D. Vale Cofer-Shabica, Ph.D.

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139 9th Street, Providence, RI 02906

Education & Training

Brown University — Providence, RI
Ph.D. Physical Chemistry — 2018
Potential landscape perspectives on roaming: Insights on formaldehyde from geodesic paths

Brown University, H. W. Sheridan Center for Teaching and Learning — Providence, RI
Certificate program: *Reflective Teaching* — 2013–2014

Brown University — Providence, RI
Sc.B. Chemical Physics — 2005–2009

Selected Honors & Awards

William R. Potter Prize for Doctoral Thesis of Outstanding Merit — 2018
Brown University Department of Chemistry, Providence RI

2017 Editors' Choice article: Cofer-Shabica and Stratt [2017] — 2018
Journal of Chemical Physics

Elaine Chase Award for Leadership and Service — 2017
Brown University Department of Chemistry, Providence RI

William T. King Prize for Teaching — 2014
Brown University Department of Chemistry, Providence RI

Teaching Fellowship — 2013–2015
Brown University Department of Chemistry, Providence RI

Undergraduate Teaching and Research Award — 2008
Brown University, Providence RI

Publications & Posters

D. Vale Cofer-Shabica and Richard M. Stratt. What is special about how roaming chemical reactions traverse their potential surfaces? Differences in geodesic paths between roaming and non-roaming events. *The Journal of Chemical Physics*, 146(21):214303, 2017. doi:10.1063/1.4984617.

J. M. Budarz, M. P. Minitti, **D. V. Cofer-Shabica**, B. Stankus, A. Kirrander, J. B. Hastings, and P. M. Weber. Observation of femtosecond molecular dynamics via pump-probe gas phase x-ray scattering. *Journal of Physics B: Atomic Molecular and Optical Physics*, 49(3), 2016. doi:10.1088/0953-4075/49/3/034001.

D. Vale Cofer-Shabica and Richard M. Stratt. The geometries of potential energy landscapes imply dynamical signatures for roaming reactions. Boston, MA, 2015. American Chemical Society, 250th National Meeting. PHYS 554.

Michael P. Minitti, James M. Budarz, Adam Kirrander, Joseph Robinson, Thomas J. Lane, Daniel Ratner, Kenichiro Saita, Thomas Northey, Brian Stankus, **Vale Cofer-Shabica**, Jerome Hastings, and Peter M. Weber. Toward structural femtosecond chemical dynamics: Imaging chemistry in space and time. *Faraday Discussions*, 171:81–91, 2014. doi:10.1039/c4fd00030g.

TALKS

D. Vale Cofer-Shabica. What is special about how roaming chemical reactions traverse their potential surfaces? differences in geodesic paths between roaming and non-roaming events. Providence, RI, March 2017. Brown University, Physical Chemistry Tea Session.

D. Vale Cofer-Shabica. Global energy landscape perspectives on roaming: Geodesics paths on the formaldehyde photodissociation landscape. Providence, RI, February 2016. Brown University, Physical Chemistry Tea Session.

D. Vale Cofer-Shabica. Roaming formaldehyde photodissociation: Shining a light on a novel reaction mechanism with geodesics. Providence, RI, January 2015. Brown University, Physical Chemistry Tea Session.

D. Vale Cofer-Shabica. Wandering molecules. Providence, RI, 2014. Brown University, Research Matters. `https://youtu.be/X3xyMP9EAco`. **Invited**.

D. Vale Cofer-Shabica. Roaming formaldehyde photodissociation: Novel reaction mechanism explained by geodesics? Providence, RI, December 2013. Brown University, Physical Chemistry Tea Session.

D. Vale Cofer-Shabica. Finding your way through service. Charleston, SC, 2010. Academic Magnet High School, Commencement Address. **Invited**.

TEACHING

Banneker and Aztlán Institute, Harvard University	Cambridge, MA
Instructor: *How to think about programming for astrophysicists*	2018
Brown University	Providence, RI
Problem Session Facilitator, Equilibrium, Rate, and Structure	2014, 2015
Problem Session Facilitator, Introductory Chemistry	2013, 2014
Tutorial Assistant, Equilibrium, Rate, and Structure	2013
Laboratory Teaching Assistant, Equilibrium, Rate, and Structure	2012
Kaplan Tutoring Services	Barrington, RI
Science, Math, & Language Tutor	2008–Present
Blackstone Academy Charter School	Pawtucket, RI
High School Math Teacher: calculus, pre-calculus, statistics	2010–2011
The Metropolitan Regional Career and Technical Center	Providence, RI
High School Math Teacher: algebra, arithmetic	2009–2010

Camp Ho Non Wah, BSA Wadmalaw Island, SC
Various positions including Program Director 2001–2006

SERVICE

Diversity and Inclusion Action Committee 2016–2018
Brown University Department of Chemistry

WE Teach STEM Discussion Group 2015–2018
Teaching for and/or as women in STEM fields, Brown University

Stand Up for Graduate Student Employees 2013–2017
Graduate student union organizer, Brown University

Exhibition Night Judge 2013–Present
Blackstone Academy High School, Pawtucket, RI

Graduate Student Recruitment 2012–2017
Brown University Department of Chemistry

AFFILIATIONS

American Physical Society 2018–Present
American Chemical Society 2015–Present

REFERENCES

Dr. Richard M. Stratt, Ph.D. Advisor, Richard_Stratt@Brown.edu
Newport Rogers Professor in Chemistry and Professor of Physics, Brown University
Dr. Peter M. Weber, Committee Member/Collaborator, Peter_Weber@Brown.edu
Professor of Chemistry, Brown University
Dr. Brenda M. Rubenstein, Committee Member, Brenda_Rubenstein@Brown.edu
Assistant Professor of Chemistry, Brown University