Heon Kang

List of Publications by Year
in descending order

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57	1,135	394421	454955
papers	citations	19 h-index	30 g-index

59	59	59	786
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Chemistry of Ice Surfaces. Elementary Reaction Steps on Ice Studied by Reactive Ion Scattering. Accounts of Chemical Research, 2005, 38, 893-900.	15.6	86
2	FORMATION OF GLYCINE ON ULTRAVIOLET-IRRADIATED INTERSTELLAR ICE-ANALOG FILMS AND IMPLICATIONS FOR INTERSTELLAR AMINO ACIDS. Astrophysical Journal, 2009, 697, 428-435.	4.5	66
3	H/D isotopic exchange between water molecules at ice surfaces. Journal of Chemical Physics, 2004, 121, 2765.	3.0	59
4	Some fundamental properties and reactions of ice surfaces at low temperatures. Physical Chemistry Chemical Physics, 2010, 12, 12000.	2.8	59
5	Adsorption, Ionization, and Migration of Hydrogen Chloride on Ice Films at Temperatures between 100 and 140 K. Journal of Physical Chemistry B, 2005, 109, 5124-5132.	2.6	49
6	Mechanistic study of proton transfer and Hâˆ•D exchange in ice films at low temperatures (100â€“140K). Journal of Chemical Physics, 2007, 127, 084701.	3.0	47
7	Protons at Ice Surfaces. Angewandte Chemie - International Edition, 2006, 45, 5529-5533.	13.8	38
8	DIRECT EVIDENCE FOR AMMONIUM ION FORMATION IN ICE THROUGH ULTRAVIOLET-INDUCED ACID-BASE REACTION OF NH₃WITH H₃O⁺. Astrophysical Journal, 2010, 713, 906-911.	4.5	34
9	Generation of strong electric fields in an ice film capacitor. Journal of Chemical Physics, 2013, 139, 074201.	3.0	34
10	Reactive Ion Scattering of Low Energy Cs⁺from Surfaces. A Technique for Surface Molecular Analysis. Bulletin of the Korean Chemical Society, 2011, 32, 389-398.	1.9	30
11	Solvation and Reaction of Ammonia in Molecularly Thin Water Films. Journal of Physical Chemistry C, 2015, 119, 23052-23058.	3.1	28
12	Proton mobility in thin ice films: a revisit. Physical Chemistry Chemical Physics, 2008, 10, 4814.	2.8	27
13	Interaction of NaF, NaCl, and NaBr with Amorphous Ice Films. Salt Dissolution and Ion Separation at the Ice Surface. Journal of Physical Chemistry C, 2007, 111, 8030-8036.	3.1	25
14	Energy barrier of proton transfer at ice surfaces. Journal of Chemical Physics, 2010, 133, 044709.	3.0	25
15	Asymmetric Transport Efficiencies of Positive and Negative Ion Defects in Amorphous Ice. Physical Review Letters, 2012, 108, 226103.	7.8	25
16	Effect of Electric Field on Condensed-Phase Molecular Systems. II. Stark Effect on the Hydroxyl Stretch Vibration of Ice. Journal of Physical Chemistry C, 2015, 119, 15596-15603.	3.1	25
17	Zundelâ€like and Eigenâ€like Hydrated Protons on a Platinum Surface. Angewandte Chemie - International Edition, 2015, 54, 7626-7630.	13.8	24
18	Effect of Electric Field on Condensed-Phase Molecular Systems. I. Dipolar Polarization of Amorphous Solid Acetone. Journal of Physical Chemistry C, 2015, 119, 15588-15595.	3.1	22

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19	Electric Field Effect on Condensed-Phase Molecular Systems. III. The Origin of the Field-Induced Change in the Vibrational Frequency of Adsorbed CO on Pt(111). Journal of Physical Chemistry C, 2016, 120, 17579-17587.	3.1	21
20	Asymmetric Transport Mechanisms of Hydronium and Hydroxide Ions in Amorphous Solid Water: Hydroxide Goes Brownian while Hydronium Hops. Journal of Physical Chemistry Letters, 2014, 5, 2568-2572.	4.6	19
21	Hydrolysis of Sodium Atoms on Waterâ^'Ice Films. Characterization of Reaction Products and Interfacial Distribution of Sodium and Hydroxide Ions. Journal of Physical Chemistry C, 2009, 113, 321-327.	3.1	18
22	Comparative Proton Transfer Efficiencies of Hydronium and Hydroxide in Aqueous Solution: Proton Transfer vs Brownian Motion. Journal of Physical Chemistry B, 2014, 118, 13671-13678.	2.6	18
23	Efficient Conversion of Nitrogen Dioxide into Nitrous Acid on Ice Surfaces. Journal of Physical Chemistry Letters, 2010, 1, 3085-3089.	4.6	17
24	Brute Force Orientation of Matrixâ€Isolated Molecules: Reversible Reorientation of Formaldehyde in an Argon Matrix toward Perfect Alignment. Angewandte Chemie - International Edition, 2017, 56, 1046-1049.	13.8	17
25	Adsorption structure of 2-butyne on Si(100)-(2Ã—1). Journal of Chemical Physics, 2003, 118, 6083-6088.	3.0	16
26	Segregation of hydroxide ions to an ice surface. Journal of Chemical Physics, 2011, 135, 074703.	3.0	16
27	Transport and Surface Accumulation of Hydroniums and Chlorides in an Ice Film. A High Temperature (140â€“180 K) Study. Journal of Physical Chemistry C, 2012, 116, 21828-21835.	3.1	15
28	Real-Space Investigation of Electrical Double Layers. Potential Gradient Measurement with a Nanometer Potential Probe. Journal of Physical Chemistry C, 2011, 115, 17384-17391.	3.1	14
29	Electric Field Effect on Condensed-Phase Molecular Systems. VI. Field-Driven Orientation of Hydrogen Chloride in an Argon Matrix. Journal of Physical Chemistry A, 2018, 122, 2871-2876.	2.5	14
30	The frequency-domain infrared spectrum of ammonia encodes changes in molecular dynamics caused by a DC electric field. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23444-23447.	7.1	14
31	UV-induced protonation of molecules adsorbed on ice surfaces at low temperature. Journal of Chemical Physics, 2008, 128, 191101.	3.0	13
32	Proton transfer and H/D isotopic exchange of water molecules mediated by hydroxide ions on ice film surfaces. Journal of Chemical Physics, 2009, 131, 044705.	3.0	13
33	Kinetic Isolation of Reaction Intermediates on Ice Surfaces. Precursor States of SO2 Hydrolysis. Journal of Physical Chemistry C, 2009, 113, 16863-16865.	3.1	13
34	Comment on â€œHCl adsorption on ice at low temperature: a combined X-ray absorption, photoemission and infrared studyâ€• by P. Parent, J. Lasne, G. Marcotte and C. Laffon, Phys. Chem. Chem. Phys., 2011,13, 7142. Physical Chemistry Chemical Physics, 2012, 14, 1048-1049.	2.8	13
35	The Nature of Hydrated Protons on Platinum Surfaces. Chemistry - A European Journal, 2017, 23, 17566-17575.	3.3	13
36	Acid-Promoted Crystallization of Amorphous Solid Water. Journal of Physical Chemistry C, 2018, 122, 24164-24170.	3.1	13

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37	Electric Field Effect on Condensed-Phase Molecular Systems. IV. Conformational Change of 1,2-Dichloroethane in a Frozen Molecular Solid. Journal of Physical Chemistry C, 2017, 121, 25342-25346.	3.1	12
38	Electric Field Effect on Condensed-Phase Molecular Systems. VII. Vibrational Stark Sensitivity of Spatially Oriented Water Molecules in an Argon Matrix. Journal of Physical Chemistry C, 2019, 123, 9868-9874.	3.1	12
39	Proton Transport and Related Chemical Processes of Ice. Journal of Physical Chemistry B, 2021, 125, 8270-8281.	2.6	11
40	Organic light emitting diodes using NaCl:N,Nâ€²-bis(naphthalene-1-yl)-N,Nâ€²-bis(phenyl)benzidine composite as a hole injection buffer layer. Journal of Applied Physics, 2010, 108, 103703.	2.5	9
41	Metastable hydronium ions in UV-irradiated ice. Journal of Chemical Physics, 2012, 137, 204704.	3.0	9
42	Surface Charge Layer of Amorphous Solid Water with Adsorbed Acid or Base: Asymmetric Depth Distributions of H+ and OHâ€“ Ions. Journal of Physical Chemistry C, 2016, 120, 12051-12058.	3.1	9
43	Efficient Thermal Reactions of Sulfur Dioxide on Ice Surfaces at Low Temperature: A Combined Experimental and Theoretical Study. ACS Earth and Space Chemistry, 2017, 1, 503-510.	2.7	9
44	Reaction of Nitrogen Dioxide with Ice Surface at Low Temperature (â‰170 K). Journal of Physical Chemistry C, 2015, 119, 22016-22024.	3.1	8
45	Dissociation of Trifluoroacetic Acid in Amorphous Solid Water: Charge-Delocalized Hydroniums and Zundel Continuum Absorption. Journal of Physical Chemistry C, 2017, 121, 12842-12848.	3.1	6
46	Electric Field Effect on Condensed-Phase Molecular Systems. VIII. Vibrational Stark Effect and Dipolar Inversion in a Carbon Monoxide Crystal. Journal of Physical Chemistry C, 2019, 123, 31262-31271.	3.1	6
47	Electric Field Effect on Condensed-Phase Molecular Systems. IX. Control of Proton Displacement in Matrix-Isolated Hydrogen Chlorideâ€“Water Complexes. Journal of Physical Chemistry C, 2020, 124, 1129-1134.	3.1	6
48	Electric Field Effect on Condensed-Phase Molecular Systems: V. Acidâ€“Base Proton Transfer at the Interface of Molecular Films. Journal of Physical Chemistry C, 2018, 122, 4901-4907.	3.1	5
49	Entropy-Driven Spontaneous Reaction in Cryogenic Ice: Dissociation of Fluoroacetic Acids. Journal of Physical Chemistry Letters, 2018, 9, 4282-4286.	4.6	5
50	Recent Progress in the Manipulation of Molecules with DC Electric Fields. Accounts of Chemical Research, 2021, 54, 323-331.	15.6	5
51	Electronic and Nuclear Contributions to Vibrational Stark Shifts of Hydroxyl Stretching Frequencies of Water Clusters. Journal of Physical Chemistry C, 2018, 122, 12970-12974.	3.1	4
52	Tunneling Diffusion of Excess Protons in Amorphous Solid Water at 10 and 80 K. Journal of Physical Chemistry C, 2019, 123, 3657-3663.	3.1	4
53	Transmission and Trapping of Low-Energy (1â€“10 eV) Electrons in Crystalline Ice Films. Journal of Physical Chemistry C, 2020, 124, 15862-15869.	3.1	4
54	Electric Field Effect on Condensed-Phase Molecular Systems. X. Interconversion Dynamics and Vibrational Stark Effect of Hydrogen Chloride Clusters in an Argon Matrix. Journal of Physical Chemistry B, 2020, 124, 4581-4589.	2.6	2

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55	Preparation and Characterization of Metastable trans-Dinitrogen Tetroxide. Journal of Physical Chemistry A, 2022, 126, 2353-2360.	2.5	2
56	Scalable energetic-impact deposition of a mixture composed of multi-walled carbon nanotubes and silver nanoparticles. Journal of the Korean Physical Society, 2013, 62, 980-982.	0.7	0
57	Brute Force Orientation of Matrixâ€Isolated Molecules: Reversible Reorientation of Formaldehyde in an Argon Matrix toward Perfect Alignment. Angewandte Chemie, 2017, 129, 1066-1069.	2.0	0