Philippe Halvick

List of Publications by Year
in descending order

60 papers	1,307 citations	279798 23 h-index	395702 33 g-index
62 all docs	62 docs citations	62 times ranked	914 citing authors

#	Article	IF	Citations
1	Resolved fine and hyperfine state-to-state rate coefficients for the rotational transitions of C3N induced by collision with He. Monthly Notices of the Royal Astronomical Society, 2021, 507, 4086-4094.	4.4	4
2	Strong ortho/para effects in the vibrational spectrum of Cl-(H2). Journal of Chemical Physics, 2021, 155, 241101.	3.0	5
3	Predissociation spectra of the 35Clâ^'(H2) complex and its isotopologue 35Clâ^'(D2). Physical Chemistry Chemical Physics, 2020, 22, 25552-25559.	2.8	5
4	Radiative Electron Attachment and Photodetachment Rate Constants for Linear Carbon Chains. ACS Earth and Space Chemistry, 2019, 3, 1556-1563.	2.7	6
5	Potential energy surface and rovibrational bound states of the H₂â€“C₃N^{â^'} van der Waals complex. Physical Chemistry Chemical Physics, 2019, 21, 2929-2937.	2.8	5
6	Rigid-Bender Close-Coupling Treatment of the Inelastic Collisions of H₂O with para-H₂. Journal of Physical Chemistry A, 2019, 123, 5704-5712.	2.5	19
7	Single-center approach for photodetachment and radiative electron attachment: Comparison with other theoretical approaches and with experimental photodetachment data. Physical Review A, 2019, 99, .	2.5	5
8	Rotational transitions of C3Nâ^' induced by collision with H2. Monthly Notices of the Royal Astronomical Society, 2019, 486, 414-421.	4.4	21
9	Quantum tunneling dynamical behaviour on weakly bound complexes: the case of a CO₂â€“N₂ dimer. Physical Chemistry Chemical Physics, 2019, 21, 3550-3557.	2.8	13
10	On the gas-phase formation of the HCO radical: accurate quantum study of the H+CO radiative association. Monthly Notices of the Royal Astronomical Society, 2018, 475, 2545-2552.	4.4	12
11	On the gas-phase formation of the HCO^{â^'} anion: accurate quantum study of the H^{â^'} + CO radiative association and HCO radiative electron attachment. Faraday Discussions, 2018, 212, 101-116.	3.2	3
12	State-to-state chemistry and rotational excitation of CH+ in photon-dominated regions. Monthly Notices of the Royal Astronomical Society, 2017, 469, 612-620.	4.4	31
13	Rotational (de-)excitation of C3Nâ^' by collision with He atoms. Monthly Notices of the Royal Astronomical Society, 2017, 467, 4174-4179.	4.4	10
14	Interaction of rigid C3Nâ^' with He: Potential energy surface, bound states, and rotational spectrum. Journal of Chemical Physics, 2017, 146, 224310.	3.0	5
15	Unveiling the Ionization Energy of the CN Radical. Journal of Physical Chemistry Letters, 2017, 8, 4038-4042.	4.6	12
16	Explanation of efficient quenching of molecular ion vibrational motion by ultracold atoms. Nature Communications, 2016, 7, 11234.	12.8	30
17	Theoretical study of the buffer-gas cooling and trapping of CrH(X6Î£+) by 3He atoms. Journal of Chemical Physics, 2016, 145, 214305.	3.0	4
18	Isotopic effects in the collision of HCN with He: substitution of HCN by DCN. Monthly Notices of the Royal Astronomical Society, 2015, 453, 1317-1323.	4.4	13

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19	Low temperature rate coefficients of the H + CH+ â†' C+ + H2 reaction: New potential energy surface and time-independent quantum scattering. Journal of Chemical Physics, 2015, 143, 114304.	3.0	22
20	Rovibrational energy transfer in the Heâ€"C3 collision: rigid bender treatment of the bendingâ€"rotation interaction and rate coefficients. Monthly Notices of the Royal Astronomical Society, 2015, 449, 3420-3425.	4.4	21
21	Potential energy surface of the CO2â€"N2 van der Waals complex. Journal of Chemical Physics, 2015, 142, 174301.	3.0	41
22	Rotational Excitation of the OH⁺ Radical by Collision with H at Low Temperature. Journal of Physical Chemistry A, 2015, 119, 12599-12606.	2.5	6
23	Accurate global potential energy surface for the H + OH+ collision. Journal of Chemical Physics, 2014, 140, 184306.	3.0	7
24	Rovibrational energy transfer in the He-C3 collision: Potential energy surface and bound states. Journal of Chemical Physics, 2014, 140, 084316.	3.0	20
25	Theoretical spectroscopic characterization of the ArBeO complex. Journal of Chemical Physics, 2014, 141, 174305.	3.0	7
26	The interaction of He with vibrating HCN: Potential energy surface, bound states, and rotationally inelastic cross sections. Journal of Chemical Physics, 2013, 139, 034304.	3.0	27
27	Ro-vibrational relaxation of HCN in collisions with He: Rigid bender treatment of the bending-rotation interaction. Journal of Chemical Physics, 2013, 139, 124317.	3.0	33
28	H₂(v= 0,1) + C⁺(²P) â†' H+CH⁺STATE-TO-STATE RATE CONSTANTS FOR CHEMICAL PUMPING MODELS IN ASTROPHYSICAL MEDIA. Astrophysical Journal, 2013, 766, 80.	4.5	67
29	Spin-orbit quenching of the C+(2P) ion by collisions with para- and ortho-H2. Journal of Chemical Physics, 2013, 138, 204314.	3.0	18
30	Rotational relaxation of CS by collision with ortho- and para-H2 molecules. Journal of Chemical Physics, 2013, 139, 204304.	3.0	18
31	Potential energy surface and rovibrational energy levels of the H2-CS van der Waals complex. Journal of Chemical Physics, 2012, 137, 234301.	3.0	6
32	Prediction of the existence of the N2Hâ^' molecular anion. Journal of Chemical Physics, 2012, 136, 244302.	3.0	11
33	Review of OCS gas-phase reactions in dark cloud chemical models. Monthly Notices of the Royal Astronomical Society, 2012, 421, 1476-1484.	4.4	34
34	Photolysis of methane revisited at 121.6 nm and at 118.2 nm: quantum yields of the primary products, measured by mass spectrometry. Physical Chemistry Chemical Physics, 2011, 13, 8140.	2.8	50
35	Explicitly correlated treatment of the Arâ€"NO+ cation. Journal of Chemical Physics, 2011, 135, 044312.	3.0	42
36	The interaction of MnH(Xâ€‰Î£7+) with He: Ab initio potential energy surface and bound states. Journal of Chemical Physics, 2010, 132, 214305.	3.0	15

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37	Theoretical Sensitivity of the C(³P) + OH(X²Î) â†' CO(X¹Î£⁺) + H(²S) Rate Constant: The Role of the Long-Range Potential. Journal of Physical Chemistry A, 2010, 114, 7494-7499.	2.5	13
38	Quasiclassical trajectory calculations of differential cross sections and product energy distributions for the N+OHâ†'NO+H reaction. Journal of Chemical Physics, 2009, 131, 094302.	3.0	20
39	On the statistical behavior of the O+OHâ†'H+O2 reaction: A comparison between quasiclassical trajectory, quantum scattering, and statistical calculations. Journal of Chemical Physics, 2009, 130, 184301.	3.0	45
40	NON-THRESHOLD, THRESHOLD, AND NONADIABATIC BEHAVIOR OF THE KEY INTERSTELLAR C + C₂H₂REACTION. Astrophysical Journal, 2009, 703, 1179-1187.	4.5	25
41	Rotational relaxation of HF by collision with ortho- and para-H2 molecules. Journal of Chemical Physics, 2008, 129, 104308.	3.0	35
42	Differential cross sections and product energy distributions for the C(P3)+OH(XÎ2)â†'CO(XÎ£+1)+H(S2) reaction using a quasiclassical trajectory method. Journal of Chemical Physics, 2008, 128, 204301.	3.0	35
43	Cross sections and rate constants for the C(P3)+OH(XÎ2)â†'CO(XÎ£+1)+H(S2) reaction using a quasiclassical trajectory method. Journal of Chemical Physics, 2007, 126, 184308.	3.0	48
44	Cross sections and low temperature rate coefficients for the H + CH+reaction: a quasiclassical trajectory study. Physical Chemistry Chemical Physics, 2007, 9, 582-590.	2.8	32
45	A multiconfigurational approach of the symmetry breaking problem in the cyclic C3H radical. Chemical Physics, 2007, 340, 79-84.	1.9	8
46	Low temperature quantum rate coefficient of the H + CH+ reaction. Physical Chemistry Chemical Physics, 2005, 7, 2446.	2.8	38
47	Analytical global potential energy surfaces of the two lowest 2Aâ€² states of NO2. Physical Chemistry Chemical Physics, 2001, 3, 2726-2734.	2.8	31
48	Ab initio quasidiabatic states for the reaction N + CH â†' NC + H. Chemical Physics, 1997, 221, 33-44.	1.9	19
49	Theoretical Studies of High-Spin Organic Molecules. 1. Enhanced Coupling between Multiple Unpaired Electrons. The Journal of Physical Chemistry, 1996, 100, 9631-9637.	2.9	8
50	Converged quantum-mechanical calculations of electronic-to-vibrational, rotational energy transfer probabilities in a system with a conical intersection. Chemical Physics Letters, 1993, 203, 565-572.	2.6	34
51	Collinear quantum wave packet study of exothermic A + BC reactions involving an intermediate complex of linear geometry. Application to the C + NO reaction. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 1579.	1.7	16
52	A new diabatic representation of the coupled potential energy surfaces for Na(3p 2P)+H2â†'Na(3s 2S)+H2 or NaH+H. Journal of Chemical Physics, 1992, 96, 2895-2909.	3.0	66
53	Converged threeâ€dimensional quantum mechanical reaction probabilities for the F+H2 reaction on a potential energy surface with realistic entrance and exit channels and comparisons to results for three other surfaces. Journal of Chemical Physics, 1991, 94, 7150-7158.	3.0	49
54	Rapid convergence of basis set expansions for quantum mechanical reactive amplitude densities: channel-dependent expansion lengths. The Journal of Physical Chemistry, 1990, 94, 3231-3236.	2.9	4

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55	Exact quantum dynamics and tests of the distorted-wave approximation for the O(3P)+ HD reaction. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 1705.	1.7	11
56	Semiclassical and Quantum Mechanical Calculations of Isotopic Kinetic Branching Ratios for the Reactionof O(³P) with HD. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1989, 44, 427-434.	1.5	26
57	Converged quantum dynamics calculations for the F+H2 reaction on the wellâ€studied M5 potentialâ€energy surface. Journal of Chemical Physics, 1989, 90, 7608-7609.	3.0	39
58	Direct calculation of the reactive transition matrix by L2 quantum mechanical variational methods with complex boundary conditions. Journal of Chemical Physics, 1989, 91, 1643-1657.	3.0	33
59	Theoretical study of the reaction C(3P) + SH(X2Ï€). Computational and Theoretical Chemistry, 1988, 163, 267-283.	1.5	12
60	Predissociation spectroscopy of cold CN^{â^'}H₂ and CN^{â^'}D₂. Molecular Physics, 0, , .	1.7	3