Peter M Felker

List of Publications by Year
in descending order

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77 papers	2,637 citations	201674 27 h-index	197818 49 g-index
79 all docs	79 docs citations	79 times ranked	1200 citing authors

#	Article	IF	Citations
1	Intermolecular rovibrational states of the H2Oâ€“CO2 and D2Oâ€“CO2 van der Waals complexes. Journal of Chemical Physics, 2022, 156, 064301.	3.0	5
2	H₂O inside the fullerene C₆₀: Inelastic neutron scattering spectrum from rigorous quantum calculations. Journal of Chemical Physics, 2022, 156, 124101.	3.0	3
3	HClâ€“H₂O dimer: an accurate full-dimensional potential energy surface and fully coupled quantum calculations of intra- and intermolecular vibrational states and frequency shifts. Physical Chemistry Chemical Physics, 2021, 23, 7101-7114.	2.8	28
4	DClâ€“H₂O, HClâ€“D₂O, and DClâ€“D₂O Dimers: Inter- and Intramolecular Vibrational States and Frequency Shifts from Fully Coupled Quantum Calculations on a Full-Dimensional Neural Network Potential Energy Surface. Journal of Physical Chemistry A, 2021, 125, 6437-6449.	2.5	11
5	HDOâ€“CO Complex: D-Bonded and H-Bonded Isomers and Intra- and Intermolecular Rovibrational States from Full-Dimensional and Fully Coupled Quantum Calculations. Journal of Physical Chemistry A, 2021, 125, 980-989.	2.5	14
6	Flexible water molecule in C60: Intramolecular vibrational frequencies and translation-rotation eigenstates from fully coupled nine-dimensional quantum calculations with small basis sets. Journal of Chemical Physics, 2020, 152, 014108.	3.0	25
7	Light molecules inside the nanocavities of fullerenes and clathrate hydrates: inelastic neutron scattering spectra and the unexpected selection rule from rigorous quantum simulations. International Reviews in Physical Chemistry, 2020, 39, 425-463.	2.3	10
8	H2Oâ€“CO and D2Oâ€“CO complexes: Intra- and intermolecular rovibrational states from full-dimensional and fully coupled quantum calculations. Journal of Chemical Physics, 2020, 153, 074107.	3.0	21
9	Benzeneâ€“H2O and benzeneâ€“HDO: Fully coupled nine-dimensional quantum calculations of flexible H2O/HDO intramolecular vibrational excitations and intermolecular states of the dimers, and their infrared and Raman spectra using compact bases. Journal of Chemical Physics, 2020, 152, 124103.	3.0	13
10	Weakly bound molecular dimers: Intramolecular vibrational fundamentals, overtones, and tunneling splittings from full-dimensional quantum calculations using compact contracted bases of intramolecular and low-energy rigid-monomer intermolecular eigenstates. Journal of Chemical Physics, 2019, 151, 024305.	3.0	28
11	The Endofullerene HF@C60: Inelastic Neutron Scattering Spectra from Quantum Simulations and Experiment, Validity of the Selection Rule, and Symmetry Breaking. Journal of Physical Chemistry Letters, 2019, 10, 5365-5371.	4.6	11
12	Intramolecular stretching vibrational states and frequency shifts of (H2)2 confined inside the large cage of clathrate hydrate from an eight-dimensional quantum treatment using small basis sets. Journal of Chemical Physics, 2019, 151, 124311.	3.0	23
13	H2, HD, and D2 in the small cage of structure II clathrate hydrate: Vibrational frequency shifts from fully coupled quantum six-dimensional calculations of the vibration-translation-rotation eigenstates. Journal of Chemical Physics, 2019, 150, 154303.	3.0	25
14	Molecules in confinement in clusters, quantum solvents and matrices: general discussion. Faraday Discussions, 2018, 212, 569-601.	3.2	4
15	Effects of symmetry breaking on the translationâ€“rotation eigenstates of H₂, HF, and H₂O inside the fullerene C₆₀. Faraday Discussions, 2018, 212, 547-567.	3.2	20
16	Electric-dipole-coupled H₂O@C₆₀ dimer: Translation-rotation eigenstates from twelve-dimensional quantum calculations. Journal of Chemical Physics, 2017, 146, 084303.	3.0	22
17	Accurate quantum calculations of translation-rotation eigenstates in electric-dipole-coupled H2O@C60 assemblies. Chemical Physics Letters, 2017, 683, 172-178.	2.6	10
18	Explaining the symmetry breaking observed in the endofullerenes H₂@C₆₀, HF@C₆₀, and H₂O@C₆₀. Physical Chemistry Chemical Physics, 2017, 19, 31274-31283.	2.8	36

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19	Translation-rotation states of H2 in C60: New insights from a perturbation-theory treatment. Journal of Chemical Physics, 2016, 145, 084310.	3.0	15
20	Communication: Quantum six-dimensional calculations of the coupled translation-rotation eigenstates of H2O@C60. Journal of Chemical Physics, 2016, 144, 201101.	3.0	36
21	Rotational constants and structure of para-difluorobenzene determined by femtosecond Raman coherence spectroscopy: A new transient type. Journal of Chemical Physics, 2015, 143, 144306.	3.0	7
22	Fully quantal calculation of H2 translation-rotation states in the (p-H2)2@51264 clathrate hydrate inclusion compound. Journal of Chemical Physics, 2014, 141, 184305.	3.0	11
23	Fully quantal calculation of H2 translation-rotation states in (H2)4@51264 clathrate sII inclusion compounds. Journal of Chemical Physics, 2013, 138, 174306.	3.0	14
24	Heâ€“, Neâ€“, and Arâ€“Phosgene Intermolecular Potential Energy Surfaces. Journal of Physical Chemistry A, 2013, 117, 3835-3843.	2.5	1
25	Nuclear-orbital/configuration-interaction study of coupled translation-rotation states in (H2)2@C70. Journal of Chemical Physics, 2013, 138, 044309.	3.0	5
26	The Benzeneâ‹Argon Ground-State Intermolecular Potential Energy Surface Revisited. Journal of Physical Chemistry A, 2009, 113, 5212-5216.	2.5	22
27	Vibrational Spectroscopy and Dynamics in the CH-Stretch Region of Fluorene by IVR-Assisted, Ionization-Gain Stimulated Raman Spectroscopy. Journal of Physical Chemistry A, 2007, 111, 12466-12470.	2.5	4
28	The Fluorobenzeneâ‹Argon S₁ Excited-State Intermolecular Potential Energy Surface. Journal of Physical Chemistry A, 2007, 111, 7876-7881.	2.5	9
29	Solvent configuration-interaction calculations of intermolecular states in molecule-(atom)N clusters: Application to Br2â€“HeN4. Journal of Chemical Physics, 2006, 125, 184313.	3.0	20
30	p-Difluorobenzeneâ‹Argon Ground State Intermolecular Potential Energy Surfaceâ€. Journal of Physical Chemistry A, 2005, 109, 11602-11608.	2.5	12
31	Study of the benzeneâ‹…N2 intermolecular potential-energy surface. Journal of Chemical Physics, 2003, 118, 1230-1241.	3.0	16
32	Computational and experimental investigation of intermolecular states and forces in the benzeneâ€“helium van der Waals complex. Journal of Chemical Physics, 2003, 119, 12956-12964.	3.0	30
33	Intermolecular Hamiltonian for soluteâ€“solventn clusters and application to the (1|1) isomer of anthraceneâ€“He2. Journal of Chemical Physics, 2003, 119, 5558-5569.	3.0	9
34	Structural study of the hydrogen-bonded 1-naphtholâ‹…(NH3)2 cluster. Journal of Chemical Physics, 2003, 118, 9157-9166.	3.0	8
35	Efficient calculation of molecular constants and transition intensities in weakly bound species from J=0 eigenstates: Benzene-Ar as test case. Journal of Chemical Physics, 2001, 114, 1233-1241.	3.0	10
36	Calculation of rovibrational states of weakly bound complexes by transformation from an Eckart frame: Benzene-N2. Journal of Chemical Physics, 2001, 114, 7901-7910.	3.0	10

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37	Semi-classical versus exact eigenvalues of Heâ€“benzene using cross-correlation filter-diagonalization. Chemical Physics Letters, 2000, 328, 516-521.	2.6	7
38	Intermolecular vibrations and asymmetric-top pendular states in 1-naphtholâ€“H2O and â€“NH3. Journal of Chemical Physics, 2000, 112, 4527-4535.	3.0	5
39	Intermolecular vibrations of naphthalene trimer by ionization-detected stimulated Raman spectroscopy. Journal of Chemical Physics, 1999, 110, 11264-11276.	3.0	21
40	Six-dimensional calculation of intermolecular states in molecule-large molecule complexes by filter diagonalization: Benzeneâ€“H2O. Journal of Chemical Physics, 1999, 110, 8461-8475.	3.0	22
41	Rotational Coherence Spectroscopy and Structure of Naphthalene Trimer. Journal of Physical Chemistry A, 1999, 103, 1442-1446.	2.5	44
42	Structural Characterization of Aromaticâ‹¯Aromatic Complexes by Rotational Coherence Spectroscopy. Journal of Physical Chemistry A, 1998, 102, 4481-4494.	2.5	11
43	Optical-field-induced pendular states and pendular band contours in symmetric tops. Journal of Chemical Physics, 1998, 108, 6763-6779.	3.0	44
44	Ground-state intermolecular spectroscopy and pendular states in benzeneâ€“argon. Journal of Chemical Physics, 1997, 107, 2193-2204.	3.0	56
45	Spectroscopy of pendular states in opticalâ€fieldâ€aligned species. Journal of Chemical Physics, 1996, 104, 1147-1150.	3.0	131
46	Nonlinear Raman spectroscopy of intermolecular vibrations in benzene-(water)n clusters. Chemical Physics Letters, 1995, 241, 603-610.	2.6	50
47	Raman spectroscopy of naphthalene clusters. Evidence for a symmetrical trimer and an unsymmetrical tetramer. Chemical Physics Letters, 1995, 242, 632-638.	2.6	30
48	APPLICATIONS OF MASS-SELECTIVE IONIZATION-LOSS STIMULATED RAMAN SPECTROSCOPY IN STUDIES OF MOLECULAR COMPLEXES AND CLUSTERS. Advanced Series in Physical Chemistry, 1995, , 279-314.	1.5	0
49	Rotational Coherence Spectroscopy and Excited-State Dynamics of Tolane and its Van Der Waals Complexes with Argon and Nitrogen. Laser Chemistry, 1994, 14, 45-59.	0.5	5
50	The Raman and vibronic activity of intermolecular vibrations in aromaticâ€containing complexes and clusters. Journal of Chemical Physics, 1994, 101, 8391-8408.	3.0	57
51	The size dependence of ground-state collective vibrational modes in molecular clusters. Benzene dimer through pentamer. Chemical Physics Letters, 1994, 224, 544-550.	2.6	27
52	Nonlinear Raman Studies of Weakly Bound Complexes and Clusters in Molecular Beams. Chemical Reviews, 1994, 94, 1787-1805.	47.7	119
53	Time-resolved ionization depletion. A new picosecond method for molecular beam studies. Chemical Physics Letters, 1993, 207, 563-568.	2.6	10
54	Intermolecular Raman bands in the ground state of benzene dimer. Journal of Chemical Physics, 1993, 99, 748-751.	3.0	84

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55	Sizeâ€selective Raman spectroscopy of carbazoleâ€"(Ar)nclusters at subâ€waveâ€number resolution. Journal of Chemical Physics, 1992, 96, 7855-7858.	3.0	3
56	High resolution Fourier transform stimulated emission and molecular beam holeâ€burning spectroscopy with picosecond excitation sources: Theoretical and experimental results. Journal of Chemical Physics, 1992, 96, 179-197.	3.0	7
57	Characterization of asymmetry transients in rotational coherence spectroscopy. Journal of Chemical Physics, 1992, 96, 4118-4130.	3.0	46
58	Structural characterization of clusters of perylene with argon and neon by rotational coherence spectroscopy. Chemical Physics Letters, 1992, 191, 362-370.	2.6	27
59	The geometry of carbazoleâ€"(Ar)2 from rotational coherence spectroscopy. Chemical Physics Letters, 1992, 193, 335-341.	2.6	18
60	Raman/vibronic double-resonance spectroscopy of benzene-doped argon clusters. Chemical Physics Letters, 1992, 198, 628-636.	2.6	26
61	Rotational coherence spectroscopy and structure of the perylene-benzene van der Waals complex. Chemical Physics Letters, 1991, 182, 385-392.	2.6	15
62	Theory of rotational coherence spectroscopy as implemented by picosecond fluorescence depletion schemes. Journal of Chemical Physics, 1991, 94, 7649-7666.	3.0	36
63	The dependence of Fourier transform nonlinear Raman spectroscopies on the temporal characteristics of the excitation fields. Journal of Chemical Physics, 1989, 91, 1478-1497.	3.0	13
64	Purely rotational coherence effect and timeâ€resolved subâ€Doppler spectroscopy of large molecules. I. Theoretical. Journal of Chemical Physics, 1987, 86, 2460-2482.	3.0	192
65	Purely rotational coherence effect and timeâ€resolved subâ€Doppler spectroscopy of large molecules. II. Experimental. Journal of Chemical Physics, 1987, 86, 2483-2499.	3.0	109
66	Fourier transform coherent Raman spectroscopy. Chemical Physics Letters, 1987, 134, 503-506.	2.6	22
67	Intramolecular dephasing in pyrazine: deuterium isotope effect and further tests of theory. Chemical Physics Letters, 1986, 128, 221-230.	2.6	29
68	Dynamics of intramolecular vibrationalâ€energy redistribution (IVR). II. Excess energy dependence. Journal of Chemical Physics, 1985, 82, 2975-2993.	3.0	164
69	Dynamics of intramolecular vibrationalâ€energy redistribution (IVR). III. Role of molecular rotations. Journal of Chemical Physics, 1985, 82, 2994-3002.	3.0	107
70	Dynamics of intramolecular vibrationalâ€energy redistribution (IVR). I. Coherence effects. Journal of Chemical Physics, 1985, 82, 2961-2974.	3.0	147
71	Direct Observation of Nonchaotic Multilevel Vibrational Energy Flow in Isolated Polyatomic Molecules. Physical Review Letters, 1984, 53, 501-504.	7.8	87
72	Direct picosecond time resolution of dissipative intramolecular vibrational-energy redistribution (IVR) in isolated molecules. Chemical Physics Letters, 1984, 108, 303-310.	2.6	70

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73	Jet spectroscopy of isoquinoline. Chemical Physics Letters, 1983, 94, 448-453.	2.6	47
74	Stepwise solvation of molecules as studies by picosecond-jet spectroscopy: dynamics and spectra. Chemical Physics Letters, 1983, 94, 454-460.	2.6	30
75	Observation of restricted IVR in large molecules: Quasi-periodic behavior, phase-shifted and non-phase-shifted quantum beats. Chemical Physics Letters, 1983, 102, 113-119.	2.6	87
76	Photodissociation of partially solvated molecules in beams by the picosecondâ€jet technique: Hydrogen bond breakage. Journal of Chemical Physics, 1983, 78, 5266-5268.	3.0	29
77	Intra- and intermolecular rovibrational states of HCl-H2O and DCl-H2O dimers from full-dimensional and fully coupled quantum calculations. Chinese Journal of Chemical Physics, 0, , .	1.3	9