Plant Biology Laboratories
612 Wilson Road
East Lansing, MI 48824
(217) 766-3323
vermaasj@msu.edu
vermaaslab.github.io
0000-0003-3139-6469
Josh Vermaas
jvermaas

Josh Vermaas

Education

2016 **Ph.D. in Biophysics**, *University of Illinois at Urbana-Champaign*, Thesis title: Interfacial modulation of protein function explored through atomistic molecular dynamics simulation

2010 **B.S. in Physics, Biochemistry, and Computational Math**, *Arizona State University*, summa cum laude

Research Experience

2021-Present **Assistant Professor**, *Michigan State University*, East Lansing, MI

Assistant professor in the plant research laboratory, using molecular simulation tools to study photosynthetic systems,[14,22] to deliver renewable energy and sustainable bioproducts,[4,12,20,28,29,35] and to generally understand plant[10,17,24,26,30,31] or electron transfer[18,25] processes at molecular detail. Our laboratory also develops tools to facilitate this research.[19,32,36] We are also active in collaborative Cryo-EM projects,[38,40] and other diverse molecular systems.[8,16,37]

2020–2020 **Computational Scientist**, *Oak Ridge Laboratory*, Oak Ridge, TN

INCITE liaison for NAMD-related projects,[45] and ensuring application readiness for NAMD on upcoming supercomputing systems. Also contributed to developing an accelerated drug-discovery pipeline for COVID-19 research.[27,41–44,47]

2016–2019 **Director's Postdoctoral Fellow**, *National Renewable Energy Laboratory*, Golden, CO

Postdoctoral work under the mentorship of Michael Crowley and Gregg Beckham, with a number of projects, principally related to lignin utilization,[46,50–52,54,56] membrane permeability,[34,52,57,59] and enzyme structure and mechanism.[53,55]

2010-2016 **Graduate Student**, *University of Illinois at Urbana-Champaign*, Urbana, IL

Graduate research performed with Emad Tajkhorshid as advisor. Research projects include methods development[39,60,64,69,74] and application[61,73,75] of accelerated and conventional[61,62,66,67] membrane models, adding capabilities to the molecular dynamics visualization program VMD,[65] and simulations related to interactions within the photosynthetic reaction center of *Rhodobacter sphaeroides*[72] or cytochrome bo_3.[63]

Fall 2015 **Sandia Graduate Fellow**, *Sandia National Laboratory*, Albuqueque, NM

On-site research supervised by Susan Rempe on the connection between substrate loading conditions and conformational change in the antibiotic resistance transporter EmrE.[58]

Summer 2014 **Computational Science Graduate Fellow**, *Oak Ridge National Laboratory*, Oak Ridge, TN

Analyzed a microsecond long multimillion atom lignocellulose system under the supervision of Loukas Petridis and Jeremy Smith, including novel visualization techniques.[68]

Summer 2012 **Computational Science Graduate Fellow**, *National Renewable Energy Laboratory*, Golden, CO

Developed and applied force fields for oxidized carbohydrates to gague their impact on cellulose decrystallization and cellulase inhibition.[71] Supervised by Gregg Beckham, Michael Crowley, and Christina Payne. This was the foundation work for more recent studies for how oxidation changes cellulose crystallinity.[33]

2007-2010 **Undergraduate Researcher**, *Arizona State University*, Tempe, AZ

Diverse projects across the physics department to gague my interests across research fields and techniques,[76] with supervision by Bruce Doak and Ralph Chamberlin. Projects in biology included a research thesis developing computational kinetic models based on experimentally determined metabolic fluxes.

Current Research Support

2024- OLCF compute allocation: bip251

2022- NERSC compute allocation: m3968, m4325

2021- ACCESS allocation: TG-BIO210061

2023-2026 DOE BES: DE-FG02-91ER20021, 1 postdoc FTE

2022-2026 DOE EFRC: DE-SC0023395, 1 postdoc FTE

2024-2029 NIH R35: R35GM155317, $1.8M

2025 DOE BRC: DE-SC0018409, 1 postdoc FTE

2025-2028 NSF: 2520985, $227k

Postgraduate Awards

2025 OpenEye Cadence Molecular Sciences Outstanding Junior Faculty Award in Computational Chemistry

2016-2019 Director's Postdoctoral Fellow, National Renewable Energy Laboratory

2018 Wiley Computing in Chemistry Outstanding Postdoc Award

2014-2016 Sandia National Laboratories Excellence in Science and Engineering Research Program Fellowship

2011-2014 DOE Computational Sciences Graduate Fellowship

2010-2011 NIH Biophysics Trainee

Service

2025 Chair for Midwest/Southeastern Regional Photosynthesis Meeting

2024 Co-chair for Midwest/Southeastern Regional Photosynthesis Meeting

2023 Lignin co-Chair for the XVI Plant Cell Wall Meeting

2022 NAMD application judge and mentor for the Student Cluster Competition associated with the SuperComputing conference

2021 Nationwide Science Bowl volunteer

2020- Reviewer for ACCESS/XSEDE supercomputing allocations

2020 Moderator for Tennessee Science Bowl

2017-2019 Special awards and physics judge for the Denver Metro and Washington/Morgan Bicounty science fairs

2018-2019 Scorekeeper or moderator for the Colorado regional high school science bowl

2016- Reviewer for several ACS, RSC, Cell Press, Elsevier, Springer and MDPI journals

Publications

(1) Raza, S.; Yadav, N. S.; Jussupow, A.; Kerfeld, C. A.; Feig, M.; **Vermaas, J. V.** Molecular Modeling and Molecular Dynamics Simulation of a Packed and Intact Bacterial Microcompartment. *J. Phys. Chem. B* **2025**, acs.jpcb.5c05178, DOI: 10.1021/acs.jpcb.5c05178.

(2) Raza, S.; Sievertsen, T. H.; Jafari, M.; **Vermaas, J. V.** Dynamics and Structural Responses to Cis-Trans Isomerization in Bacterial Lipid Bilayers, 2025, DOI: 10.26434/chemrxiv-2025-jm423.

(3) Fiebig, O. C.; Schmidt, G. P.; Yadav, N. S.; Wang, D.; Nairat, M.; Tang, H.; Ji, Y.; Prima, V.; Sturgis, J. N.; **Vermaas, J. V.**; Harris, D.; Schlau-Cohen, G. S. Anionic Lipids Regulate the Light-Harvesting Complex 1-Reaction Center Photocycle in Purple Bacteria. *J. Am. Chem. Soc.* **2025**, *147*, 36706–36716, DOI: 10.1021/jacs.5c12301.

(4) Barkarar, M.; Sarkar, D.; Hunt, C. G.; **Vermaas, J. V.** Quantifying Chemically Modified Acetylation Induced Changes in the Plant Secondary Cell Wall Structure and Dynamics. *Biomacromolecules* **2025**, *26*, 5645–5656, DOI: 10.1021/acs.biomac.5c00391.

(5) Whitehead, P.; Raza, S.; Miklaszewska, M.; Hornung, E.; Herrfurth, C.; Nadella, R.; Clews, A.; Doner, N. M.; Dyer, J. M.; Mullen, R.; Feussner, I.; **Vermaas, J. V.**; Chapman, K. Jojoba LIPID DROPLET-ASSOCIATED PROTEIN 1 Facilitates the Efficient Packaging of Wax Esters into Lipid Droplets. *Plant Cell* **2025**, *37*, koaf115, DOI: 10.1093/plcell/koaf115.

(6) Singh, N. K.; **Vermaas, J.** Molecular Insights into Zymomonas Mobilis Membrane Interactions with Lignocellulosic Inhibitors, 2025, DOI: 10.26434/chemrxiv-2025-039zg.

(7) Yadav, N.; Raza, S.; Wang, Y.; Landa, J.; Hegg, E.; Hausinger, R.; **Vermaas, J.** Quantifying Selective Metabolite Transport for the Bacterial Microcompartment from Haliangium Ochraceum with Molecular Dynamics Simulations, 2025, DOI: 10.26434/chemrxiv-2025-4x39v.

(8) Boren, D. M.; Kredi, S.; Positselskaya, E.; Giladi, M.; Haitin, Y.; **Vermaas, J. V.** Identifying and Quantifying Membrane Interactions of the Protein Human *Cis* -prenyltransferase. *Protein Science* **2025**, *34*, e70167, DOI: 10.1002/pro.70167.

(9) Okumoto, S.; Maharjan, B.; Rajan, N.; Xi, J.; Baerson, S. R.; Rooney, W. L.; Thomson, M. J.; Odeny, D. A.; Yoshihashi, T.; **Vermaas, J. V.**; Subbarao, G. V. Synthesis, Function, and Genetic Variation of Sorgoleone, the Major Biological Nitrification Inhibitor in Sorghum. *Crop Science* **2025**, *65*, e70066, DOI: 10.1002/csc2.70066.

(10) Roze, L. V.; Antoniak, A.; Sarkar, D.; Liepman, A. H.; Tejera-Nieves, M.; **Vermaas, J. V.**; Walker, B. J. Increasing Thermostability of the Key Photorespiratory Enzyme Glycerate 3-kinase by Structure-based Recombination. *Plant Biotechnology Journal* **2025**, *23*, 454–466, DOI: 10.1111/pbi.14508.

(11) Zuo, X.; Jussupow, A.; Ponomarenko, N. S.; Grant, T. D.; Tefft, N. M.; Yadav, N. S.; Range, K. L.; Ralston, C. Y.; TerAvest, M. A.; Sutter, M.; Kerfeld, C. A.; **Vermaas, J. V.**; Feig, M.; Tiede, D. M. Structure Characterization of Bacterial Microcompartment Shells via X-ray Scattering and Coordinate Modeling: Evidence for Adventitious Capture of Cytoplasmic Proteins. *ACS Appl. Bio Mater.* **2025**, *8*, 2090–2103, DOI: 10.1021/acsabm.4c01621.

(12) Young, E. J.; Kirst, H.; Dwyer, M. E.; **Vermaas, J. V.**; Kerfeld, C. A. Quantitative Measurement of Molecular Permeability to a Synthetic Bacterial Microcompartment Shell System. *ACS Synth. Biol.* **2025**, *14*, 1404–1413, DOI: 10.1021/acssynbio.4c00290.

(13) Sutter, M.; Utschig, L. M.; Niklas, J.; Paul, S.; Kahan, D. N.; Gupta, S.; Poluektov, O. G.; Ferlez, B. H.; Tefft, N. M.; TerAvest, M. A.; Hickey, D. P.; **Vermaas, J. V.**; Ralston, C. Y.; Kerfeld, C. A. Electrochemical Cofactor Recycling of Bacterial Microcompartments. *Proc. Natl. Acad. Sci. U.S.A.* **2024**, *121*, e2414220121, DOI: 10.1073/pnas.2414220121.

(14) Sarkar, D.; Maffeo, C.; Sutter, M.; Aksimentiev, A.; Kerfeld, C.; **Vermaas, J.** Atomic View of Photosynthetic Metabolite Permeability Pathways and Confinement in Cyanobacterial Carboxysomes. *Proc. Natl. Acad. Sci.* **2024**, *121*, e2402277121, DOI: 10.1073/pnas.2402277121.

(15) Raza, S.; Sarkar, D.; Chan, L. J. G.; Mae, J.; Sutter, M.; Petzold, C. J.; Kerfeld, C. A.; Ralston, C. Y.; Gupta, S.; **Vermaas, J. V.** Comparative Pore Structure and Dynamics for Bacterial Microcompartment Shell Protein Assemblies in Sheets or Shells. *ACS Omega* **2024**, *9*, 35503–35514, DOI: 10.1021/acsomega.4c02406.

(16) Dickwella Widanage, M. C.; Gautam, I.; Sarkar, D.; Mentink-Vigier, F.; **Vermaas, J. V.**; Ding, S.-Y.; Lipton, A. S.; Fontaine, T.; Latgé, J.-P.; Wang, P.; Wang, T. Adaptative Survival of Aspergillus Fumigatus to Echinocandins Arises from Cell Wall Remodeling beyond $\beta-$1,3-Glucan Synthesis Inhibition. *Nat Commun* **2024**, *15*, 6382, DOI: 10.1038/s41467-024-50799-8.

(17) Weraduwage, S. M.; Whitten, D.; Kulke, M.; Sahu, A.; **Vermaas, J. V.**; Sharkey, T. D. The Isoprene-responsive Phosphoproteome Provides New Insights into the Putative Signalling Pathways and Novel Roles of Isoprene. *Plant Cell & Environment* **2024**, *47*, 1099–1117, DOI: 10.1111/pce.14776.

(18) Parson, W. W.; Huang, J.; Kulke, M.; **Vermaas, J. V.**; Kramer, D. M. Electron Transfer in a Crystalline Cytochrome with Four Hemes. *J. Chem. Phys.* **2024**, *160*, 065101, DOI: 10.1063/5.0186958.

(19) Sethuraman, V.; **Vermaas, J. V.**; Liang, L.; Ragauskas, A. J.; Smith, J. C.; Petridis, L. Atomistic Simulations of Polydisperse Lignin Melts Using Simple Polydisperse Residue Input Generator. *Biomacromolecules* **2024**, *25*, 767–777, DOI: 10.1021/acs.biomac.3c00951.

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(21) Raza, S.; Sievertsen, T. H.; Okumoto, S.; **Vermaas, J. V.** Passive Permeability Controls Synthesis for the Allelochemical Sorgoleone in Sorghum Root Exudate. *Phytochemistry* **2024**, *217*, 113891, DOI: 10.1016/j.phytochem.2023.113891.

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(23) Sarkar, D.; Lee, H.; Vant, J. W.; Turilli, M.; **Vermaas, J. V.**; Jha, S.; Singharoy, A. Adaptive Ensemble Refinement of Protein Structures in High Resolution Electron Microscopy Density Maps with Radical Augmented Molecular Dynamics Flexible Fitting. *J. Chem. Inf. Model.* **2023**, *63*, 5834–5846, DOI: 10.1021/acs.jcim.3c00350.

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(25) Kulke, M.; Olson, D. M.; Huang, J.; Kramer, D. M.; **Vermaas, J. V.** Long-Range Electron Transport Rates Depend on Wire Dimensions in Cytochrome Nanowires. *Small* **2023**, *19*, 2304013, DOI: 10.1002/smll.202304013.

(26) Kulke, M.; Weraduwage, S. M.; Sharkey, T. D.; **Vermaas, J. V.** Nanoscale Simulation of the Thylakoid Membrane Response to Extreme Temperatures. *Plant Cell & Environment* **2023**, *46*, 2273–2589, DOI: 10.1111/pce.14609.

(27) Rogers, D. M.; Agarwal, R.; **Vermaas, J. V.**; Smith, M. D.; Rajeshwar, R. T.; Cooper, C.; Sedova, A.; Boehm, S.; Baker, M.; Glaser, J.; Smith, J. C. SARS-CoV2 Billion-Compound Docking. *Sci Data* **2023**, *10*, 173, DOI: 10.1038/s41597-023-01984-9.

(28) Sarkar, D.; Bu, L.; Jakes, J. E.; Zieba, J. K.; Kaufman, I. D.; Crowley, M. F.; Ciesielski, P. N.; **Vermaas, J. V.** Diffusion in Intact Secondary Cell Wall Models of Plants at Different Equilibrium Moisture Content. *The Cell Surface* **2023**, 100105, DOI: 10.1016/j.tcsw.2023.100105.

(29) Sarkar, D.; Santiago, I. J.; **Vermaas, J. V.** Atomistic Origins of Biomass Recalcitrance in Organosolv Pretreatment. *Chemical Engineering Science* **2023**, 118587, DOI: 10.1016/j.ces.2023.118587.

(30) Raza, S.; Miller, M.; Hamberger, B.; **Vermaas, J. V.** Plant Terpenoid Permeability through Biological Membranes Explored via Molecular Simulations. *J. Phys. Chem. B* **2023**, *127*, 1144–1157, DOI: 10.1021/acs.jpcb.2c07209.

(31) Weraduwage, S. M.; Sahu, A.; Kulke, M.; **Vermaas, J. V.**; Sharkey, T. D. Characterization of Promoter Elements of Isoprene-responsive Genes and the Ability of Isoprene to Bind START Domain Transcription Factors. *Plant Direct* **2023**, *7*, e483, DOI: 10.1002/pld3.483.

(32) Sarkar, D.; Kulke, M.; **Vermaas, J. V.** LongBondEliminator: A Molecular Simulation Tool to Remove Ring Penetrations in Biomolecular Simulation Systems. *Biomolecules* **2023**, *13*, 107, DOI: 10.3390/biom13010107.

(33) Uchiyama, T.; Uchihashi, T.; Ishida, T.; Nakamura, A.; **Vermaas, J. V.**; Crowley, M. F.; Samejima, M.; Beckham, G. T.; Igarashi, K. Lytic Polysaccharide Monooxygenase Increases Cellobiohydrolases Activity by Promoting Decrystallization of Cellulose Surface. *Sci. Adv.* **2022**, *8*, eade5155, DOI: 10.1126/sciadv.ade5155.

(34) **Vermaas, J. V.**; Crowley, M. F.; Beckham, G. T. Molecular Simulation of Lignin-Related Aromatic Compound Permeation through Gram-Negative Bacterial Outer Membranes. *Journal of Biological Chemistry* **2022**, *298*, 102627, DOI: 10.1016/j.jbc.2022.102627.

(35) Andeme Ela, R. C.; Raza, S.; Heiden, P. A.; **Vermaas, J. V.**; Ong, R. G. Lignin Nanoparticle Morphology Depends on Polymer Properties and Solvent Composition: An Experimental and Computational Study. *ACS Appl. Polym. Mater.* **2022**, *4*, 6925–6935, DOI: 10.1021/acsapm.2c00854.

(36) Kulke, M.; **Vermaas, J. V.** Reversible Unwrapping Algorithm for Constant-Pressure Molecular Dynamics Simulations. *J. Chem. Theory Comput.* **2022**, *18*, 6161–6171, DOI: 10.1021/acs.jctc.2c00327.

(37) Ayala Mariscal, S. M.; Pigazzini, M. L.; Richter, Y.; Özel, M.; Grothaus, I. L.; Protze, J.; Ziege, K.; Kulke, M.; ElBediwi, M.; **Vermaas, J. V.**; Colombi Ciacchi, L.; Köppen, S.; Liu, F.; Kirstein, J. Identification of a HTT-specific Binding Motif in DNAJB1 Essential for Suppression and Disaggregation of HTT. *Nat Commun* **2022**, *13*, 4692, DOI: 10.1038/s41467-022-32370-5.

(38) Vant, J. W.; Sarkar, D.; Nguyen, J.; Baker, A. T.; **Vermaas, J. V.**; Singharoy, A. Exploring Cryo-Electron Microscopy with Molecular Dynamics. *Biochem. Soc. Trans.* **2022**, *50*, 569–581, DOI: 10.1042/BST20210485.

(39) **Vermaas, J. V.**; Mayne, C. G.; Shinn, E.; Tajkhorshid, E. Assembly and Analysis of Cell-Scale Membrane Envelopes. *J. Chem. Inf. Model.* **2022**, *62*, 602–617, DOI: 10.1021/acs.jcim.1c01050.

(40) Baker, A. T.; Boyd, R. J.; Sarkar, D.; Teijeira-Crespo, A.; Chan, C. K.; Bates, E.; Waraich, K.; Vant, J.; Wilson, E.; Truong, C. D.; Lipka-Lloyd, M.; Fromme, P.; **Vermaas, J.**; Williams, D.; Machiesky, L.; Heurich, M.; Nagalo, B. M.; Coughlan, L.; Umlauf, S.; Chiu, P.-L.; Rizkallah, P. J.; Cohen, T. S.; Parker, A. L.; Singharoy, A.; Borad, M. J. ChAdOx1 Interacts with CAR and PF4 with Implications for Thrombosis with Thrombocytopenia Syndrome. *Sci. Adv.* **2021**, *7*, eabl8213, DOI: 10.1126/sciadv.abl8213.

(41) Glaser, J.; **Vermaas, J. V.**; Rogers, D. M.; Larkin, J.; LeGrand, S.; Boehm, S.; Baker, M. B.; Scheinberg, A.; Tillack, A. F.; Thavappiragasam, M.; Sedova, A.; Hernandez, O. High-Throughput Virtual Laboratory for Drug Discovery Using Massive Datasets. *The International Journal of High Performance Computing Applications* **2021**, *35*, 452–468, DOI: 10.1177/10943420211001565.

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Invited Presentations

2024 Cell-Scale Computational Modeling Methodologies for Living Membranes, *Advanced Computational Workshop Simulations and Visualization of a Minimal Bacterial Cell* University of Illinois at Urbana-Champaign

2023 Atomically Resolved Fluxes Across Protein Shells in Photosynthesis and Beyond, *Biophysics Seminar Series* University of Maryland

2023 Tracking Carbon Diffusion in Photosynthesis from a Molecular Perspective, Eastern Michigan University

2022 Tracking Carbon Diffusion in Photosynthesis from a Molecular Perspective, *Biophysics Seminar Series* Arizona State University

2022 Exploring biological mechanisms and materials through molecular simulation for a sustainable bioeconomy, *IOB Seminar Series* University of Georgia

2022 Tracking Carbon Diffusion in Photosynthesis from a Molecular Perspective, National Renewable Energy Laboratory

2021 Exploring biological mechanisms and materials through molecular simulation for a sustainable bioeconomy *School of Molecular Sciences Seminar* Arizona State University

2021 Exploring biological mechanisms and materials to enable the bioeconomy through computational physics *Theoretical and Computational Biophysics Group Seminar* University of Illinois at Urbana-Champaign

Conference Presentations (Past 3 years only)

2025 Standard Binding Free Energy Estimates Between Photosystem I and Ferredoxin Isoforms in *Chlamydomonas reinhardtii* Using Enhanced Sampling Molecular Simulations **Oral Presentation** *Biophysical Society 2025 Annual Meeting* Los Angeles, CA

2025 Molecular Simulation of Photosystem II and Phycobilisome Interactions in Cyanobacteria *Biophysical Society 2025 Annual Meeting* Los Angeles, CA

2024 Atomically Resolved Fluxes Across Protein Shells in Photosynthesis and Beyond **Oral Presentation** *Center for Integrated Nanotechnologies 2024 Annual User Conference* Santa Fe, NM

2024 Isoprenoid membrane insertion is contingent on binding pose for the human protein cis-Prenyltransferase **Oral Presentation** *ACS Fall 2024* Denver, CO

2024 Atomic view of photosynthetic metabolite permeability pathways and confined catalysis in cyanobacterial carboxysomes *ACS Fall 2024* Denver, CO

2024 Lignin Modeling and Modification *in silico* for Enhanced Biomaterials **Oral Presentation** *Lignin Gordon Research Conference* Easton, MA

2024 Adventures in Permeability and Binding in the Vermaas Lab **Oral Presentation** *NAMD Developer's Workshop 2024* Chicago, IL

2024 Atomic View of Photosynthetic Metabolite Permeability Pathways and Confinement in Cyanobacterial Carboxysomes **Oral Presentation** *2nd North American Photosynthesis Congress* Atlanta, GA

2023 Photosynthetic energy capture, conversion, and storage: from fundamental mechanisms to modular engineering **Oral Presentation** *DOE Photosynthesis PI Meeting* Rockville, MD

2023 Quantifying Passive Permeation of Terpenoids Across Lipid Bilayers with Molecular Simulation **Oral Presentation** *TERPNET-2023* Davis, CA

2023 Quantifying Mesophyll Conductance and Carbon Assimilation with Molecular Dynamics Simulations *Photosynthesis Gordon Research Conference* Newry, ME

2023 Nanoscale Interactions of Isoprene with Membrane Bilayers and Proteins **Oral Presentation** *Phytochemical Society of North America Annual Meeting* East Lansing, MI

2023 Comparing cell wall and membrane contributions to mesophyll conductance in plants **Oral Presentation** *XVI Plant Cell Wall Meeting* Malaga, Spain

2023 Exploring Protein Thermostability in Plant Photorespiratory Pathways **Keynote** *Midwest Conference on Protein Folding, Assembly and Molecular Motions* Notre Dame

2023 Tracking Photosynthetic Metabolites Across Bacterial Microcompartments at Atomic Resolution **Keynote** *Eastern Regional Photosynthesis Meeting* Woods Hole, MA

2022 Quantifying temperature dependent mesophyll conductance within leaf plasma membranes **Oral Presentation** *ACS Fall 2022 National Meeting* Chicago, IL

2022 Predicting Lignin Depolymerization Pathways and Products at High Temperature through Molecular Dynamics Simulation *Lignin Gordon Conference* Easton, MA

2022 Exploring Lignin Interactions Within the Cell Wall Through Computational Microscopy **Oral Presentation** *IX Cell Wall Research Conference* East Lansing, MI

2022 Tracking Photosynthetic Reactant and Product Diffusion Across Cyanobacterial Carboxysomes on Exascale Computing Platforms **Oral Presentation** *Biophysics at the Dawn to Exascale Computing* Hamburg, Germany

2022 Measuring heme-hopping electron transfer through a biological nanowire *Biophysical Society 66th Annual Meeting* San Francisco, CA

2022 Measuring heme-hopping electron transfer through a biological nanowire *Computational Methods in Photosynthesis* Virtual Meeting

Mentoring Relationships

Postdoctoral Scholars

Jan. 2021-Apr. 2023 Martin Kulke, who is now a postdoc in Munich

Jan. 2021- Saad Raza

May 2021-Dec. 2024	Daipayan Sarkar, who is now a staff scientist at NIH
July 2023-	Neetu Yadav
Nov. 2024-	Nitin Singh

Graduate Students

Mar. 2022-	Duncan Boren
Aug. 2024-	Jinxin Lin
Mar. 2025-	Siva Damaraju

Undergraduate Students

Jan. 2021-May 2024	Dayna Olson
Jan. 2021-Dec. 2022	Jessica Egleston
May 2021-Aug. 2021	Mykayla Miller (SROP)
May 2021-Aug. 2021	Ian Santiago (SROP)
Jan. 2022-May 2024	Troy Sievertsen
Feb. 2022-May 2024	Rohith Nadella
Aug. 2022-	Jay Scott
Mar. 2023-	Murtaza Barkarar
May 2023-Aug. 2023	Israel Davidson (ACRES)
Aug. 2023-	Andrew Strong
June 2024-	Shubh Gorantla

Research Assistants

July 2024-Aug. 2024	Keerthi Gogineni
July 2024-	Sumayya

High School Students

June 2023-Aug. 2023	Helen Tang (HSHSP)
June 2024-Aug. 2024	Zachary Alvord (HSHSP)

Graduate Student Committees

Brandizzi	Ethan Thibault
Dickson	Ceren Kilinc
Hsu	Isaiah Kaufman
Wang	Wangchen Zhao (Defense Fall 2023), Priya Sahu
Ducat/Walker	Luke Sharpe