Hyung Kyu Shin

List of Publications by Year in Descending Order

88 papers	890 citations	19 h-index	22 g-index
89 ext. papers	918 ext. citations	3.5 avg, IF	4.15 L-index

#	Paper	IF	Citations
88	Vibrational Energy Transfer in a Water Chain. *Bulletin of the Korean Chemical Society*, **2020**, 41, 38-47	1.2	1
87	Inter- and Intramolecular Vibrational Energy Flow in a Formamide-Water Complex. *Journal of Physical Chemistry A*, **2020**, 124, 3031-3037	2.8	6
86	Nitrogen Atom Abstraction of Nitrogen Chemisorbed on W(100) Surface. *Bulletin of the Korean Chemical Society*, **2018**, 39, 231-238	1.2	
85	Energy Transfer to the Hydrogen Bond in the (HO) + HO Collision. *Journal of Physical Chemistry B*, **2018**, 122, 3307-3317	3.4	6
84	Relaxation of the HO Overtone Bending Vibration in the Water Dimer□□Hydroxyl Radical Complex. *Journal of Physical Chemistry A*, **2018**, 122, 5510-5517	2.8	3
83	Dynamics of the Water Dimer + Nitric Oxide Collision. *Bulletin of the Korean Chemical Society*, **2017**, 38, 196-204	1.2	3
82	Energy Transfer and Bond Dissociation in the o-chlorotoluene + H2/Cl2/HCl Collisions. *Bulletin of the Korean Chemical Society*, **2017**, 38, 911-918	1.2	1
81	Kinetics of BrO + NO -rBr + NO2 Reaction. *Bulletin of the Korean Chemical Society*, **2016**, 37, 305-311	1.2	1
80	Dependence of the four-atom reaction HBr + OH -rBr + H2O on temperatures between 20 and 2000 K. *Journal of Physical Chemistry A*, **2015**, 119, 3147-60	2.8	19
79	Collision-induced Energy Transfer between Toluene and Halogen Molecules and C?H Bond Dissociation. *Bulletin of the Korean Chemical Society*, **2015**, 36, 2609-2614	1.2	
78	Vibrational Relaxation and Fragmentation in Icosahedral (Ar2+)Ar12Clusters. *Bulletin of the Korean Chemical Society*, **2014**, 35, 2774-2780	1.2	
77	Dynamics of the CH3 + OH reaction. *International Journal of Chemical Kinetics*, **2011**, 43, 455-466	1.4	3
76	Dynamics of relaxation and fragmentation in size-selected icosahedral Ar(n)[NO(-)(v = 1)] clusters. *Journal of Chemical Physics*, **2011**, 134, 124301	3.9	1
75	Vibrational relaxation of NO-(v=1) in icosahedral (Ar)12NO- clusters. *Journal of Chemical Physics*, **2010**, 132, 104302	3.9	3
74	Vibrational relaxation of trapped molecules in solid matrices: OH(A 2Sigma+; v = 1)/Ar. *Journal of Chemical Physics*, **2009**, 130, 014507	3.9	3
73	Classical trajectory study of the formation of XeH+ and XeCl+ in the Xe++HCl collision. *Journal of Chemical Physics*, **2007**, 127, 054304	3.9	3
72	Host-assisted intramolecular vibrational relaxation at low temperatures: OH in an argon cage. *Journal of Chemical Physics*, **2006**, 125, 24501	3.9	2

71	Vibrational relaxation of molecular ions at low temperatures: O2(-) (v=1) + Ar. *Journal of Physical Chemistry A*, **2005**, 109, 5537-44	2.8	1
70	Threshold collision-induced dissociation of diatomic molecules: a case study of the energetics and dynamics of O2- collisions with Ar and Xe. *Journal of Chemical Physics*, **2005**, 123, 64308	3.9	5
69	Vibrational relaxation of oxygen in an argon cage. *Journal of Chemical Physics*, **2004**, 121, 9443-52	3.9	5
68	Oxygen Atom Abstraction of Hydrogen Chemisorbed on a Silicon Surface. *Journal of Physical Chemistry A*, **2003**, 107, 5101-5109	2.8	6
67	Collision-induced intramolecular energy flow and CH bond dissociation in excited toluene. *Journal of Chemical Physics*, **2002**, 116, 4858	3.9	19
66	Vibrational Energy Transfer from DF(1) to Toluene. Competition between the Benzene Ring CH and Methyl Group CH Stretches. *Journal of Physical Chemistry A*, **2000**, 104, 6699-6708	2.8	13
65	Interaction of gas-phase atomic chlorine with a silicon surface: Reactions on bare and hydrogen-chemisorbed surface sites. *Journal of Chemical Physics*, **1999**, 111, 10261-10274	3.9	7
64	Eley-Rideal Dynamics of the Chlorine Atom Abstraction of Hydrogen Chemisorbed on Silicon. *Journal of Physical Chemistry A*, **1999**, 103, 411-419	2.8	10
63	Principal Energy Transfer Pathways in the Collision of N2O(0001) with Toluene-d8. A (WKB) Semiclassical Study. *Journal of Physical Chemistry A*, **1999**, 103, 6030-6035	2.8	5
62	Vibrationally Excited OD Radicals from the Reaction of Oxygen Atoms with Chemisorbed Deuterium on Tungsten. *Journal of Physical Chemistry A*, **1998**, 102, 2372-2380	2.8	12
61	Direct reaction of gas-phase atomic hydrogen with chemisorbed chlorine atoms on a silicon surface. *Journal of Chemical Physics*, **1998**, 108, 9821-9834	3.9	20
60	Dynamics of Gas-Surface Interactions: Reaction of Atomic Oxygen with Chemisorbed Hydrogen on Tungsten. *Journal of Physical Chemistry A*, **1997**, 101, 4523-4534	2.8	12
59	Reaction of atomic oxygen with adsorbed carbon monoxide on a platinum surface. *Journal of Chemical Physics*, **1996**, 104, 742-757	3.9	32
58	Intramolecular energy flow and bond dissociation in iodoacetylene and iododiacetylene. *Journal of Chemical Physics*, **1994**, 101, 4668-4681	3.9	1
57	Self-relaxation of vibrationally excited H2O molecules. *Journal of Chemical Physics*, **1993**, 98, 1964-1978	3.9	17
56	Relaxation of vibrationally excited HCl molecules in the H2O-HCl collision complex. *Journal of Chemical Physics*, **1993**, 99, 9521-9531	3.9	2
55	Adatom bond dissociation and HO2 bond formation in the reaction between an adsorbed hydrogen atom and an oxygen molecule: A trajectory dynamics study. *Journal of Chemical Physics*, **1992**, 96, 3330-3338	3.9	11
54	Dependence of vibrational energy transfer and bond dissociation on initial excitation and phases in O2(0)+O2(v). *Journal of Chemical Physics*, **1991**, 95, 4094-4101	3.9	1

53	Intramolecular dynamics of collisionally excited metal???ligand complexes in the energy localization range. *Journal of Chemical Physics*, **1990**, 92, 5223-5234	3.9	8
52	Vibrational relaxation of water molecules in H2O+Ar collisions between 200 and 1000 K: 001-020, 020-010, and 010-000 transitions. *Journal of Chemical Physics*, **1990**, 93, 6463-6472	3.9	11
51	Classical dynamics of collision-initiated intramolecular energy flow between metal???diatom bonds. *Journal of Chemical Physics*, **1989**, 91, 929-937	3.9	5
50	Collision-induced intramolecular energy flow and fragmentation in van der Waals complexes: Atom+tetramer collisions. *Journal of Chemical Physics*, **1988**, 88, 7522-7528	3.9	5
49	Internal resonances for energy flow in collisionally perturbed symmetric van der Waals complexes near fragmentation threshold. *Journal of Chemical Physics*, **1988**, 89, 2943-2947	3.9	3
48	Collisional energy flow in weakly bound complexes. *Journal of Chemical Physics*, **1987**, 87, 993-1000	3.9	6
47	Effects of chain length on atom/chain interaction dynamics. *Journal of Chemical Physics*, **1987**, 87, 3942-3948	3.9	7
46	Exact classical calculations of vibrational energy transfer in a Morse oscillator. *Journal of Chemical Physics*, **1986**, 84, 5545-5552	3.9	14
45	Isotopic vibration□vibration energy exchange in hydrogen chloride molecules at low temperatures. *Journal of Chemical Physics*, **1985**, 82, 1308-1311	3.9	
44	VV-VT intermode coupling in vibrational energy transfer. *Journal of Chemical Physics*, **1984**, 81, 1725-1730	3.9	9
43	Interference between vibration-to-translation and vibration-to-vibration energy transfer modes in diatomic molecules at high collision energies. *Journal of Chemical Physics*, **1983**, 79, 4285-4294	3.9	8
42	Vibration□vibration energy exchange in iodine molecules. *Journal of Chemical Physics*, **1983**, 78, 1163-1173	3.9	4
41	Vibration-to-vibration energy transfer in the deexcitation of HCl(v) by HCl(0): Role of the rotational and translational motions. *Journal of Chemical Physics*, **1983**, 78, 795-799	3.9	5
40	Multiquantum vibration□vibration transitions in H 35Cl(n)+H 37Cl(0) and H 35Cl(n)+H 79Br(0). *Journal of Chemical Physics*, **1982**, 76, 3045-3048	3.9	3
39	Probabilities of vibration□vibration energy exchange in H 35Cl(2) +H 37Cl(0)-H 35Cl(0)+H 37Cl(2). *Journal of Chemical Physics*, **1981**, 75, 5972-5973	3.9	2
38	Role of local translation in the vibrational relaxation of matrix-isolated guest molecules. *Journal of Chemical Physics*, **1981**, 75, 3821-3830	3.9	16
37	Isotopic vibration□vibration energy exchange in hydrogen chloride molecules. *Journal of Chemical Physics*, **1981**, 75, 220-225	3.9	4
36	A comparison of the two-state approximation and multistate treatments for vibration□vibration energy exchange in molecular collisions. *Journal of Chemical Physics*, **1981**, 75, 2242-2246	3.9	5

35	Temperature dependence of the vibrational relaxation rate coefficient of N2(1)+N2(0). *Journal of Chemical Physics*, **1981**, 74, 2866-2868	3.9	9
34	On the use of ladder operators in simultaneous VV and VT transitions at high collision energies. *Journal of Chemical Physics*, **1980**, 73, 1702-1705	3.9	8
33	Vibrational relaxation of D2O(010). *Journal of Chemical Physics*, **1979**, 70, 1568-1569	3.9	
32	Simple WKB expressions for van der Waals molecules. *Journal of Chemical Physics*, **1978**, 68, 335	3.9	8
31	A model calculation of vibration□translation energy transfer. *Journal of Chemical Physics*, **1978**, 68, 3973-3977	3.9	1
30	Vibrational relaxation of water molecules near room temperature. *Journal of Chemical Physics*, **1978**, 69, 1240	3.9	15
29	Transfer of vibrational energy to oscillatory, restricted rotational, and translational motion in HCl+Cl. *Journal of Chemical Physics*, **1978**, 68, 5265-5270	3.9	2
28	Vibrational Energy Transfer **1976**, 131-210		16
27	Temperature dependence of the vibration□vibration de-excitation rates of HF(v=n)+HF(v=0) -□HF(v=n□1)+HF(v=1) for n=2□5. *Journal of Chemical Physics*, **1976**, 64, 3634-3638	3.9	20
26	Vibrational deactivation of HF(□= 1) in the H2O + HF dimer: HF(□= 1) + H2O(000) -□HF(□= 0) + H2O(001) + □. *Chemical Physics Letters*, **1975**, 32, 218-223	2.5	8
25	Effects of the multiplicity of impacts on vibration□translation energy transfer in collinear collisions. *Journal of Chemical Physics*, **1975**, 62, 4130-4137	3.9	24
24	Vibrational de-excitation of HF(v = 1) in HF + Ar: Importance of rotational transitions. *Journal of Chemical Physics*, **1974**, 60, 193-194	3.9	8
23	Temperature dependence of V -□R, T energy transfer probabilities in CO2(00□1) + HF/DF. *Journal of Chemical Physics*, **1974**, 60, 2167-2168	3.9	11
22	Vibration-to-vibration energy transfer in near-resonant collisions. *Journal of Chemical Physics*, **1974**, 60, 1064-1070	3.9	29
21	Vibration-to-vibration energy transfer in N2 + CO in the temperature region 100□3000 □K. *Journal of Chemical Physics*, **1974**, 61, 2474-2475	3.9	4
20	Temperature dependence of the probability of vibration-vibration-rotation energy transfer in HCl (v = 2) + HCl (v = 0) ? HCl (v = 1) + HCl (v = 1). *Journal of Chemical Physics*, **1974**, 60, 2305-2309	3.9	11
19	Interference between two adjacent collisions in vibrational relaxation. *Chemical Physics Letters*, **1974**, 27, 611-616	2.5	23
18	A collision model for the vibrational relaxation of hydrogen fluoride at low temperatures. *Chemical Physics Letters*, **1974**, 26, 450-456	2.5	23

17	Vibration-to-rotation energy transfer in hydrogen fluoride: Effects of the dipole-dipole and hydrogen-bond interactions. *Journal of Chemical Physics*, **1973**, 59, 879-884	3.9	26
16	Temperature Dependence of Vibrational Transition Probabilities for O2, N2, CO, and Cl2 in the Region below 300□K. *Journal of Chemical Physics*, **1972**, 57, 1363-1364	3.9	22
15	Collision-Induced Light Scattering in Liquids. *Journal of Chemical Physics*, **1972**, 56, 2617-2622	3.9	20
14	De-excitation of CO2(00□1) by Hydrogen Fluorides. *Journal of Chemical Physics*, **1972**, 57, 3484-3490	3.9	14
13	Vibrational Relaxation in CO+He at Low Temperatures. *Journal of Chemical Physics*, **1971**, 55, 5233-5234	3.9	27
12	On the WKB Evaluation of the Transition Matrix Elements. *Journal of Chemical Physics*, **1970**, 53, 1607-1609	3.9	6
11	Temperature dependence of intermolecular energy transfer in polar molecules. *Journal of the American Chemical Society*, **1968**, 90, 3029-3039	16.4	21
10	WKB Calculation of Vibrational Transition Probabilities in Molecular Collisions. *Journal of Chemical Physics*, **1968**, 48, 3644-3651	3.9	17
9	Excitation of Molecular Vibration on Collision. I. Preferential Orientations for Vibrational Transitions. *Journal of Chemical Physics*, **1968**, 49, 3964-3973	3.9	26
8	Temperature dependence of vibrational trasition probabilities in H2O-H2O collisions. *Chemical Physics Letters*, **1968**, 1, 635-638	2.5	9
7	Inelastic molecular collisions with an orientation-averaged interaction energy. *International Journal of Quantum Chemistry*, **1968**, 2, 265-279	2.1	3
6	Excitation of Molecular Vibration on Collision: Role of the High-Order Angular Momenta. *Journal of Chemical Physics*, **1967**, 46, 744-754	3.9	21
5	□Steric Factor□in Vibration□Translation Energy Transfer. *Journal of Chemical Physics*, **1967**, 46, 3688-3689	3.9	9
4	Effect of Molecular Orientations on Vibrational-Translational Energy Transfer. *Journal of Chemical Physics*, **1967**, 47, 3302-3311	3.9	19
3	On the Importance of the Polarization Energy in Inelastic Ion□Molecule Collisions. *Journal of Chemical Physics*, **1965**, 42, 1739-1743	3.9	10
2	Dependence of the Probabilities of Vibrational De-Excitation on Interaction Potentials. *Journal of Chemical Physics*, **1965**, 42, 59-62	3.9	40
1	Inelastic Molecular Collisions with a Lennard-Jones (12□6) Interaction Energy. *Journal of Chemical Physics*, **1964**, 41, 2864-2868	3.9	30