Sheldon Green

List of Publications by Year
in descending order

87	3,644	109137 35	143772 57
papers	citations	h-index	g-index

88	88	88	880
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Sources of Error and Expected Accuracy in Ab Initio One-Electron Operator Properties: The Molecular Dipole Moment. Advances in Chemical Physics, 2007, , 179-209.	0.3	49
2	Quantum calculations for rotational energy transfer in nitrogen molecule collisions. Journal of Chemical Physics, 1996, 104, 7572-7589.	1.2	40
3	Vibrationâ€“rotation excitation of CO by hot hydrogen atoms: Comparison of two potential energy surfaces. Journal of Chemical Physics, 1996, 105, 5416-5422.	1.2	12
4	Quantum calculations for line shapes in Raman spectra of molecular nitrogen. Journal of Chemical Physics, 1996, 104, 7590-7598.	1.2	11
5	Excitation of interstellar water by ortho-and para-hydrogen. Astrophysics and Space Science, 1995, 224, 537-538.	0.5	8
6	Collision dynamics for an asymmetric top rotor and a linear rotor: Coupled channel formalism and application to H2Oâ€“H2. Journal of Chemical Physics, 1995, 102, 6024-6031.	1.2	53
7	Quantum scattering calculations for vibrational and rotational excitation of CO by hot hydrogen atoms. Journal of Chemical Physics, 1995, 102, 8800-8806.	1.2	19
8	Comment on symmetry of the interaction between an asymmetric rigid rotor and a linear rigid rotor. Journal of Chemical Physics, 1995, 103, 1035-1042.	1.2	12
9	Effects of velocity changing collisions on line shapes of HF in Ar. Journal of Chemical Physics, 1995, 102, 9160-9166.	1.2	49
10	Excitation of Interstellar Water by Ortho-and Para-Hydrogen. , 1995, , 537-538.		0
11	Raman Qâ€branch line shapes as a test of a H2â€“Ar intermolecular potential. Journal of Chemical Physics, 1994, 101, 15-19.	1.2	9
12	Experimental and theoretical velocity profiles for pure rotational scattering: COâ€“hot hydrogen atom collisions. Journal of Chemical Physics, 1994, 101, 9499-9505.	1.2	8
13	Spectral line shape parameters for HF in a bath of Ar are accurately predicted by a potential inferred from spectra of the van der Waals dimer. Journal of Chemical Physics, 1994, 100, 891-898.	1.2	58
14	Anisotropic rigid rotor potential energy function for H2Oâ€“H2. Journal of Chemical Physics, 1994, 101, 5824-5830.	1.2	78
15	Raman linewidths and rotationally inelastic collision rates in nitrogen. Journal of Chemical Physics, 1993, 98, 257-268.	1.2	19
16	Improved collisional excitation rates for interstellar water. Astrophysical Journal, Supplement Series, 1993, 85, 181.	3.0	115
17	Comment on: Heterodyne spectroscopy of carbon monoxide lines perturbed by hydrogen and helium. Journal of Chemical Physics, 1992, 97, 1610-1611.	1.2	7
18	Comment on broadening of water microwave lines by collisions with helium atoms. Journal of Chemical Physics, 1992, 96, 8150-8156.	1.2	21

#	Article	IF	Citations
19	Calculation of Pressure Broadened Spectral Line Shapes Including Collisional Transfer of Intensity. , 1992, , 257-283.		4
20	A simple ab initio calculation for energy transfer in collisions of hot hydrogen atoms with carbon dioxide. Chemical Physics Letters, 1991, 177, 508-516.	1.2	2
21	Pressure broadening data as a test of a recently proposed Arâ€“H2O interaction potential. Journal of Chemical Physics, 1991, 95, 3888-3890.	1.2	13
22	Calculations of H2O microwave line broadening in collisions with He atoms: Sensitivity to potential energy surfaces. Journal of Chemical Physics, 1991, 94, 1346-1359.	1.2	35
23	Theoretical line shapes for rotational spectra of HCl in Ar. Journal of Chemical Physics, 1990, 92, 4679-4685.	1.2	28
24	Raman Qâ€branch line shapes as a test of the H2â€“Ar intermolecular potential. Journal of Chemical Physics, 1990, 93, 1496-1501.	1.2	37
25	Dicke narrowing of the polarized Stokesâ€“Raman Q branch of the ν=0â†'1 transition of D2 in He. Journal of Chemical Physics, 1989, 91, 3846-3853.	1.2	43
26	Comment on linewidths and shifts in the Stokesâ€“Raman Q branch of D2 in He. Journal of Chemical Physics, 1989, 91, 52-55.	1.2	24
27	Pressure broadening and line coupling in bending bands of CO2. Journal of Chemical Physics, 1989, 90, 3603-3614.	1.2	65
28	Accurate collision-induced line-coupling parameters for the fundamental band of CO in He: Close coupling and coupled states scattering calculations. Journal of Quantitative Spectroscopy and Radiative Transfer, 1988, 39, 33-42.	1.1	59
29	Recent advances in pressure broadening: experiment and theory. Journal of Molecular Structure, 1988, 190, 435-446.	1.8	13
30	Intermolecular potential for thermal H2Oâ€“He collisions. Journal of Chemical Physics, 1988, 89, 1401-1407.	1.2	36
31	Effect of nuclear hyperfine structure on microwave spectral pressure broadening. Journal of Chemical Physics, 1988, 88, 7331-7336.	1.2	22
32	Polarized D2 Stokesâ€“Raman Q branch broadened by He: A numerical calculation. Journal of Chemical Physics, 1988, 88, 4113-4119.	1.2	29
33	Collisional excitation of interstellar water. Astrophysical Journal, Supplement Series, 1988, 68, 287.	3.0	30
34	Test of a modified sudden approximation for rotational excitation in He + CH3CN. Chemical Physics, 1987, 112, 15-22.	0.9	18
35	Collisional excitation of interstellar cyclopropenylidene. Astrophysical Journal, Supplement Series, 1987, 65, 175.	3.0	13
36	Effect of the potential well on low temperature pressure broadening in COâ€“He. Journal of Chemical Physics, 1986, 85, 1333-1335.	1.2	48

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37	Accuracy of the energyâ€corrected sudden (ECS) scaling procedure for rotational excitation of CO by collisions with Ar. Journal of Chemical Physics, 1986, 84, 3865-3869.	1.2	19
38	Calculations of pressure-broadened linewidhts for CO in Ar. Journal of Quantitative Spectroscopy and Radiative Transfer, 1985, 33, 299-305.	1.1	12
39	Calculation of pressure broadening parameters for the COâ€“He system at low temperatures. Journal of Chemical Physics, 1985, 82, 4548-4550.	1.2	43
40	Rotational excitation in low-energy methyl cyanide-helium collisions. The Journal of Physical Chemistry, 1985, 89, 5289-5294.	2.9	10
41	Accuracy of the IOS approximation for highly inelastic Rî—¸T collisional energy transfer. CO-Ar. Chemical Physics Letters, 1984, 112, 436-440.	1.2	21
42	Accuracy of the IOS approximation for highly inelastic R-T collisional energy transfer. Chemical Physics Letters, 1983, 98, 467-471.	1.2	16
43	Theoretical three-dimensional potential-energy surface for the reaction of Be with HF. Chemical Physics, 1983, 78, 93-105.	0.9	51
44	M dependence in the analysis of NH3â€“He microwave double resonance experiments. Journal of Chemical Physics, 1983, 78, 2170-2174.	1.2	13
45	Methyl Cyanide as a Probe of the Temperature and Density in SgrB2; Quasi-Equilibrium in Molecular Rotational Levels. Astrophysics and Space Science Library, 1982, , 391-397.	1.0	4
46	Electron-gas He-sio potential hypersurface for vibrational- rotational excitations through collisions. Chemical Physics Letters, 1981, 84, 380-384.	1.2	14
47	Energy transfer in NH3â€“He collisions. Journal of Chemical Physics, 1980, 73, 2740-2750.	1.2	101
48	On the use of pressure broadening data to assess the accuracy of COâ€“He interaction potentials. Journal of Chemical Physics, 1980, 73, 5391-5393.	1.2	38
49	Surprisal analysis of rotationalâ€”translational energy transfer: Non-linear versus linear rotors. Chemical Physics, 1979, 40, 1-10.	0.9	38
50	Vibrational dependence of pressure induced spectral linewidths and line shifts: Application of the infinite order sudden scattering approximation. Journal of Chemical Physics, 1979, 70, 4686-4693.	1.2	42
51	Rotational excitation of symmetric top molecules by collisions with atoms. II. Infinite order sudden approximation. Journal of Chemical Physics, 1979, 70, 816.	1.2	111
52	Dynamics of the collinear beryllium + hydrofluoric acid .fwdarw. beryllium fluoride + hydrogen reaction. The Journal of Physical Chemistry, 1979, 83, 920-922.	2.9	18
53	Rotational inelasticity in high-energy H2î—¸H2 collisions. Chemical Physics, 1978, 28, 319-329.	0.9	9
54	Computational test of the infinite order sudden approximation for excitation of linear rigid rotors by collisions with atoms. Chemical Physics, 1978, 31, 425-431.	0.9	18

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55	On the amount of information in rotational relaxation experiments with application to microwave transient T1 and T2 rates. Journal of Chemical Physics, 1978, 69, 4076-4082.	1.2	24
56	Effect of molecular anisotropy on beam scattering measurements. Journal of Chemical Physics, 1978, 69, 598-605.	1.2	19
57	The coupled states approximation for scattering of two diatoms. Journal of Chemical Physics, 1978, 68, 2562.	1.2	72
58	Theoretical study of collinear Be+FH(v1) â†'BeF(v2) +H. Journal of Chemical Physics, 1978, 69, 3790-3806.	1.2	45
59	Comment of fitting ab initio intermolecular potentials for scattering calculations. Journal of Chemical Physics, 1977, 67, 715-717.	1.2	30
60	Rotational excitation of linear molecules by collisions with atoms: Comparison of classical and quantum methods. Journal of Chemical Physics, 1977, 67, 2317.	1.2	77
61	Computational tests of the coupled states angular momentum decoupling approximation for NMR spinâ€"lattice relaxation cross sections. Journal of Chemical Physics, 1977, 67, 225-228.	1.2	15
62	Validity of approximate methods in molecular scattering. III. Effective potential and coupled states approximations for differential and gas kinetic cross sections. Journal of Chemical Physics, 1977, 66, 3085-3093.	1.2	31
63	Lowâ€temperature rotational relaxation in gaseous H2 and D2. Journal of Chemical Physics, 1977, 66, 3021-3030.	1.2	48
64	Computational tests of angular momentum decoupling approximations for pressure broadening cross sections. Journal of Chemical Physics, 1977, 66, 1409-1412.	1.2	47
65	On the factorization and fitting of molecular scattering information. Journal of Chemical Physics, 1977, 67, 5661-5675.	1.2	204
66	Rotational excitation in collisions between two rigid rotors: Alternate angular momentum coupling and pressure broadening of HCl BY H2. Chemical Physics Letters, 1977, 47, 119-122.	1.2	26
67	Rotational excitation of symmetric top molecules by collisions with atoms: Close coupling, coupled states, and effective potential calculations for NH3â€"He. Journal of Chemical Physics, 1976, 64, 3463.	1.2	195
68	Theoretical investigation of protonated carbon dioxide. Chemical Physics, 1976, 17, 479-485.	0.9	38
69	Accuracy of decoupling approximations for rotational excitation: low-energy COî—¸He collisions. Chemical Physics Letters, 1976, 38, 293-296.	1.2	24
70	On the accuracy of the â€™â€™decoupledlâ€dominantâ€™â€™ approximation for atomâ€"molecule scattering. Journal of Chemical Physics, 1976, 65, 68-70.	1.2	12
71	Comment on the accuracy of Rabitzâ€™ effective potential approximation for rotational excitation by collisions. Journal of Chemical Physics, 1975, 62, 3568.	1.2	31
72	Rotational excitation in H2â€"H2 collisions: Closeâ€coupling calculations. Journal of Chemical Physics, 1975, 62, 2271-2277.	1.2	288

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73	Validity of central field approximations in molecular scattering: Low energy COâ€“He collisions. Journal of Chemical Physics, 1975, 63, 2000-2009.	1.2	53
74	Validity of approximate methods in molecular scattering: Thermal HClâ€“He collisions. Journal of Chemical Physics, 1975, 63, 4198-4205.	1.2	71
75	Hartreeâ€“Fock and Gordonâ€“Kim interaction potentials for scattering of closedâ€shell molecules by atoms: (H2CO,He) and (H2,Li+). Journal of Chemical Physics, 1975, 63, 1154-1161.	1.2	39
76	Rotational Excitation of HCN by Collisions. Astrophysical Journal, 1974, 191, 653.	1.6	146
77	Calculated properties for No X2 Î and A 2Î£+. II. Configuration interaction. Chemical Physics Letters, 1973, 23, 115-119.	1.2	32
78	Calculated properties for ClF. Journal of Chemical Physics, 1973, 58, 3117.	1.2	23
79	Dipole moment and hyperfine constants of ODA2Î£+fromab initiocalculations. Journal of Chemical Physics, 1973, 58, 4327-4330.	1.2	10
80	Electric Dipole Moment of Diatomic Molecules by Configuration Interaction. IV. Basis Set Dependence in COa3Î¦. Journal of Chemical Physics, 1972, 57, 2830-2835.	1.2	16
81	Electric Dipole Moment of Diatomic Molecules by Configuration Interaction. III. Openâ€Shell Molecules CO a3II and CS A 1II. Journal of Chemical Physics, 1972, 56, 739-744.	1.2	30
82	Electric Dipole Moment of Diatomic Molecules by Configuration Interaction. V. Two States of 2Î£+ Symmetry in CN. Journal of Chemical Physics, 1972, 57, 4694-4698.	1.2	24
83	Calculated Potential-Energy Curves for CH+. Physical Review A, 1972, 5, 1614-1618.	1.0	130
84	Electric Dipole Moment of Diatomic Molecules by Configuration Interaction. I. Closedâ€Shell Molecules. Journal of Chemical Physics, 1971, 54, 827-832.	1.2	95
85	Quadrupole Moment of Li. Physical Review A, 1971, 4, 251-253.	1.0	41
86	Electric Dipole Moment of Diatomic Molecules by Configuration Interaction. II Fixedâ€Core Approximation. Journal of Chemical Physics, 1971, 54, 3051-3053.	1.2	13
87	Incorrect Dissociation of CO in the Restricted Hartreeâ€“Fock Approximation. Journal of Chemical Physics, 1970, 52, 3100-3104.	1.2	30