

# Paul L Houston

## List of Publications by Citations

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53  
papers

2,324  
citations

23  
h-index

48  
g-index

57  
ext. papers

2,607  
ext. citations

5.9  
avg, IF

5.16  
L-index

#	Paper	IF	Citations
53	Two-dimensional imaging of state-selected photodissociation products detected by multiphoton ionization. <i>Journal of Chemical Physics</i> , <b>1987</b> , 87, 1445-1447	3.9	809
52	Improved two-dimensional product imaging: The real-time ion-counting method. <i>Review of Scientific Instruments</i> , <b>1998</b> , 69, 1665-1670	1.7	165
51	Formaldehyde photochemistry: Appearance rate, vibrational relaxation, and energy distribution of the CO product. <i>Journal of Chemical Physics</i> , <b>1976</b> , 65, 757-770	3.9	135
50	Photodissociation dynamics of acetone at 193 nm: Photofragment internal and translational energy distributions. <i>Journal of Chemical Physics</i> , <b>1989</b> , 91, 7498-7513	3.9	129
49	New Laser-Based and Imaging Methods for Studying the Dynamics of Molecular Collisions. <i>The Journal of Physical Chemistry</i> , <b>1996</b> , 100, 12757-12770		70
48	The energy distribution, angular distribution, and alignment of the O(1D2) fragment from the photodissociation of ozone between 235 and 305 nm. <i>Journal of Chemical Physics</i> , <b>2001</b> , 115, 7460-7473	3.9	62
47	Theories and simulations of roaming. <i>Chemical Society Reviews</i> , <b>2017</b> , 46, 7615-7624	58.5	51
46	The vibrational distribution of O2(X 3 $\Sigma^-_g$ ) produced in the photodissociation of ozone between 226 and 240 and at 266 nm. <i>Journal of Chemical Physics</i> , <b>2000</b> , 112, 1279-1286	3.9	48
45	Photodissociation dynamics of state-selected resonances of HCO X 2A $^+$ prepared by stimulated emission pumping. <i>Journal of Chemical Physics</i> , <b>1995</b> , 102, 1645-1657	3.9	48
44	"Plug and play" full-dimensional ab initio potential energy and dipole moment surfaces and anharmonic vibrational analysis for CH4-H2O. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 8172-81	3.6	47
43	Determination of the heat of formation of O3 using vacuum ultraviolet laser-induced fluorescence spectroscopy and two-dimensional product imaging techniques. <i>Journal of Chemical Physics</i> , <b>1999</b> , 111, 6350-6355	3.9	47
42	Speed-Dependent Anisotropy Parameters in the UV Photodissociation of Ozone. <i>Journal of Physical Chemistry A</i> , <b>1997</b> , 101, 7593-7599	2.8	44
41	Two roaming pathways in the photolysis of CH3CHO between 328 and 308 nm. <i>Chemical Science</i> , <b>2014</b> , 5, 4633-4638	9.4	43
40	Product correlations in photofragment dynamics. <i>Faraday Discussions of the Chemical Society</i> , <b>1986</b> , 82, 13		40
39	Roaming Under the Microscope: Trajectory Study of Formaldehyde Dissociation. <i>Journal of Physical Chemistry A</i> , <b>2016</b> , 120, 5103-14	2.8	38
38	Evidence for Vinylidene Production in the Photodissociation of the Allyl Radical. <i>Journal of Physical Chemistry Letters</i> , <b>2010</b> , 1, 1875-1880	6.4	38
37	Machine learning for potential energy surfaces: A PIP approach to bring a DFT-based PES to CCSD(T) level of theory. <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 051102	3.9	34

36	Communication: A benchmark-quality, full-dimensional ab initio potential energy surface for Ar-HOCO. <i>Journal of Chemical Physics</i> , <b>2014</b> , 140, 151101	3.9	33
35	Perspective: Advanced particle imaging. <i>Journal of Chemical Physics</i> , <b>2017</b> , 147, 013601	3.9	32
34	A new (multi-reference configuration interaction) potential energy surface for HCO and preliminary studies of roaming. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2017</b> , 375,	3	29
33	Classical trajectory study of energy transfer in collisions of highly excited allyl radical with argon. <i>Journal of Physical Chemistry A</i> , <b>2013</b> , 117, 14028-41	2.8	27
32	Changes in the Vibrational Population of SO(3 $\Sigma$ ) from the Photodissociation of SO <sub>2</sub> between 202 and 207 nm. <i>Journal of Physical Chemistry A</i> , <b>2000</b> , 104, 10240-10246	2.8	24
31	Evidence of a Double Surface Crossing between Open- and Closed-Shell Surfaces in the Photodissociation of Cyclopropyl Iodide. <i>Journal of Physical Chemistry A</i> , <b>2001</b> , 105, 1693-1701	2.8	23
30	Capturing roaming molecular fragments in real time. <i>Science</i> , <b>2020</b> , 370, 1072-1077	33.3	22
29	Efficient Generation of Permutationally Invariant Potential Energy Surfaces for Large Molecules. <i>Journal of Chemical Theory and Computation</i> , <b>2020</b> , 16, 3264-3272	6.4	21
28	The dynamics of allyl radical dissociation. <i>Journal of Physical Chemistry A</i> , <b>2011</b> , 115, 6797-804	2.8	18
27	Trajectory and Model Studies of Collisions of Highly Excited Methane with Water Using an ab Initio Potential. <i>Journal of Physical Chemistry A</i> , <b>2015</b> , 119, 12304-17	2.8	17
26	Collisional energy transfer in highly excited molecules. <i>Journal of Physical Chemistry A</i> , <b>2014</b> , 118, 7758-7758		17
25	Formaldehyde roaming dynamics: Comparison of quasi-classical trajectory calculations and experiments. <i>Journal of Chemical Physics</i> , <b>2017</b> , 147, 013936	3.9	16
24	A Machine Learning Approach for Rate Constants. II. Clustering, Training, and Predictions for the O(P) + HCl $\rightarrow$ OH + Cl Reaction. <i>Journal of Physical Chemistry A</i> , <b>2020</b> , 124, 5746-5755	2.8	16
23	Differential Cross Section for Rotationally Inelastic Scattering of Vibrationally Excited NO(v=5) from Ar. <i>Journal of Physical Chemistry A</i> , <b>2001</b> , 105, 11165-11170	2.8	16
22	Rotational resonances in the HCO roaming reaction are revealed by detailed correlations. <i>Science</i> , <b>2020</b> , 369, 1592-1596	33.3	16
21	A Machine Learning Approach for Prediction of Rate Constants. <i>Journal of Physical Chemistry Letters</i> , <b>2019</b> , 10, 5250-5258	6.4	15
20	Zero Kinetic Energy Photofragment Spectroscopy: The Threshold Dissociation of NO <sub>2</sub> . <i>Journal of Physical Chemistry A</i> , <b>1998</b> , 102, 9666-9673	2.8	15
19	Full-dimensional potential energy surface for acetylacetone and tunneling splittings. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 7758-7767	3.6	14

18	Breaking the Coupled Cluster Barrier for Machine-Learned Potentials of Large Molecules: The Case of 15-Atom Acetylacetone. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 12, 4902-4909	6.4	13
17	Permutationally invariant polynomial potential energy surfaces for tropolone and H and D atom tunneling dynamics. <i>Journal of Chemical Physics</i> , <b>2020</b> , 153, 024107	3.9	12
16	A model for energy transfer in collisions of atoms with highly excited molecules. <i>Journal of Physical Chemistry A</i> , <b>2015</b> , 119, 4695-710	2.8	11
15	Full-dimensional, ab initio potential energy surface for glycine with characterization of stationary points and zero-point energy calculations by means of diffusion Monte Carlo and semiclassical dynamics. <i>Journal of Chemical Physics</i> , <b>2020</b> , 153, 244301	3.9	11
14	Electronic to Vibrational Energy Transfer from Excited Halogen Atoms. <i>Advances in Chemical Physics</i> , <b>2007</b> , 381-418		9
13	Ultraviolet Photodissociation Dynamics of the 1-Propenyl Radical. <i>Journal of Physical Chemistry A</i> , <b>2016</b> , 120, 5248-56	2.8	8
12	Initiation of Atom-Molecule Reactions by Infrared Multiphoton Dissociation. <i>Advances in Chemical Physics</i> , <b>2007</b> , 625-638		7
11	PHOTODISSOCIATION DYNAMICS OF OZONE IN THE HARTLEY BAND. <i>Advanced Series in Physical Chemistry</i> , <b>2004</b> , 281-327		6
10	q-AQUA: A Many-Body CCSD(T) Water Potential, Including Four-Body Interactions, Demonstrates the Quantum Nature of Water from Clusters to the Liquid Phase. <i>Journal of Physical Chemistry Letters</i> , 5068-5074	6.4	6
9	H atom Product Channels in the Ultraviolet Photodissociation of the 2-Propenyl Radical. <i>Journal of Physical Chemistry A</i> , <b>2019</b> , 123, 9957-9965	2.8	5
8	Product Imaging Studies of Photodissociation and Bimolecular Reaction Dynamics. <i>Journal of the Chinese Chemical Society</i> , <b>2001</b> , 48, 309-318	1.5	5
7	Permutationally invariant polynomial regression for energies and gradients, using reverse differentiation, achieves orders of magnitude speed-up with high precision compared to other machine learning methods.. <i>Journal of Chemical Physics</i> , <b>2022</b> , 156, 044120	3.9	4
6	A CCSD(T)-Based 4-Body Potential for Water. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 12, 10318-10324	6.4	3
5	Teaching vibrational spectra to assign themselves. <i>Faraday Discussions</i> , <b>2018</b> , 212, 65-82	3.6	3
4	MULTIMODE Calculations of Vibrational Spectroscopy and 1d Interconformer Tunneling Dynamics in Glycine Using a Full-Dimensional Potential Energy Surface. <i>Journal of Physical Chemistry A</i> , <b>2021</b> , 125, 5346-5354	2.8	1
3	MULTIMODE, The n-Mode Representation of the Potential and Illustrations to IR Spectra of Glycine and Two Protonated Water Clusters <b>2022</b> , 296-339		1
2	A Tribute to William M. Jackson, Jr. <i>Journal of Physical Chemistry A</i> , <b>2019</b> , 123, 1905-1907	2.8	
1	Improvements in the Product Imaging Technique and Their Application to Ozone Photodissociation. <i>ACS Symposium Series</i> , <b>2000</b> , 34-55	0.4	

