

Rigoberto Hernandez  
Department of Chemistry  
The Johns Hopkins University  
Baltimore, MD 21218

Biographical Sketch, July 2, 2017  
Telephone: 404.894.0594  
Fax: 410.516.8024  
E-mail: r.hernandez@jhu.edu

#### A. Professional Preparation

Princeton University (Princeton, NJ)	Chemical Engineering & Math	B.S.E	1989
University of California (Berkeley, CA)	Chemistry	Ph.D.	1993
Weizmann Institute (Rehovot, ISRAEL)	Chemical Physics	postdoctoral	1994
University of Pennsylvania (Philadelphia, PA)	Chemistry	postdoctoral	1995-96

#### B. Appointments

2016-present	Professor of Chemistry, The Johns Hopkins University
2016-2017	Adjunct Professor, Georgia Institute of Technology
2009-2016	Professor of Chemistry, Georgia Institute of Technology
2012-present	Director, Open Chemistry Collaborative in Diversity Equity (OXIDE)
2000-present	Co-Director, Center for Computational Molecular Science & Technology
2002-2009	Associate Professor of Chemistry, Georgia Institute of Technology
1996-2002	Assistant Professor of Chemistry, Georgia Institute of Technology

#### C. Honors and Awards

Transformative Research and Exceptional Education (TREE) Award, Research Corporation (2016); Visiting Scholar, Phi Beta Kappa Society (2015-2016); ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences (2014); APS Fellow, American Physical Society (elected 2011); Vasser Woolley Faculty Fellow (2011-2013); ACS Fellow, American Chemical Society (elected 2010); Sackler Visiting Chair in Exact Sciences, Tel Aviv University (2010); Alexander von Humboldt Research Fellow (2006); AAAS Fellow, American Association for the Advancement of Science (elected 2004); Goizueta Foundation Junior Rotating Faculty Chair (2002-2006); BPP Freshman Partner of the Year Award (Georgia Tech, 2002); Sigma Xi Southeast Regional Young Investigator (2000 & 2002); Blanchard Assistant Professor of Chemistry (1999-2001); Sloan Fellow, Alfred P. Sloan Foundation (2000-2003); Cottrell Scholar, Research Corporation (1999-2004); NSF CAREER Award (1997-2002); Sigma Xi Young Faculty Award (Georgia Tech, 1999); Feinberg Postdoctoral Fellowship (1994), NSF Graduate Research Fellowship (1989-1993), AT&T Cooperative Research Fellowship (1989-1993)

#### D. Products (10 selected out of 93 peer-reviewed articles and 5 editorials)

1. G. T. Craven and R. Hernandez, "Lagrangian descriptors of thermalized transition states on time-varying energy surfaces," *Phys. Rev. Lett.* **115**, 148301 (2015).
2. C. Murphy, A. Vartanian, F. Geiger, R. Hamers, J. Pedersen, Q. Cui, C. Haynes, E. Carlson, R. Hernandez, R. Klaper, G. Orr, Z. Rosenzweig, *ACS Central Science* **1**, 117 (2015).
3. "Dynamical simulation of electrostatic striped colloidal particles," M. C. Hagy and R. Hernandez, *J. Chem. Phys.* **140**, 034701 (2014).
4. "Communication: Transition state trajectory stability determines barrier crossing rates in chemical reactions induced by time-dependent oscillating fields," G. T. Craven, T. Bartsch and R. Hernandez, *J. Chem. Phys.* **141**, 041106 (2014). (*Communication*)
5. G. Ozer, S. Quirk and R. Hernandez, "The thermodynamics of decaalanine stretching in water obtained by adaptive steered molecular dynamics simulations," *J. Chem. Theory Comput.* **8**, 4837-4844 (2012).
6. "Dynamical Simulation of Dipolar Janus Colloids: Equilibrium Structure and Thermodynamics," M. Hagy and R. Hernandez, *J. Chem. Phys.* **137**, 044505 (2012).
7. "The ontology of temperature in nonequilibrium systems," A. V. Popov, R. Hernandez, *J. Chem. Phys.* **126**, 244506:1-16 (2007).
8. "Dynamics of swelling/contracting hard spheres surmised by an irreversible Langevin equation," A. V. Popov, J. Melvin, and R. Hernandez, *J. Phys. Chem. A* **110**, 1635-1644 (2006).

9. "Probing the Cybotactic Region in Gas-Expanded Liquids (GXLs)," J. P. Hallett, C. L. Kitchens, R. Hernandez, C. L. Liotta, and C. A. Eckert, *Acc. Chem. Res.*, **39**, 531-539 (2006).
10. "The mechanism for radical cation transport in duplex DNA oligonucleotides," C.-S. Liu, R. Hernandez, and G. B. Schuster, *J. Am. Chem. Soc.* **126**, 2877-2884 (2004).

#### E. Synergistic Activities (representative activities)

1. **Professional Service:** District IV Director, Board of Directors, American Chemical Society (2014-2016); heavily involved in national ACS Governance activities since 2003.
2. **Education:** Chair/Founder, Academic Leadership Training (ALT) Workshop (2016,2017), Co-Instructor/Founder, NSF-supported cCWCS workshop on Theoretical and Computational Chemistry targeted at undergraduate college professors (2002-05, 2009, 2011, 2013, 2014). Facilitator at New Faculty Workshop (2013, 2014) and Future Faculty Workshop (2013, 2014)
3. **Advisory:** Member, Sloan MPhD Advisory Committee, Sloan Foundation (2013- 2014); Member (2011-2015) and Chair (2016-2017), Cottrell Scholars Advisory Committee, Research Corporation
4. **Promoting Diversity:** Frequent invitations at Colleges, Universities and Public Lectures on the topic of "Advancing Chemistry Through Diversity"
5. **Broad Dissemination:** Blogging on [EveryWhereChemistry.blogspot.com](http://EveryWhereChemistry.blogspot.com) since April 23, 2013, presently with over 50,000 page views.

#### E. Collaborators & Other Affiliations (within the last 5 years)

(i) **Collaborators:** *OXIDE, Center for Sustainable Nanotechnology, RCSA CSC Projects, Other Projects:* Dr. Thomas Bartsch (Loughborough U.); Dr. Rosa Benito (U. Politecnica de Madrd); Dr. Karen Bjorkman (U. Toledo); Dr. Karl Booksh (U. Delaware); Dr. Florentino Borondo (U. Autonoma de Madrid); Dr. Iain Boyd (U. Michigan); Dr. Browne Browne (Mount Holyoke); Dr. Gail Burd (U. Arizona); Dr. Erin Carlson (U. Minnesota); Dr. Cristel Chandre (Aix-Marseille U.); Dr. Qian Cui (UW-Madison); Dr. Michael Curry (Tuskegee U.); Dr. Larry Dalton (U. Washington); Dr. Lizanne DeStefano (Georgia Tech); Dr. Frank Dobbin (Harvard U.); Dr. Peter Dorhout (Kansas State U.); Dr. Luis Echegoyen (UTEP); Dr. Charles Eckert (Georgia Tech); Dr. Archie Ervin (Georgia Tech); Dr. Howard Fairborther (Johns Hopkins U.); Dr. Andrew Feig (Wayne State U.); Dr. Vivian Feng (Augsburg College); Dr. Michelle Francl (Bryn Mawr); Dr. Franz Geiger (Northwestern) U.; Dr. Robert Hamers (UW-Madison); Dr. Philip Hammer (American Institute of Physics); Dr. Paula Hammond (MIT); Dr. Ron Hanson (Stanford U.); Dr. Christy Haynes (U. Minnesota); Dr. Malika Jeffries-El (MIT); Dr. Tom Keyes (Boston U); Dr. Rebecca Klaper (UW-Milwaukee); Dr. Charles Liotta (Georgia Tech); Dr. Sara Mason (U. Iowa); Dr. Cathy Murphy (U. Illinois); Dr. Teri Odom (Northwestern U.); Dr. Mary Jo Ondrechen (Northeastern U.); Dr. Galya Orr (PNNL); Dr. Joel Pedersen (UW-Madison); Dr. Eli Pollak (Weizmann Institute); Dr. Stephen Quirk (Kimberly Clark); Dr. Zeev Rosenzweig (UMBC);; Dr. Jennifer Ross (U. Mass. Amherst); Dr. Jennifer Ross (U. Mass. Amherst); Dr. Vincent Rotello (U. Mass. Amherst); Dr. Peter Saalfrank (U.Potsdam); Dr. Gary Schuster (Georgia Tech); Dr. Denise Sekaqueptawa (U. Michigan); Dr. Kyril Solntsev (Georgia Tech); Dr. Marilyne Stains (U. Nebraska Lincoln); Dr. John Stanton (U. Texas Austin); Dr. Jean Stockard (U. Oregon); Dr. Tim Swager (MIT); Dr. Turgay Uzer (Georgia Tech); Dr. Jodi Wesemann (American Chemical Society).

(ii) **PI's postdoctoral advisors:** Dr. G. A. Voth, U. Utah (1995-96), Dr. E. Pollak, Weizmann Institute (1994).

PI's Ph.D. advisor: Dr. W. H. Miller. U.C., Berkeley (1989-93).

(iii) **Present and former group members:** **Current Graduate Students:** Messerret Zekarias (2014- ), Gene Chong (2014- ), Hailey Bureau (2012-), Benjamin Mahala (2011-). **Former Graduate Students:** *Dr. Galen Craven (2010-2014; University of Pennsylvania), Dr. Matthew Hagy (2009-2013; LiveRamp), Mr. Ryan Bucher (Masters, 2012-2014; unknown), Dr. Ashley Tucker (2005-2011; unknown), Dr. Gungor Ozer (2004-2011; New York University);* **Current Post Docs:** Dr. Caley Allen (2013-); **Former Post Docs:** Dr. Andrej Juniginger (2015-2016, U. Stuttgart), Dr. Svetlana Khoklova (2013-2015; unknown), Dr. Inga Ulusoy (2012-2015; Michigan State University), Dr. Douglas C. Viehman (2009-2010; unknown); **Current Research Scientists:** Dr. Dontarie Stallings (2015- ), Dr. Srikant Iyer (2015- ), Dr. Alex Popov (2004-). **Former Research Scientists:** *Dr. Eliezer Hershkovitz (2010-2015, Kennesaw State University), Dr. Shannon Watt (2012-2014, Louisiana State University).*