

# Stephen J Klippenstein

## List of Publications by Year in descending order

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276  
papers

22,853  
citations

5574

82  
h-index

10445

139  
g-index

281  
all docs

281  
docs citations

281  
times ranked

9018  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Current Status of Transition-State Theory. <i>The Journal of Physical Chemistry</i> , 1996, 100, 12771-12800.   | 2.9  | 1,795     |
| 2  | Modeling nitrogen chemistry in combustion. <i>Progress in Energy and Combustion Science</i> , 2018, 67, 31-68.  | 31.2 | 980       |
| 3  | Comprehensive H <sub>2</sub> /O <sub>2</sub> kinetic model for high-pressure combustion. <i>International Journal of Chemical Kinetics</i> , 2012, 44, 444-474.   | 1.6  | 682       |
| 4  | Modeling the Kinetics of Bimolecular Reactions. <i>Chemical Reviews</i> , 2006, 106, 4518-4584.   | 47.7 | 533       |
| 5  | Reformulation and Solution of the Master Equation for Multiple-Well Chemical Reactions. <i>Journal of Physical Chemistry A</i> , 2013, 117, 12146-12154.  | 2.5  | 461       |
| 6  | A KINETIC DATABASE FOR ASTROCHEMISTRY (KIDA). <i>Astrophysical Journal, Supplement Series</i> , 2012, 199, 21.  | 7.7  | 436       |
| 7  | Master Equation Methods in Gas Phase Chemical Kinetics. <i>Journal of Physical Chemistry A</i> , 2006, 110, 10528-10544.  | 2.5  | 386       |
| 8  | DISEQUILIBRIUM CARBON, OXYGEN, AND NITROGEN CHEMISTRY IN THE ATMOSPHERES OF HD 189733b AND HD 209458b. <i>Astrophysical Journal</i> , 2011, 737, 15.  | 4.5  | 374       |
| 9  | The Recombination of Propargyl Radicals and Other Reactions on a C <sub>6</sub> H <sub>6</sub> Potential. <i>Journal of Physical Chemistry A</i> , 2003, 107, 7783-7799.  | 2.5  | 368       |
| 10 | Enols Are Common Intermediates in Hydrocarbon Oxidation. <i>Science</i> , 2005, 308, 1887-1889.   | 12.6 | 306       |
| 11 | The role of NNH in NO formation and control. <i>Combustion and Flame</i> , 2011, 158, 774-789.  | 5.2  | 304       |
| 12 | THE 2014 KIDA NETWORK FOR INTERSTELLAR CHEMISTRY. <i>Astrophysical Journal, Supplement Series</i> , 2015, 217, 20.  | 7.7  | 291       |
| 13 | Variational optimizations in the Rice-Ramsperger-Kassel-Marcus theory calculations for unimolecular dissociations with no reverse barrier. <i>Journal of Chemical Physics</i> , 1992, 96, 367-371.                    | 3.0  | 268       |
| 14 | Long-range transition state theory. <i>Journal of Chemical Physics</i> , 2005, 122, 194103.   | 3.0  | 236       |
| 15 | Role of O <sub>2</sub> + QOOH in Low-Temperature Ignition of Propane. 1. Temperature and Pressure Dependent Rate Coefficients. <i>Journal of Physical Chemistry A</i> , 2012, 116, 3325-3346.                         | 2.5  | 223       |
| 16 | A Two Transition State Model for Radical-Molecule Reactions: A Case Study of the Addition of OH to C <sub>2</sub> H <sub>4</sub> . <i>Journal of Physical Chemistry A</i> , 2005, 109, 6031-6044.                     | 2.5  | 218       |
| 17 | From the Multiple-Well Master Equation to Phenomenological Rate Coefficients: % Reactions on a C <sub>3</sub> H <sub>4</sub> Potential Energy Surface. <i>Journal of Physical Chemistry A</i> , 2003, 107, 2680-2692. | 2.5  | 216       |
| 18 | Chemical Kinetics and Mechanisms of Complex Systems: A Perspective on Recent Theoretical Advances. <i>Journal of the American Chemical Society</i> , 2014, 136, 528-546.  | 13.7 | 212       |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 19 | Predictive theory for the combination kinetics of two alkyl radicals. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 1133.   | 2.8  | 202       |
| 20 | From theoretical reaction dynamics to chemical modeling of combustion. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 77-111.   | 3.9  | 199       |
| 21 | Kinetics of the Reaction of Methyl Radical with Hydroxyl Radical and Methanol Decomposition. <i>Journal of Physical Chemistry A</i> , 2007, 111, 3932-3950.   | 2.5  | 188       |
| 22 | From the Time-Dependent, Multiple-Well Master Equation to Phenomenological Rate Coefficients. <i>Journal of Physical Chemistry A</i> , 2002, 106, 9267-9277.  | 2.5  | 184       |
| 23 | Predictive Theory for Hydrogen Atom-Hydrocarbon Radical Association Kinetics. <i>Journal of Physical Chemistry A</i> , 2005, 109, 4646-4656.  | 2.5  | 176       |
| 24 | An Efficient Procedure for Evaluating the Number of Available States within a Variably Defined Reaction Coordinate Framework. <i>The Journal of Physical Chemistry</i> , 1994, 98, 11459-11464.   | 2.9  | 166       |
| 25 | Measurements, Theory, and Modeling of OH Formation in Ethyl + O <sub>2</sub> and Propyl + O <sub>2</sub> Reactions. <i>Journal of Physical Chemistry A</i> , 2003, 107, 4415-4427.  | 2.5  | 160       |
| 26 | Ab initio methods for reactive potential surfaces. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 4055.  | 2.8  | 158       |
| 27 | Vibrational Spectroscopy and Density Functional Theory of Transition-Metal Ion-Benzene and Dibenzene Complexes in the Gas Phase. <i>Journal of the American Chemical Society</i> , 2004, 126, 10981-10991.  | 13.7 | 157       |
| 28 | High-pressure oxidation of methane. <i>Combustion and Flame</i> , 2016, 172, 349-364.   | 5.2  | 157       |
| 29 | Reaction of Ethylene with Hydroxyl Radicals: A Theoretical Study. <i>Journal of Physical Chemistry A</i> , 2006, 110, 6960-6970.  | 2.5  | 156       |
| 30 | Exploring the Role of PAHs in the Formation of Soot: Pyrene Dimerization. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 2962-2967.  | 4.6  | 152       |
| 31 | Uncertainty driven theoretical kinetics studies for CH <sub>3</sub> OH ignition: HO <sub>2</sub> +CH <sub>3</sub> OH and O <sub>2</sub> +CH <sub>3</sub> OH. <i>Proceedings of the Combustion Institute</i> , 2011, 33, 351-357.  | 3.9  | 149       |
| 32 | Transition State Theory for Multichannel Addition Reactions: Multifaceted Dividing Surfaces. <i>Journal of Physical Chemistry A</i> , 2003, 107, 9776-9781.   | 2.5  | 147       |
| 33 | Ab Initio Computations and Active Thermochemical Tables Hand in Hand: Heats of Formation of Core Combustion Species. <i>Journal of Physical Chemistry A</i> , 2017, 121, 6580-6602.   | 2.5  | 144       |
| 34 | Identification and Chemistry of C <sub>4</sub> H <sub>3</sub> and C <sub>4</sub> H <sub>5</sub> Isomers in Fuel-Rich Flames. <i>Journal of Physical Chemistry A</i> , 2006, 110, 3670-3678.   | 2.5  | 143       |
| 35 | Predictive a priori pressure-dependent kinetics. <i>Science</i> , 2014, 346, 1212-1215.   | 12.6 | 142       |
| 36 | Association rate constants for reactions between resonance-stabilized radicals: C <sub>3</sub> H <sub>3</sub> + C <sub>3</sub> H <sub>3</sub> , C <sub>3</sub> H <sub>3</sub> + C <sub>3</sub> H <sub>5</sub> , and C <sub>3</sub> H <sub>5</sub> + C <sub>3</sub> H <sub>5</sub> . <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 4259. | 2.8  | 141       |

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|----|--|------|-----------|
| 37 | The $\text{H} + \text{C}_2\text{H}_2(+\text{M}) \rightarrow \text{C}_2\text{H}_3(+\text{M})$ and $\text{H} + \text{C}_2\text{H}_2(+\text{M}) \rightarrow \text{C}_2\text{H}_5(+\text{M})$ reactions: Electronic structure, transition-state theory, and solutions to a two-dimensional master equation. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 1192-1202. | 2.8  | 139       |
| 38 | Rate Constants for the Thermal Decomposition of Ethanol and Its Bimolecular Reactions with OH and D: Reflected Shock Tube and Theoretical Studies. <i>Journal of Physical Chemistry A</i> , 2010, 114, 9425-9439.  | 2.5  | 139       |
| 39 | Variable reaction coordinate transition state theory: Analytic results and application to the $\text{C}_2\text{H}_3 + \text{H} \rightarrow \text{C}_2\text{H}_4$ reaction. <i>Journal of Chemical Physics</i> , 2003, 118, 5442-5455.  | 3.0  | 135       |
| 40 | Understanding Reactivity at Very Low Temperatures: The Reactions of Oxygen Atoms with Alkenes. <i>Science</i> , 2007, 317, 102-105.  | 12.6 | 131       |
| 41 | Application of unimolecular reaction rate theory for highly flexible transition states to the dissociation of NCNO into NC and NO. <i>Journal of Chemical Physics</i> , 1988, 89, 4761-4770.   | 3.0  | 128       |
| 42 | The Recombination of Propargyl Radicals: Solving the Master Equation. <i>Journal of Physical Chemistry A</i> , 2001, 105, 7254-7266.   | 2.5  | 127       |
| 43 | Solution of Some One- and Two-Dimensional Master Equation Models for Thermal Dissociation: The Dissociation of Methane in the Low-Pressure Limit. <i>Journal of Physical Chemistry A</i> , 2002, 106, 4904-4913.   | 2.5  | 127       |
| 44 | Roaming Radical Kinetics in the Decomposition of Acetaldehyde. <i>Journal of Physical Chemistry A</i> , 2010, 114, 765-777.  | 2.5  | 125       |
| 45 | Simulating the density of organic species in the atmosphere of Titan with a coupled ion-neutral photochemical model. <i>Icarus</i> , 2019, 324, 120-197.   | 2.5  | 125       |
| 46 | The reaction between ethyl and molecular oxygen II: Further analysis. <i>International Journal of Chemical Kinetics</i> , 2001, 33, 654-668.   | 1.6  | 124       |
| 47 | Identification of $\text{C}_5\text{H}_x$ Isomers in Fuel-Rich Flames by Photoionization Mass Spectrometry and Electronic Structure Calculations. <i>Journal of Physical Chemistry A</i> , 2006, 110, 4376-4388.  | 2.5  | 122       |
| 48 | Understanding low-temperature first-stage ignition delay: Propane. <i>Combustion and Flame</i> , 2015, 162, 3658-3673.   | 5.2  | 122       |
| 49 | A bond length reaction coordinate for unimolecular reactions. II. Microcanonical and canonical implementations with application to the dissociation of NCNO. <i>Journal of Chemical Physics</i> , 1991, 94, 6469-6482.   | 3.0  | 119       |
| 50 | The spin-forbidden reaction $\text{CH}(2^1) + \text{N}_2 \rightarrow \text{HCN} + \text{N}(4\text{S})$ revisited. II. Nonadiabatic transition state theory and application. <i>Journal of Chemical Physics</i> , 1999, 110, 9469-9482.   | 3.0  | 118       |
| 51 | Temperature- and pressure-dependent rate coefficients for the HACA pathways from benzene to naphthalene. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 919-926.   | 3.9  | 115       |
| 52 | Synchrotron photoionization measurements of combustion intermediates: Photoionization efficiency and identification of $\text{C}_3\text{H}_2$ isomers. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 806.  | 2.8  | 113       |
| 53 | Direct Observation of Roaming Radicals in the Thermal Decomposition of Acetaldehyde. <i>Journal of Physical Chemistry A</i> , 2010, 114, 755-764.  | 2.5  | 112       |
| 54 | On the Combination Reactions of Hydrogen Atoms with Resonance-Stabilized Hydrocarbon Radicals. <i>Journal of Physical Chemistry A</i> , 2007, 111, 3789-3801.  | 2.5  | 111       |

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|----|--|------|-----------|
| 55 | Implementation of RRKM theory for highly flexible transition states with a bond length as the reaction coordinate. <i>Chemical Physics Letters</i> , 1990, 170, 71-77.   | 2.6  | 109       |
| 56 | Four-Carbon Criegee Intermediate from Isoprene Ozonolysis: Methyl Vinyl Ketone Oxide Synthesis, Infrared Spectrum, and OH Production. <i>Journal of the American Chemical Society</i> , 2018, 140, 10866-10880.                    | 13.7 | 109       |
| 57 | The anharmonic force field and equilibrium molecular structure of ketene. <i>Journal of Chemical Physics</i> , 1995, 102, 8506-8532.   | 3.0  | 106       |
| 58 | A theoretical analysis of the reaction between ethyl and molecular oxygen. <i>Proceedings of the Combustion Institute</i> , 2000, 28, 1479-1486.   | 3.9  | 105       |
| 59 | High pressure rate constants for unimolecular dissociation/free radical recombination: Determination of the quantum correction via quantum Monte Carlo path integration. <i>Journal of Chemical Physics</i> , 1987, 87, 3410-3417. | 3.0  | 104       |
| 60 | Application of unimolecular reaction rate theory for highly flexible transition states to the dissociation of CH <sub>2</sub> CO into CH <sub>2</sub> and CO. <i>Journal of Chemical Physics</i> , 1989, 91, 2280-2292.            | 3.0  | 103       |
| 61 | Binding Energy of Al(C <sub>6</sub> H <sub>6</sub> ) <sup>+</sup> from Analysis of Radiative Association Kinetics. <i>Journal of the American Chemical Society</i> , 1996, 118, 5277-5283.   | 13.7 | 102       |
| 62 | Initial Steps of Aromatic Ring Formation in a Laminar Premixed Fuel-Rich Cyclopentene Flame. <i>Journal of Physical Chemistry A</i> , 2007, 111, 4081-4092.  | 2.5  | 102       |
| 63 | On the formation and decomposition of C <sub>7</sub> H <sub>8</sub> . <i>Proceedings of the Combustion Institute</i> , 2007, 31, 221-229.  | 3.9  | 101       |
| 64 | Unimolecular Decay of Criegee Intermediates to OH Radical Products: Prompt and Thermal Decay Processes. <i>Accounts of Chemical Research</i> , 2018, 51, 978-985.  | 15.6 | 101       |
| 65 | Communication: Real time observation of unimolecular decay of Criegee intermediates to OH radical products. <i>Journal of Chemical Physics</i> , 2016, 144, 061102.  | 3.0  | 99        |
| 66 | A theoretical analysis of the reaction between propargyl and molecular oxygen. <i>Faraday Discussions</i> , 2001, 119, 79-100.   | 3.2  | 93        |
| 67 | Reaction Kinetics of CO + HO <sub>2</sub> Products: Ab Initio Transition State Theory Study with Master Equation Modeling. <i>Journal of Physical Chemistry A</i> , 2007, 111, 4031-4042.  | 2.5  | 92        |
| 68 | Theory, measurements, and modeling of OH and HO <sub>2</sub> formation in the reaction of cyclohexyl radicals with O <sub>2</sub> . <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 4315.                                    | 2.8  | 92        |
| 69 | Roaming radicals in the thermal decomposition of dimethyl ether: Experiment and theory. <i>Combustion and Flame</i> , 2011, 158, 618-632.  | 5.2  | 92        |
| 70 | Binding Energies of Ag <sup>+</sup> and Cd <sup>+</sup> Complexes from Analysis of Radiative Association Kinetics. <i>Journal of Physical Chemistry A</i> , 1997, 101, 3338-3347.  | 2.5  | 91        |
| 71 | A Theoretical Analysis of the Reaction between Vinyl and Acetylene: Quantum Chemistry and Solution of the Master Equation. <i>Journal of Physical Chemistry A</i> , 2000, 104, 7525-7536.  | 2.5  | 91        |
| 72 | Interception of Excited Vibrational Quantum States by O <sub>2</sub> in Atmospheric Association Reactions. <i>Science</i> , 2012, 337, 1066-1069.  | 12.6 | 90        |

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|----|--|------|-----------|
| 73 | Binding Energies of Gas-Phase Metal Ions with Pyrrole: Experimental and Quantum Chemical Results. <i>Journal of Physical Chemistry A</i> , 2000, 104, 3246-3256.   | 2.5  | 89        |
| 74 | Shock Tube and Theory Investigation of Cyclohexane and 1-Hexene Decomposition. <i>Journal of Physical Chemistry A</i> , 2009, 113, 13570-13583.  | 2.5  | 88        |
| 75 | Temperature and Pressure-Dependent Rate Coefficients for the Reaction of Vinyl Radical with Molecular Oxygen. <i>Journal of Physical Chemistry A</i> , 2015, 119, 7766-7779.   | 2.5  | 88        |
| 76 | Theoretical and Experimental Investigation of the Dynamics of the Production of CO from the CH <sub>3</sub> + O and CD <sub>3</sub> + O Reactions. <i>Journal of Physical Chemistry A</i> , 2001, 105, 8361-8369.  | 2.5  | 87        |
| 77 | Energy-Resolved Photoionization of Alkylperoxy Radicals and the Stability of Their Cations. <i>Journal of the American Chemical Society</i> , 2006, 128, 13559-13567.  | 13.7 | 87        |
| 78 | Theoretical rate coefficients for the reaction of methyl radical with hydroperoxyl radical and for methylhydroperoxide decomposition. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 279-286.  | 3.9  | 87        |
| 79 | Infrared frequency-modulation probing of product formation in alkyl + O <sub>2</sub> reactions. Part IV. For Part III see ref. 12. Reactions of propyl and butyl radicals with O <sub>2</sub> . Electronic Supplementary Information available. See <a href="http://www.rsc.org/suppdata/fd/b1/b102237g/">http://www.rsc.org/suppdata/fd/b1/b102237g/</a> . <i>Faraday Discussions</i> , 2001, 119, 101-120. | 3.2  | 86        |
| 80 | The Reaction of Acetylene with Hydroxyl Radicals. <i>Journal of Physical Chemistry A</i> , 2005, 109, 6045-6055.   | 2.5  | 86        |
| 81 | Thermal Decomposition of NH <sub>2</sub> OH and Subsequent Reactions: Ab Initio Transition State Theory and Reflected Shock Tube Experiments. <i>Journal of Physical Chemistry A</i> , 2009, 113, 10241-10259.   | 2.5  | 86        |
| 82 | Strange Kinetics of the C <sub>2</sub> H <sub>6</sub> + CN Reaction Explained. <i>Journal of Physical Chemistry A</i> , 2007, 111, 3802-3811.  | 2.5  | 85        |
| 83 | Ephemeral collision complexes mediate chemically termolecular transformations that affect system chemistry. <i>Nature Chemistry</i> , 2017, 9, 1078-1082.  | 13.6 | 85        |
| 84 | Density functional theory predictions for the binding of transition metal cations to pi systems: from acetylene to coronene and tribenzocyclyne. <i>International Journal of Mass Spectrometry</i> , 2000, 201, 253-267.   | 1.5  | 84        |
| 85 | Reactions between Resonance-Stabilized Radicals: Propargyl + Allyl. <i>Journal of Physical Chemistry A</i> , 2010, 114, 4881-4890.   | 2.5  | 84        |
| 86 | A high level ab initio map and direct statistical treatment of the fragmentation of singlet ketene. <i>Journal of Chemical Physics</i> , 1996, 105, 118-140.   | 3.0  | 81        |
| 87 | H-Abstraction reactions by OH, HO <sub>2</sub> , O, O <sub>2</sub> and benzyl radical addition to O <sub>2</sub> and their implications for kinetic modelling of toluene oxidation. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 10607-10627.  | 2.8  | 80        |
| 88 | EStokTP: Electronic Structure to Temperature- and Pressure-Dependent Rate Constants—A Code for Automatically Predicting the Thermal Kinetics of Reactions. <i>Journal of Chemical Theory and Computation</i> , 2019, 15, 1122-1145.  | 5.3  | 80        |
| 89 | Theory and Modeling of the Binding in Cationic Transition-Metal~Benzene Complexes. <i>Journal of Physical Chemistry A</i> , 1999, 103, 1094-1103.  | 2.5  | 78        |
| 90 | A Direct Transition State Theory Based Study of Methyl Radical Recombination Kinetics. <i>Journal of Physical Chemistry A</i> , 1999, 103, 9388-9398.  | 2.5  | 77        |

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|-----|--|-----|-----------|
| 91  | Statistical Theory for the Kinetics and Dynamics of Roaming Reactions. <i>Journal of Physical Chemistry A</i> , 2011, 115, 14370-14381.  | 2.5 | 76        |
| 92  | Pressure-dependent rate constants for PAH growth: formation of indene and its conversion to naphthalene. <i>Faraday Discussions</i> , 2016, 195, 637-670.  | 3.2 | 76        |
| 93  | High-pressure oxidation of ethane. <i>Combustion and Flame</i> , 2017, 182, 150-166.   | 5.2 | 76        |
| 94  | A combined theoretical and experimental study of the dissociation of benzene cation. <i>Journal of Chemical Physics</i> , 1993, 98, 243-256.   | 3.0 | 75        |
| 95  | Theoretical rate coefficients for allyl+HO <sub>2</sub> and allyloxy decomposition. <i>Proceedings of the Combustion Institute</i> , 2011, 33, 273-282.  | 3.9 | 75        |
| 96  | Theoretical Considerations in the NH <sub>2</sub> + NO Reaction. <i>Journal of Physical Chemistry A</i> , 2000, 104, 2061-2069.  | 2.5 | 74        |
| 97  | Pathways and Rate Coefficients for the Decomposition of Vinyloxy and Acetyl Radicals. <i>Journal of Physical Chemistry A</i> , 2006, 110, 5772-5781.   | 2.5 | 74        |
| 98  | Dissociation of Propyl Radicals and Other Reactions on a C <sub>3</sub> H <sub>7</sub> Potential. <i>Journal of Physical Chemistry A</i> , 2013, 117, 2718-2727.   | 2.5 | 74        |
| 99  | Reactions over Multiple, Interconnected Potential Wells: Unimolecular and Bimolecular Reactions on a C <sub>3</sub> H <sub>5</sub> Potential. <i>Journal of Physical Chemistry A</i> , 2008, 112, 9429-9438.                               | 2.5 | 73        |
| 100 | Roaming Radical Pathways for the Decomposition of Alkanes. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 3016-3020.  | 4.6 | 73        |
| 101 | A quantitative explanation for the apparent anomalous temperature dependence of OH + HO <sub>2</sub> = H <sub>2</sub> O + O <sub>2</sub> through multi-scale modeling. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 547-555. | 3.9 | 73        |
| 102 | Determining phenomenological rate coefficients from a time-dependent, multiple-well master equation: "species reduction" at high temperatures. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 4744.                                | 2.8 | 73        |
| 103 | A Two Transition State Model for Radical-Molecule Reactions: Applications to Isomeric Branching in the OH-Isoprene Reaction. <i>Journal of Physical Chemistry A</i> , 2007, 111, 5582-5592.  | 2.5 | 71        |
| 104 | Theory and modeling of ion-molecule radiative association kinetics. <i>Journal of Chemical Physics</i> , 1996, 104, 4502-4516.   | 3.0 | 70        |
| 105 | A combined ab initio and photoionization mass spectrometric study of polyynes in fuel-rich flames. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 366-374.   | 2.8 | 68        |
| 106 | Exploring formation pathways of aromatic compounds in laboratory-based model flames of aliphatic fuels. <i>Combustion, Explosion and Shock Waves</i> , 2012, 48, 508-515.  | 0.8 | 68        |
| 107 | Theoretical Validation of Chemical Kinetic Mechanisms: Combustion of Methanol. <i>Journal of Physical Chemistry A</i> , 2010, 114, 8286-8301.  | 2.5 | 66        |
| 108 | Formation of NH <sub>3</sub> and CH <sub>2</sub> NH in Titan's upper atmosphere. <i>Faraday Discussions</i> , 2010, 147, 31.   | 3.2 | 66        |

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|-----|--|------|-----------|
| 109 | Collision Efficiency of Water in the Unimolecular Reaction $\text{CH}_4 + \text{H}_2\text{O} \rightleftharpoons \text{CH}_3 + \text{H} + \text{H}_2\text{O}$ : One-Dimensional and Two-Dimensional Solutions of the Low-Pressure-Limit Master Equation. <i>Journal of Physical Chemistry A</i> , 2013, 117, 12243-12255. | 2.5  | 65        |
| 110 | Uncertainty propagation in the derivation of phenomenological rate coefficients from theory: A case study of n-propyl radical oxidation. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 177-185.   | 3.9  | 64        |
| 111 | Dissociation, relaxation, and incubation in the high-temperature pyrolysis of ethane, and a successful RRKM modeling. <i>Proceedings of the Combustion Institute</i> , 2005, 30, 1129-1135.  | 3.9  | 63        |
| 112 | Experimental and Theoretical Investigation of the Self-Reaction of Phenyl Radicals. <i>Journal of Physical Chemistry A</i> , 2010, 114, 8240-8261.   | 2.5  | 63        |
| 113 | Weakly Bound Free Radicals in Combustion: Dissociation of Formyl Radicals and Its Effect on Laminar Flame Speeds. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 85-89.   | 4.6  | 63        |
| 114 | Direct kinetic measurements and theoretical predictions of an isoprene-derived Criegee intermediate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 9733-9740.  | 7.1  | 63        |
| 115 | Kinetics of $\text{CH} + \text{N}_2$ Revisited with Multireference Methods. <i>Journal of Physical Chemistry A</i> , 2008, 112, 522-532.   | 2.5  | 62        |
| 116 | Automated computational thermochemistry for butane oxidation: A prelude to predictive automated combustion kinetics. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 363-371.   | 3.9  | 62        |
| 117 | The Addition of Hydrogen Atoms to Diacetylene and the Heats of Formation of $\text{C}_4\text{H}_3$ and $\text{n-C}_4\text{H}_3$ . <i>Journal of Physical Chemistry A</i> , 2005, 109, 4285-4295.   | 2.5  | 61        |
| 118 | Experimental and theoretical rate constants for $\text{CH}_4 + \text{O}_2 \rightarrow \text{CH}_3 + \text{HO}_2$ . <i>Combustion and Flame</i> , 2007, 149, 104-111.   | 5.2  | 61        |
| 119 | Near-threshold H/D exchange in $\text{CD}_3\text{CHO}$ photodissociation. <i>Nature Chemistry</i> , 2011, 3, 443-448.  | 13.6 | 60        |
| 120 | Thermal Dissociation and Roaming Isomerization of Nitromethane: Experiment and Theory. <i>Journal of Physical Chemistry A</i> , 2015, 119, 7872-7893.  | 2.5  | 59        |
| 121 | Experiments and Theory on the Thermal Decomposition of $\text{CHCl}_3$ and the Reactions of $\text{CCl}_2$ . <i>Journal of Physical Chemistry A</i> , 1997, 101, 8653-8661.  | 2.5  | 58        |
| 122 | Effect of non-thermal product energy distributions on ketohydroperoxide decomposition kinetics. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 283-290.  | 3.9  | 58        |
| 123 | Shock Tube and Theoretical Studies on the Thermal Decomposition of Propane: Evidence for a Roaming Radical Channel. <i>Journal of Physical Chemistry A</i> , 2011, 115, 3366-3379.   | 2.5  | 57        |
| 124 | Theory and modeling of relevance to prompt-NO formation at high pressure. <i>Combustion and Flame</i> , 2018, 195, 3-17.   | 5.2  | 57        |
| 125 | Pressure-Dependent OH Yields in Alkene + $\text{HO}_2$ Reactions: A Theoretical Study. <i>Journal of Physical Chemistry A</i> , 2011, 115, 10218-10225.  | 2.5  | 56        |
| 126 | Deep tunneling in the unimolecular decay of $\text{CH}_3\text{CHOO}$ Criegee intermediates to OH radical products. <i>Journal of Chemical Physics</i> , 2016, 145, 234308.   | 3.0  | 56        |



| #   | ARTICLE   | IF   | CITATIONS |
|-----|---|------|-----------|
| 127 | Theoretical Kinetics Analysis for a C Atom Addition to 1,3-Butadiene and Related Reactions on the $\text{Å}_{4\text{H}7}$ Potential Energy Surface. <i>Journal of Physical Chemistry A</i> , 2017, 121, 7433-7445.  | 2.5  | 55        |
| 128 | Reactions of oxygen atoms with hydrocarbon radicals: a priori kinetic predictions for the $\text{CH}_3+\text{O}$ , $\text{C}_2\text{H}_5+\text{O}$ , and $\text{C}_2\text{H}_3+\text{O}$ reactions. <i>Proceedings of the Combustion Institute</i> , 2005, 30, 985-993.                                       | 3.9  | 54        |
| 129 | RAPID ASSOCIATION REACTIONS AT LOW PRESSURE: IMPACT ON THE FORMATION OF HYDROCARBONS ON TITAN. <i>Astrophysical Journal</i> , 2012, 744, 11.  | 4.5  | 54        |
| 130 | Application of unimolecular reaction rate theory for highly flexible transition states to the dissociation of $\text{CH}_2\text{CO}$ into $\text{CH}_2$ and $\text{CO}$ . II. Photofragment excitation spectra for vibrationally excited fragments. <i>Journal of Chemical Physics</i> , 1990, 93, 2418-2424. | 3.0  | 53        |
| 131 | Ab Initio Kinetics for the Decomposition of Hydroxybutyl and Butoxy Radicals of <i>n</i> -Butanol. <i>Journal of Physical Chemistry A</i> , 2013, 117, 1890-1906.   | 2.5  | 52        |
| 132 | Synthesis, Electronic Spectroscopy, and Photochemistry of Methacrolein Oxide: A Four-Carbon Unsaturated Criegee Intermediate from Isoprene Ozonolysis. <i>Journal of the American Chemical Society</i> , 2019, 141, 15058-15069.  | 13.7 | 52        |
| 133 | A kinetic issue in reburning: the fate of HCNO. <i>Combustion and Flame</i> , 2003, 135, 357-362.   | 5.2  | 51        |
| 134 | A theoretical study of the dissociation of $\text{NO}_2$ . <i>Journal of Chemical Physics</i> , 1993, 99, 3644-3653.  | 3.0  | 50        |
| 135 | Resolving the mystery of prompt $\text{CO}_2$ : The $\text{HCCO}+\text{O}_2$ reaction. <i>Proceedings of the Combustion Institute</i> , 2002, 29, 1209-1217.  | 3.9  | 50        |
| 136 | Direct observation of unimolecular decay of $\text{CH}_3\text{CH}_2\text{CHOO}$ Criegee intermediates to OH radical products. <i>Journal of Chemical Physics</i> , 2016, 145, 044312.   | 3.0  | 49        |
| 137 | Separability of Tight and Roaming Pathways to Molecular Decomposition. <i>Journal of Physical Chemistry A</i> , 2012, 116, 6967-6982.   | 2.5  | 48        |
| 138 | Towards a quantitative understanding of the role of non-Boltzmann reactant distributions in low temperature oxidation. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 205-213.  | 3.9  | 48        |
| 139 | Hydrolysis of Ketene Catalyzed by Formic Acid: Modification of Reaction Mechanism, Energetics, and Kinetics with Organic Acid Catalysis. <i>Journal of Physical Chemistry A</i> , 2015, 119, 4347-4357.   | 2.5  | 48        |
| 140 | High-pressure oxidation of propane. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 461-468.   | 3.9  | 48        |
| 141 | Variational statistical study of the $\text{CN}+\text{O}_2$ reaction employing ab initio determined properties for the transition state. <i>Journal of Chemical Physics</i> , 1993, 99, 5790-5799.  | 3.0  | 46        |
| 142 | Small ester combustion chemistry: Computational kinetics and experimental study of methyl acetate and ethyl acetate. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 419-428.  | 3.9  | 45        |
| 143 | Comparisons between statistics, dynamics, and experiment for the $\text{H}+\text{O}_2\rightarrow\text{OH}+\text{O}$ reaction. <i>Journal of Chemical Physics</i> , 1995, 103, 7287-7298.  | 3.0  | 44        |
| 144 | Temperature Dependence of Two Key Interstellar Reactions of $\text{H}_3^+$ : $\text{O}(\text{sup}3\text{P}) + \text{H}_3^+$ and $\text{CO} + \text{H}_3^+$ . <i>Journal of Physical Chemistry A</i> , 2010, 114, 278-290.   | 2.5  | 44        |

| #   | ARTICLE  | IF   | CITATIONS |
|-----|--|------|-----------|
| 145 | Detailed balance in multiple-well chemical reactions. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 1128.   | 2.8  | 43        |
| 146 | Unimolecular reaction rate theory for highly flexible transition states: use of conventional coordinates. <i>The Journal of Physical Chemistry</i> , 1988, 92, 3105-3109.  | 2.9  | 42        |
| 147 | Decomposition of acetaldehyde: Experiment and detailed theory. <i>Proceedings of the Combustion Institute</i> , 2007, 31, 167-174.   | 3.9  | 42        |
| 148 | First-principles binary diffusion coefficients for H, H <sub>2</sub> , and four normal alkanes + N <sub>2</sub> . <i>Journal of Chemical Physics</i> , 2014, 141, 124313.  | 3.0  | 42        |
| 149 | Theoretical kinetics of O + C <sub>2</sub> H <sub>4</sub> . <i>Proceedings of the Combustion Institute</i> , 2017, 36, 219-227.  | 3.9  | 42        |
| 150 | Dimethylamine Addition to Formaldehyde Catalyzed by a Single Water Molecule: A Facile Route for Atmospheric Carbinolamine Formation and Potential Promoter of Aerosol Growth. <i>Journal of Physical Chemistry A</i> , 2016, 120, 1358-1368.       | 2.5  | 41        |
| 151 | Theoretical kinetics predictions for NH <sub>2</sub> +HO <sub>2</sub> . <i>Combustion and Flame</i> , 2022, 236, 111787.   | 5.2  | 41        |
| 152 | A complete statistical analysis of the reaction between OH and CO. <i>Proceedings of the Combustion Institute</i> , 2005, 30, 945-953.   | 3.9  | 40        |
| 153 | The Effect of Spin-Orbit Splitting on the Association Kinetics of Barrierless Halogen Atom-Hydrocarbon Radical Reactions. <i>Journal of Physical Chemistry A</i> , 2010, 114, 5759-5768.   | 2.5  | 40        |
| 154 | Propargyl + O <sub>2</sub> Reaction in Helium Droplets: Entrance Channel Barrier or Not?. <i>Journal of Physical Chemistry A</i> , 2013, 117, 13626-13635.   | 2.5  | 39        |
| 155 | Intramolecular dynamics. I. Curvilinear normal modes, local modes, molecular anharmonic Hamiltonian, and application to benzene. <i>Journal of Chemical Physics</i> , 1991, 94, 7319-7334.   | 3.0  | 38        |
| 156 | Measurements and Modeling of HO <sub>2</sub> Formation in the Reactions of n-C <sub>3</sub> H <sub>7</sub> and i-C <sub>3</sub> H <sub>7</sub> Radicals with O <sub>2</sub> . <i>Journal of Physical Chemistry B</i> , 2005, 109, 8374-8387.       | 2.6  | 38        |
| 157 | A shock-tube and theory study of the dissociation of acetone and subsequent recombination of methyl radicals. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 123-130.  | 3.9  | 38        |
| 158 | Unconventional Peroxy Chemistry in Alcohol Oxidation: The Water Elimination Pathway. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 350-354.  | 4.6  | 38        |
| 159 | Rate Constant and Branching Fraction for the NH <sub>2</sub> + NO <sub>2</sub> Reaction. <i>Journal of Physical Chemistry A</i> , 2013, 117, 9011-9022.  | 2.5  | 37        |
| 160 | Multiscale Informatics for Low-Temperature Propane Oxidation: Further Complexities in Studies of Complex Reactions. <i>Journal of Physical Chemistry A</i> , 2015, 119, 7095-7115.   | 2.5  | 37        |
| 161 | Unimolecular reaction rate theory for highly flexible transition states. 2. Conventional coordinate formulas for the various possible fragment combinations: miscellaneous topics. <i>The Journal of Physical Chemistry</i> , 1988, 92, 5412-5417. | 2.9  | 36        |
| 162 | Radiative Association of NO <sub>2</sub> with 3-Pentanone: Rate, Binding Energy, and Temperature Dependence. <i>Journal of the American Chemical Society</i> , 1996, 118, 5462-5468.   | 13.7 | 36        |

| #   | ARTICLE   | IF   | CITATIONS |
|-----|---|------|-----------|
| 163 | Ramifications of including non-equilibrium effects for HCO in flame chemistry. Proceedings of the Combustion Institute, 2017, 36, 525-532.  | 3.9  | 36        |
| 164 | Nascent energy distribution of the Criegee intermediate CH <sub>2</sub> OO from direct dynamics calculations of primary ozonide dissociation. Journal of Chemical Physics, 2018, 148, 174306.   | 3.0  | 36        |
| 165 | Kinetics of Propargyl Radical Dissociation. Journal of Physical Chemistry A, 2015, 119, 7780-7791.  | 2.5  | 35        |
| 166 | Variational calculation of the rate of dissociation of ethenone into methylene and carbon monoxide on an ab initio determined potential energy surface. The Journal of Physical Chemistry, 1991, 95, 9882-9889.   | 2.9  | 34        |
| 167 | Shock Tube Explorations of Roaming Radical Mechanisms: The Decompositions of Isobutane and Neopentane. Journal of Physical Chemistry A, 2012, 116, 5981-5989.   | 2.5  | 34        |
| 168 | Tunneling effects in the unimolecular decay of (CH <sub>3</sub> ) <sub>2</sub> COO Criegee intermediates to OH radical products. Journal of Chemical Physics, 2017, 146, 134307.  | 3.0  | 34        |
| 169 | Resolving Some Paradoxes in the Thermal Decomposition Mechanism of Acetaldehyde. Journal of Physical Chemistry A, 2015, 119, 7724-7733.   | 2.5  | 33        |
| 170 | Variable reaction coordinate direct RRKM theory. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1997, 101, 423-437.  | 0.9  | 32        |
| 171 | Time-resolved measurements of OH and HO <sub>2</sub> product formation in pulsed-photolytic chlorine atom initiated oxidation of neopentane. Physical Chemistry Chemical Physics, 2003, 5, 1584-1592.   | 2.8  | 32        |
| 172 | Channel Specific Rate Constants Relevant to the Thermal Decomposition of Disilane. Journal of Physical Chemistry A, 2005, 109, 4911-4920.   | 2.5  | 32        |
| 173 | Global uncertainty analysis for RRKM/master equation based kinetic predictions: A case study of ethanol decomposition. Combustion and Flame, 2015, 162, 3427-3436.  | 5.2  | 32        |
| 174 | New Insights into Low-Temperature Oxidation of Propane from Synchrotron Photoionization Mass Spectrometry and Multiscale Informatics Modeling. Journal of Physical Chemistry A, 2015, 119, 7116-7129.   | 2.5  | 32        |
| 175 | Selective deuteration illuminates the importance of tunneling in the unimolecular decay of Criegee intermediates to hydroxyl radical products. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12372-12377. | 7.1  | 32        |
| 176 | Infrared Spectral Properties of the Naphthalene Cation: Radiative Cooling Kinetics Experiments and Density Functional Calculations. The Journal of Physical Chemistry, 1995, 99, 12115-12124.   | 2.9  | 31        |
| 177 | Some Observations Concerning Detailed Balance in Association/Dissociation Reactions. Journal of Physical Chemistry A, 2004, 108, 8296-8306.   | 2.5  | 31        |
| 178 | Measurements and Modeling of DO <sub>2</sub> Formation in the Reactions of C <sub>2</sub> D <sub>5</sub> and C <sub>3</sub> D <sub>7</sub> Radicals with O <sub>2</sub> . Journal of Physical Chemistry A, 2007, 111, 4015-4030.                        | 2.5  | 31        |
| 179 | Performance of the Spin-Flip and Multireference Methods for Bond Breaking in Hydrocarbons: A Benchmark Study. Journal of Physical Chemistry A, 2007, 111, 13264-13271.  | 2.5  | 31        |
| 180 | Watching a hydroperoxyalkyl radical (â€¢QOOH) dissociate. Science, 2021, 373, 679-682.  | 12.6 | 31        |

| #   | ARTICLE  | IF   | CITATIONS |
|-----|--|------|-----------|
| 181 | Thermal Decomposition of CF <sub>3</sub> and the Reaction of CF <sub>2</sub> + OH → CF <sub>2</sub> O + H. Journal of Physical Chemistry A, 2008, 112, 31-37.  | 2.5  | 30        |
| 182 | The role of radical + fuel-radical well-skipping reactions in ethanol and methylformate low-pressure flames. Proceedings of the Combustion Institute, 2015, 35, 447-455.   | 3.9  | 30        |
| 183 | Comment on "When Rate Constants Are Not Enough". Journal of Physical Chemistry A, 2016, 120, 306-312.  | 2.5  | 30        |
| 184 | A theoretical study of the kinetics of C <sub>2</sub> H <sub>3</sub> +H. Physical Chemistry Chemical Physics, 1999, 1, 989-997.  | 2.8  | 28        |
| 185 | Temperature Dependence and Deuterium Kinetic Isotope Effects in the CH (CD) + C <sub>2</sub> H <sub>4</sub> (C <sub>2</sub> D <sub>4</sub> ) Reaction between 295 and 726 K. Journal of Physical Chemistry A, 2001, 105, 5393-5401.  | 2.5  | 28        |
| 186 | A theoretical analysis of the CH <sub>3</sub> +H reaction: isotope effects, the high-pressure limit, and transition state recrossing. Proceedings of the Combustion Institute, 2002, 29, 1229-1236.  | 3.9  | 28        |
| 187 | Pressure-dependent branching in the reaction of 1 CH <sub>2</sub> with C <sub>2</sub> H <sub>4</sub> and other reactions on the C <sub>3</sub> H <sub>6</sub> potential energy surface. Proceedings of the Combustion Institute, 2015, 35, 223-230.  | 3.9  | 28        |
| 188 | Automated theoretical chemical kinetics: Predicting the kinetics for the initial stages of pyrolysis. Proceedings of the Combustion Institute, 2021, 38, 375-384.  | 3.9  | 28        |
| 189 | Substitution Reactions in the Pyrolysis of Acetone Revealed through a Modeling, Experiment, Theory Paradigm. Journal of the American Chemical Society, 2021, 143, 3124-3142.   | 13.7 | 28        |
| 190 | Theoretical kinetic estimates for the recombination of hydrogen atoms with propargyl and allyl radicals. Proceedings of the Combustion Institute, 2000, 28, 1503-1509.   | 3.9  | 27        |
| 191 | A direct transition state theory based analysis of the branching in NH <sub>2</sub> + NO. Faraday Discussions, 2001, 119, 207-222.   | 3.2  | 27        |
| 192 | Ab initio kinetics for pyrolysis and combustion systems. Computer Aided Chemical Engineering, 2019, , 115-167.   | 0.5  | 27        |
| 193 | Auxiliary Induced .rho.-Stereocontrol in Acetaloxyalkyl Radical Addition Reactions. Journal of the American Chemical Society, 1995, 117, 4183-4184.  | 13.7 | 26        |
| 194 | Development of an Effective Chiral Auxiliary for Hydroxyalkyl Radicals. Journal of Organic Chemistry, 2002, 67, 6195-6209.   | 3.2  | 26        |
| 195 | Secondary Kinetics of Methanol Decomposition: Theoretical Rate Coefficients for <sup>3</sup> CH <sub>2</sub> + OH, <sup>3</sup> CH <sub>2</sub> + <sup>3</sup> CH <sub>2</sub> , and <sup>3</sup> CH <sub>2</sub> + CH <sub>3</sub> . Journal of Physical Chemistry A, 2007, 111, 8699-8707. | 2.5  | 26        |
| 196 | Low Temperature Kinetics of the First Steps of Water Cluster Formation. Physical Review Letters, 2016, 116, 113401.  | 7.8  | 26        |
| 197 | Kinetics of the reaction of vinyl radicals with NO: Ab initio theory, master equation predictions, and laser absorption measurements. Physical Chemistry Chemical Physics, 2004, 6, 2216-2223.   | 2.8  | 25        |
| 198 | Combustion Chemistry: Important Features of the C <sub>3</sub> H <sub>5</sub> Potential Energy Surface, Including Allyl Radical, Propargyl + H <sub>2</sub> , Allene + H, and Eight Transition States. Journal of Physical Chemistry A, 2011, 115, 14209-14214.                              | 2.5  | 25        |

| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 199 | Comparison of variational Riceâ€“Ramspergerâ€“Kasselâ€“Marcus theory with quantum scattering theory for the He+H+2 $\hat{\rightarrow}$ HeH++H reaction. Journal of Chemical Physics, 1992, 96, 8164-8170.   | 3.0 | 24        |
| 200 | Kinetic Isotope Effects and Variable Reaction Coordinates in Barrierless Recombination Reactions. Journal of Physical Chemistry A, 2001, 105, 8567-8578.  | 2.5 | 24        |
| 201 | Geometric Investigation of Association/Dissociation Kinetics with an Application to the Master Equation for CH <sub>3</sub> + CH <sub>3</sub> $\hat{\rightarrow}$ C <sub>2</sub> H <sub>6</sub> . Journal of Physical Chemistry A, 2002, 106, 5860-5879.                          | 2.5 | 24        |
| 202 | Sterically promoted zirconiumâ€“phosphorus $\pi$ -bonding: structural investigations of [Cp <sub>2</sub> Zr(Cl){P(H)Dmp}] and [Cp <sub>2</sub> Zr{P(H)Dmp} <sub>2</sub> ] (Dmp=2,6-Mes <sub>2</sub> C <sub>6</sub> H <sub>3</sub> ). Inorganica Chimica Acta, 2000, 297, 181-190. | 2.4 | 23        |
| 203 | Kinetics and Product Branching Ratios of the Reaction of <sup>1</sup> CH <sub>2</sub> with H <sub>2</sub> and D <sub>2</sub> . Journal of Physical Chemistry A, 2008, 112, 9575-9583.   | 2.5 | 23        |
| 204 | H <sup>2</sup> +O <sub>2</sub> : High level theory and the role of singlet channels. Combustion and Flame, 2022, 243, 111975.   | 5.2 | 23        |
| 205 | A first principles theoretical determination of the rate constant for the dissociation of singlet ketene. Journal of Chemical Physics, 1994, 101, 9198-9201.  | 3.0 | 22        |
| 206 | Accurate Anharmonic Zero-Point Energies for Some Combustion-Related Species from Diffusion Monte Carlo. Journal of Physical Chemistry A, 2017, 121, 4334-4340.  | 2.5 | 22        |
| 207 | Predictive Theory for the Addition and Insertion Kinetics of <sup>1</sup> CH <sub>2</sub> Reacting with Unsaturated Hydrocarbons. Journal of Physical Chemistry A, 2013, 117, 12677-12692.  | 2.5 | 21        |
| 208 | Comparison of multireference configuration interaction potential energy surfaces for H <sub>2</sub> +O <sub>2</sub> $\hat{\rightarrow}$ H <sub>2</sub> O <sub>2</sub> : the effect of internal contraction. Theoretical Chemistry Accounts, 2014, 133, 1.                         | 1.4 | 21        |
| 209 | Pressure dependent low temperature kinetics for CN + CH <sub>3</sub> : competition between chemical reaction and van der Waals complex formation. Physical Chemistry Chemical Physics, 2016, 18, 15118-15132.   | 2.8 | 21        |
| 210 | Nonthermal rate constants for CH <sub>4</sub> * + X $\hat{\rightarrow}$ CH <sub>3</sub> + HX, X = H, O, OH, and O <sub>2</sub> . Journal of Chemical Physics, 2019, 150, 114112.  | 3.0 | 21        |
| 211 | A semiclassical model for orientation effects in electron transfer reactions. Journal of Chemical Physics, 1986, 84, 3089-3098.   | 3.0 | 20        |
| 212 | Product Formation in the Cl-Initiated Oxidation of Cyclopropane. Journal of Physical Chemistry A, 2003, 107, 1992-2002.   | 2.5 | 20        |
| 213 | Oxidation pathways in the reaction of diacetylene with OH radicals. Proceedings of the Combustion Institute, 2007, 31, 185-192.   | 3.9 | 20        |
| 214 | Low Temperature Rate Coefficients for the Reaction CN + HC <sub>3</sub> N. Journal of Physical Chemistry A, 2013, 117, 12155-12164.   | 2.5 | 20        |
| 215 | Recombination of aromatic radicals with molecular oxygen. Proceedings of the Combustion Institute, 2017, 36, 169-177.   | 3.9 | 20        |
| 216 | A combined quantum chemical and transition state theory study of the C <sub>2</sub> H <sub>2</sub> +CH <sub>4</sub> reaction dynamics. Journal of Chemical Physics, 1996, 104, 5437-5445.   | 3.0 | 19        |



| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 235 | Direct Measurement and Theoretical Calculation of the Rate Coefficient for Cl + CH <sub>3</sub> in the Range from T = 202 to 298 K. <i>Journal of Physical Chemistry A</i> , 2007, 111, 1015-1023.            | 2.5 | 15        |
| 236 | Anharmonic Rovibrational Partition Functions for Fluxional Species at High Temperatures via Monte Carlo Phase Space Integrals. <i>Journal of Physical Chemistry A</i> , 2018, 122, 1727-1740.                 | 2.5 | 15        |
| 237 | Kinetics of 1-butyl and 2-butyl radical reactions with molecular oxygen: Experiment and theory. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 291-298.   | 3.9 | 15        |
| 238 | Termolecular chemistry facilitated by radical-radical recombinations and its impact on flame speed predictions. <i>Proceedings of the Combustion Institute</i> , 2021, 38, 515-522.                           | 3.9 | 15        |
| 239 | A theoretical analysis of the reaction of H with C <sub>2</sub> H <sub>5</sub> . <i>Proceedings of the Combustion Institute</i> , 1998, 27, 151-157.  | 0.3 | 13        |
| 240 | An experimental and theoretical high temperature kinetic study of the thermal unimolecular dissociation of fluoroethane. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 6266.                         | 2.8 | 13        |
| 241 | Formic acid catalyzed isomerization and adduct formation of an isoprene-derived Criegee intermediate: experiment and theory. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 26796-26805.              | 2.8 | 13        |
| 242 | Application of artificial intelligence methods to intramolecular dynamics calculations. <i>Chemical Physics Letters</i> , 1988, 146, 7-12.  | 2.6 | 12        |
| 243 | RRKM Theory and Its Implementation. <i>Comprehensive Chemical Kinetics</i> , 2003, , 55-103.  | 2.3 | 11        |
| 244 | Photodissociation transition states characterized by chirped pulse millimeter wave spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 146-151. | 7.1 | 11        |
| 245 | Diastereomers and Low-Temperature Oxidation. <i>Journal of Physical Chemistry A</i> , 2021, 125, 8064-8073.   | 2.5 | 11        |
| 246 | A test of two approximate two-state treatments for the dynamics of H-atom transfers between two heavy particles. <i>Journal of Chemical Physics</i> , 1986, 85, 1924-1930.                                    | 3.0 | 10        |
| 247 | D-Atom Products in Predissociation of CD <sub>2</sub> CD <sub>2</sub> OH from the 202 to 215 nm Photodissociation of 2-Bromoethanol. <i>Journal of Physical Chemistry A</i> , 2010, 114, 5453-5461.           | 2.5 | 10        |
| 248 | Insights into the role of polycyclic aromatic hydrocarbon condensation in haze formation in Jupiter's atmosphere. <i>Astronomy and Astrophysics</i> , 2011, 532, A40.   | 5.1 | 10        |
| 249 | A Summary of a Direct Transition State Theory Based Study of Methyl Radical Recombination Kinetics. <i>Journal of Physical Chemistry A</i> , 2000, 104, 2351-2354.  | 2.5 | 9         |
| 250 | The Vinyl + NO Reaction: Determining the Products with Time-Resolved Fourier Transform Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2005, 109, 4921-4929.   | 2.5 | 9         |
| 251 | Comment on "Automatic estimation of pressure-dependent rate coefficients" (J. W. Allen, C. F. J. ETQq1 1 0.784314 rgBT / Over Physics, 2012, 14, 8431.  | 2.8 | 8         |
| 252 | Reaction Profiles and Kinetics for Radical-Radical Hydrogen Abstraction via Multireference Coupled Cluster Theory. <i>Journal of Chemical Theory and Computation</i> , 2020, 16, 1511-1525.                   | 5.3 | 8         |

| #   | ARTICLE  | IF   | CITATIONS |
|-----|--|------|-----------|
| 253 | Infrared spectroscopic signature of a hydroperoxyalkyl radical ( $\dot{\text{C}}\text{OOH}$ ). Journal of Chemical Physics, 2022, 156, 014301.   | 3.0  | 8         |
| 254 | Iteratively determined effective Hamiltonians for the adiabatically reduced coupled equations approach to intramolecular dynamics calculations. Journal of Chemical Physics, 1986, 85, 5019-5026.  | 3.0  | 7         |
| 255 | Effects of New Ab Initio Rate Coefficients on Predictions of Species Formed during <i>n</i> -Butanol Ignition and Pyrolysis. Journal of Physical Chemistry A, 2015, 119, 543-551.  | 2.5  | 7         |
| 256 | Comparison of variational RRKM theory with quantum scattering theory for the $\text{Ne}+\text{H}+2\hat{\text{T}}'\text{NeH}+\text{H}$ reaction. Chemical Physics Letters, 1992, 195, 513-517.  | 2.6  | 6         |
| 257 | The fragmentation pattern of 1,4-dioxane ion. International Journal of Mass Spectrometry and Ion Processes, 1993, 128, 21-30.  | 1.8  | 6         |
| 258 | Theory of Low Temperature Gas-Phase Reactions. , 2008, , 175-229.  |      | 6         |
| 259 | First-Principles Chemical Kinetic Modeling of Methyl <i>trans</i> -3-Hexenoate Epoxidation by $\text{HO}_2$ . Journal of Physical Chemistry A, 2017, 121, 1909-1915.   | 2.5  | 6         |
| 260 | Theoretical investigation of intersystem crossing in the cyanonitrene molecule, $1\text{NCN} \hat{\text{T}}'\hat{\text{A}}\hat{\text{C}}^3\text{NCN}$ . Journal of Chemical Physics, 2017, 147, 084310.  | 3.0  | 6         |
| 261 | Transition-State Theory Based Modeling of the Dynamics of the $\text{O}(4\text{S}) + \text{CO}_2$ Reaction. Journal of Physical Chemistry A, 1998, 102, 9811-9818.   | 2.5  | 5         |
| 262 | Ab initio Variational Transition State Theory and Master Equation Study of the Reaction $(\text{OH})_3\text{SiOCH}_2\text{CH}_3 + \text{CH}_3\text{CH}_2\text{C}(\text{OH})_3\text{SiOC}_2\text{H}_5$ . Zeitschrift Fur Physikalische Chemie, 2015, 229, 691-708.                                    | 2.8  | 5         |
| 263 | Rapid Allylic 1,6 H-Atom Transfer in an Unsaturated Criegee Intermediate. Journal of the American Chemical Society, 2022, 144, 5945-5955.  | 13.7 | 5         |
| 264 | Entanglement Effect and Angular Momentum Conservation in a Nonseparable Tunneling Treatment. Journal of Chemical Theory and Computation, 2021, 17, 3863-3885.  | 5.3  | 4         |
| 265 | Dramatic Conformer-Dependent Reactivity of the Acetaldehyde Oxide Criegee Intermediate with Dimethylamine <i>Via</i> a 1,2-Insertion Mechanism. Journal of Physical Chemistry A, 2022, 126, 710-719.   | 2.5  | 4         |
| 266 | Secondary channels in the thermal decomposition of monomethylhydrazine ( $\text{CH}_3\text{NHNH}_2$ ). RSC Advances, 2014, 4, 62951-62964.   | 3.6  | 3         |
| 267 | Comment on $\hat{\text{A}}\hat{\text{O}}\hat{\text{A}}$ novel and facile decay path of Criegee intermediates by intramolecular insertion reactions via roaming transition states $\hat{\text{A}}\hat{\text{J}}$ . Chem. Phys. 142, 124312 (2015)]. Journal of Chemical Physics, 2015, 143, 167101.   | 3.0  | 3         |
| 268 | Long-Range Interaction Potential of Open Shell Atoms with Neutral Molecules : Application to the Calculation of the Rate Constant for the $\text{C}_2\text{H}(2\hat{\text{T}}\hat{\text{L}}^+)+\text{O}(3\text{P})$ Reaction. Proceedings of the International Astronomical Union, 2011, 7, 372-382. | 0.0  | 2         |
| 269 | A Tribute to Lawrence B. Harding, Joe V. Michael, and Albert F. Wagner for Their 100 Years of Combustion Kinetics Studies at Argonne. Journal of Physical Chemistry A, 2015, 119, 7075-7077.   | 2.5  | 2         |
| 270 | Propane clusters in Titan's lower atmosphere: insights from a combined theory/laboratory study. Monthly Notices of the Royal Astronomical Society, 2019, 488, 676-684.   | 4.4  | 2         |



| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 271 | TRANSITION STATES IN BARRIERLESS REACTIONS. <i>Advanced Series in Physical Chemistry</i> , 1996, , 120-163.   | 1.5 | 2         |
| 272 | Energy-resolved and time-dependent unimolecular dissociation of hydroperoxyalkyl radicals ( $\dot{E}^{\text{TM}}\text{QOOH}$ ). <i>Faraday Discussions</i> , 0, 238, 575-588. | 3.2 | 2         |
| 273 | Insights into the condensation of PAHs in the envelope of IRC +10216. <i>EAS Publications Series</i> , 2011, 46, 191-199.   | 0.3 | 1         |
| 274 | Angular momentum conservation in the $\text{O} + \text{OH} \hat{\rightarrow} \text{O}_2 + \text{H}$ reaction. , 1999, 31, 753.  |     | 1         |
| 275 | Development of an Effective Chiral Auxiliary for Hydroxylalkyl Radicals.. <i>ChemInform</i> , 2003, 34, no.   | 0.0 | 0         |
| 276 | Tribute to James A. Miller. <i>Journal of Physical Chemistry A</i> , 2007, 111, 3673-3675.  | 2.5 | 0         |