.50)
Fall 2019	CHEM 4364: <i>Advanced Organic Chemistry</i>	17	15	4.53 (3.56)	4.62 (3.72)
Fall 2017	CHEM 4364: <i>Advanced Organic Chemistry</i>	42	39	4.36 (3.89)	4.38 (4.10)
Fall 2017	CHEM 6312: <i>Bonding</i>	26	23	4.39 (4.19)	4.40 (4.22)
Fall 2016	CHEM 4364: <i>Advanced Organic Chemistry</i>	35	33	4.60 (3.50)	4.60 (4.20)
Fall 2016	CHEM 6312: <i>Bonding</i>	29	29	4.80 (4.60)	4.60 (4.60)
Fall 2015	CHEM 6312: <i>Bonding</i>	21	18	4.72 (4.11)	4.75 (3.89)

SERVICE ACTIVITIES

Departmental Service

- *Member*, Graduate Committee (Fall 2022–present).
- *Member*, Graduate Admissions Committee (Fall 2017–2024).
- *Search Committee*, Theoretical/Computational Chemistry Faculty Search (2023).
- *Search Committee*, Inorganic Chemistry Faculty Search Committee (2021).
- *Search Committee*, Bio-organic Chemistry Faculty Search Committee (2016).
- *Organic Division Seminar Coordinator* (Fall 2016–Spring 2017).

- *Departmental Seminar Coordinator* (Fall 2017–Spring 2018).
- *Committee Member* for Oral Research Progress, M.S. Thesis, and Ph.D. Dissertation examinations, in the Department of Chemistry and Department of Chemical and Biomolecular Engineering at the University of Houston, as well as other institutions.

Broader Scientific Community

- *Reviewer* of manuscripts (for 20+ journals)
- *Reviewer* for grant proposals:
 - a) American Chemical Society Petroleum Research Fund (ACS-PRF)
 - b) National Science Foundation (NSF)
 - c) National Institutes of Health (NIH)
 - d) European Research Council (ERC)
 - e) Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek)
- *Discussion Leader* for the Gordon Research Conference (GRC)–Physical Organic Chemistry (2017).
- *Advisory Board Member* for *Chemical Communications* (2020–present)
- *Editorial Board Member* for *Organic and Biomolecular Chemistry* (2020–present)
- *Associate Editor* for the *Journal of Physical Organic Chemistry* (2020–present)
- *Governing Board Member* for the Reaction and Mechanisms Conferences (RMC) (2022–2028)
- *Conference Chair* for the “International Conference of Excited-State (Anti)aromaticity (ICESAA)” (2022)
- *Committee Member* for the IUPAC Division III SSMC (Structural and Mechanistic Chemistry) (2024–present)
- *Editorial Advisory Board* for the *Journal of Computational Chemistry* (2025)
- *Co-Vice Chair*, Gordon Research Conference (GRC)–Physical Organic Chemistry (2025)
- *Co-Chair*, Gordon Research Conference (GRC)–Physical Organic Chemistry (2027)
- *Co-Chair*, Reaction Mechanisms Conference (RMC) at Hope College, Holland MI (2026)
- Instructional and Clinical Faculty Promotion Committee (2025–present)

FIVE SELECTED PUBLICATIONS (*post-tenure*)

- Viesser, R. V.; Donald, C. P.; May, J. A.; Wu, J. I.* "Can Twisted Double Bonds Facilitate Stepwise [2+2] Cycloadditions?" *Org. Lett.* **2024**, *26*, 3778–3783. DOI: [10.1021/acs.orglett.4c00879](https://doi.org/10.1021/acs.orglett.4c00879)
- Karas, L. J.; Jalife, S.; Viesser, R. V.; Soares, J. V.; Haley, M. M.*; Wu, J. I.* "Tetra-*tert*-butyl-*s*-indacene is a Bond Localized C_{2h} Structure and a Challenge for Computational Chemistry" *Angew. Chem. Int. Ed.* **2023**, *62*, e202307379. DOI: [10.1002/anie.202307379](https://doi.org/10.1002/anie.202307379)
- Meng, J.; Robles, A.; Jalife, S.; Ren, W.; Zhang, Y.; Zhao, L.; Liang, Y.; Wu, J. I.*; Miljanic, O. S.*; Yao, Y.* "Cyclotetrazolyl Derivatives for Electrochemical Lithium-Ion Storage" *Angew. Chem. Int. Ed.* **2023**, *62*, e202300892. DOI: [10.1002/anie.202300892](https://doi.org/10.1002/anie.202300892)
- Karas, L. J. *; Wu, J. I.* "Baird's Rules at the Tipping Point" *Nat. Chem.* **2022**, *14*, 723-725. DOI: [10.1038/s41557-022-00988z](https://doi.org/10.1038/s41557-022-00988z)

- Karas, L. J.*; Wu, C. H.; Wu, J. I.* "Barrier-Lowering Effects of Baird Antiaromaticity in Photoinduced Proton-Coupled Electron Transfer (PCET) Reactions" *J. Am. Chem. Soc.* **2021**, *143*, 17970-17974. DOI: [10.1021/jacs.1c09324](https://doi.org/10.1021/jacs.1c09324)