Michal FÃ¡rnÃ-k

List of Publications by Year
in descending order

120 papers	2,566 citations	172457 29 h-index	276875 41 g-index
123 all docs	123 docs citations	123 times ranked	1596 citing authors

#	Article	IF	Citations
1	Microhydration Prevents Fragmentation of Uracil and Thymine by Low-Energy Electrons. Journal of Physical Chemistry Letters, 2016, 7, 3401-3405.	4.6	95
2	Acidic protons before take-off: A comparative jet Fourier transform infrared study of small HClâ€“ and HBrâ€“solvent complexes. Journal of Chemical Physics, 2003, 118, 10120-10136.	3.0	80
3	A first glimpse at the acidic proton vibrations in HClâ€“water clusters via supersonic jet FTIR spectroscopy. Physical Chemistry Chemical Physics, 2002, 4, 3933-3937.	2.8	68
4	Ion-molecule reactions in 4He droplets: Flying nano-cryo-reactors. Journal of Chemical Physics, 2005, 122, 014307.	3.0	62
5	Concentration modulation spectroscopy with a pulsed slit supersonic discharge expansion source. Chemical Physics Letters, 2001, 344, 23-30.	2.6	59
6	Dynamics of chemical reactions of doubly-charged ions. CF2D+ formation in collisions of CF22+ and D2. Chemical Physics Letters, 1995, 235, 99-104.	2.6	54
7	Oriented xenon hydride molecules in the gas phase. International Reviews in Physical Chemistry, 2006, 25, 583-612.	2.3	49
8	Low-energy electrons transform the nimorazole molecule into a radiosensitiser. Nature Communications, 2019, 10, 2388.	12.8	48
9	Mass spectrometry of aerosol particle analogues in molecular beam experiments. Mass Spectrometry Reviews, 2018, 37, 630-651.	5.4	47
10	Ionization of large homogeneous and heterogeneous clusters generated in acetyleneâ€“Ar expansions: Cluster ion polymerization. Journal of Chemical Physics, 2013, 138, 124306.	3.0	46
11	Extensive water cluster fragmentation after low energy electron ionization. Chemical Physics Letters, 2014, 612, 256-261.	2.6	46
12	Dynamics of chemical and charge transfer reactions of molecular dications: beam scattering and total cross section data on CF2D+ (CF2H+), CF2+, and CF+ formations in CF22+ + D2(H2) collisions. International Journal of Mass Spectrometry, 1999, 192, 191-203.	1.5	45
13	Uptake of atmospheric molecules by ice nanoparticles: Pickup cross sections. Journal of Chemical Physics, 2012, 137, 034304.	3.0	43
14	Generation and orientation of organoxenon molecule Hâ€“Xeâ€“CCH in the gas phase. Journal of Chemical Physics, 2008, 128, 104313.	3.0	41
15	Nucleation of Mixed Nitric Acidâ€“Water Ice Nanoparticles in Molecular Beams that Starts with a HNO₃ Molecule. Journal of Physical Chemistry Letters, 2012, 3, 3096-3101.	4.6	40
16	Irregular Shapes of Water Clusters Generated in Supersonic Expansions. Physical Review Letters, 2014, 112, 113401.	7.8	40
17	Energy and charge transfer in ionized argon coated water clusters. Journal of Chemical Physics, 2013, 139, 214308.	3.0	39
18	Self-Scavenging of Electrons in Fe(CO)₅ Aggregates Deposited on Argon Nanoparticles. Journal of Physical Chemistry C, 2016, 120, 7397-7402.	3.1	39

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19	Differences in the Detachment of Electron Bubbles from Superfluid4HeDroplets versus Nonsuperfluid3HeDroplets. Physical Review Letters, 1998, 81, 3892-3895.	7.8	38
20	Experimental and theoretical study of the pyrrole cluster photochemistry: Closing the Ï€Ïƒ* dissociation pathway by complexation. Journal of Chemical Physics, 2007, 127, 064307.	3.0	37
21	Photodissociation of hydrogen halide molecules on free ice nanoparticles. Journal of Chemical Physics, 2007, 126, 071101.	3.0	37
22	Runaway electron experiments at COMPASS in support of the EUROfusion ITER physics research. Plasma Physics and Controlled Fusion, 2019, 61, 014010.	2.1	36
23	Cooperative and anticooperative mixed trimers of HCl and methanol. Journal of Molecular Structure, 2006, 790, 18-26.	3.6	35
24	Water photodissociation in free ice nanoparticles at 243 nm and 193 nm. Physical Chemistry Chemical Physics, 2008, 10, 4835.	2.8	34
25	Emergence of Charge-Transfer-to-Solvent Band in the Absorption Spectra of Hydrogen Halides on Ice Nanoparticles: Spectroscopic Evidence for Acidic Dissociation. Journal of Physical Chemistry A, 2008, 112, 5344-5353.	2.5	34
26	Pickup and Photodissociation of Hydrogen Halides in Floppy Neon Clusters. Journal of Physical Chemistry A, 2003, 107, 7743-7754.	2.5	33
27	Energy Transfer in Microhydrated Uracil, 5-Fluorouracil, and 5-Bromouracil. Journal of Physical Chemistry B, 2017, 121, 8965-8974.	2.6	33
28	Comparison between positive and negative charging of helium droplets. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1997, 40, 93-98.	1.0	32
29	Beyond the Bornâ€“Oppenheimer approximation: High-resolution overtone spectroscopy of H2D+ and D2H+. Journal of Chemical Physics, 2002, 116, 6146-6158.	3.0	31
30	Electron Attachment to Microhydrated Deoxycytidine Monophosphate. Journal of Physical Chemistry B, 2018, 122, 5212-5217.	2.6	31
31	Photochemistry of Hydrogen Halides on Water Clusters: Simulations of Electronic Spectra and Photodynamics, and Comparison with Photodissociation Experiments. Journal of Physical Chemistry A, 2011, 115, 6155-6168.	2.5	30
32	Velocity map imaging of HBr photodissociation in large rare gas clusters. Journal of Chemical Physics, 2011, 134, 154303.	3.0	30
33	Effect of cluster environment on the electron attachment to 2-nitrophenol. European Physical Journal D, 2016, 70, 1.	1.3	30
34	Pickup and reactions of molecules on clusters relevant for atmospheric and interstellar processes. Physical Chemistry Chemical Physics, 2021, 23, 3195-3213.	2.8	30
35	Size-selected methyl lactate clusters: fragmentation and spectroscopic fingerprints of chiral recognition. Physical Chemistry Chemical Physics, 2006, 8, 1148.	2.8	29
36	Photochemistry of hydrogen bonded heterocycles probed by photodissociation experiments and ab initio methods. Physical Chemistry Chemical Physics, 2011, 13, 12123.	2.8	29

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37	Isomeric transitions in size-selected methanol hexamers probed by OH-stretch spectroscopy. Physical Chemistry Chemical Physics, 2006, 8, 2752-2758.	2.8	28
38	Lack of Aggregation of Molecules on Ice Nanoparticles. Journal of Physical Chemistry A, 2015, 119, 8991-8999.	2.5	28
39	Electron-triggered chemistry in HNO₃/H₂O complexes. Physical Chemistry Chemical Physics, 2017, 19, 11753-11758.	2.8	28
40	High-resolution IR studies of hydrogen bonded clusters: Large amplitude dynamics in (HCl)n. Faraday Discussions, 2001, 118, 63-78.	3.2	27
41	Mass spectrometry of hydrogen bonded clusters of heterocyclic molecules: Electron ionization vs. photoionization. International Journal of Mass Spectrometry, 2010, 290, 85-93.	1.5	27
42	Cluster cross sections from pickup measurements: Are the established methods consistent?. Journal of Chemical Physics, 2011, 135, 104305.	3.0	27
43	The influence of embedded atoms, molecules, and clusters on the lifetimes of electron bubbles in large 4He droplets. Journal of Chemical Physics, 2003, 118, 4176-4182.	3.0	26
44	Photodissociation of HCl and small (HCl)m complexes in and on large Arn clusters. Journal of Chemical Physics, 2004, 121, 1293-1302.	3.0	26
45	Comparative FTIR Spectroscopy of HX Adsorbed on Solid Water:â€‰ Ragout-Jet Water Clusters vs Ice Nanocrystal Arrays. Journal of Physical Chemistry A, 2005, 109, 955-958.	2.5	26
46	Photodissociation of HBr on the surface of Arn clusters at 193nm. Chemical Physics, 2005, 315, 161-170.	1.9	25
47	Photodissociation of hydrogen iodide on the surface of large argon clusters: The orientation of the librational wave function and the scattering from the cluster cage. Journal of Chemical Physics, 2004, 120, 4498-4511.	3.0	24
48	Fragmentation Dynamics of Size-Selected Pyrrole Clusters Prepared by Electron Impact Ionization:â€‰ Forming a Solvated Dimer Ion Core. Journal of Physical Chemistry A, 2007, 111, 12477-12486.	2.5	24
49	Clustering and Photochemistry of Freon CF₂Cl₂ on Argon and Ice Nanoparticles. Journal of Physical Chemistry A, 2014, 118, 4740-4749.	2.5	23
50	Postionization fragmentation of rare-gas trimers revisited with new theoretical approaches. Journal of Chemical Physics, 2009, 131, 114306.	3.0	22
51	Size-selective vibrational spectroscopy of methyl glycolate clusters: comparison with ragout-jet FTIR spectroscopy. Physical Chemistry Chemical Physics, 2004, 6, 4614-4620.	2.8	21
52	Photoinduced Processes in Hydrogen Bonded System: Photodissociation of Imidazole Clusters. Journal of Physical Chemistry A, 2009, 113, 14583-14590.	2.5	21
53	Intramolecular energy transfer between oriented chromophores: High-resolution infrared spectroscopy of HCl trimer. Journal of Chemical Physics, 2004, 121, 12386.	3.0	20
54	Photochemistry of HI on argon and waternanoparticles: Hydronium radical generation in HIÂ·(H₂O)_n. Physical Chemistry Chemical Physics, 2011, 13, 2250-2258.	2.8	20

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55	Suppression of low-energy dissociative electron attachment in Fe(CO)₅ upon clustering. Beilstein Journal of Nanotechnology, 2017, 8, 2200-2207.	2.8	19
56	Solvent-Induced Photostability of Acetylene Molecules in Clusters Probed by Multiphoton Dissociation. Journal of Physical Chemistry A, 2009, 113, 7322-7330.	2.5	18
57	Hydrogen bond dynamics in the excited states: Photodissociation of phenol in clusters. Physical Chemistry Chemical Physics, 2012, 14, 8936.	2.8	18
58	Caging of Cl atoms from photodissociation of CF₂Cl₂in clusters. Physical Chemistry Chemical Physics, 2014, 16, 421-429.	2.8	18
59	Electron interactions with Bis(pentamethylcyclopentadienyl) titanium(IV) dichloride and difluoride. European Physical Journal D, 2018, 72, 1.	1.3	18
60	Reactivity of Hydrated Electron in Finite Size System: Sodium Pickup on Mixed N₂Oâ€“Water Nanoparticles. Journal of Physical Chemistry Letters, 2015, 6, 2865-2869.	4.6	17
61	Dynamics of the Hydride Ion Transfer Reaction between CD3+ and CH4: A Crossed Beam Scattering Study. The Journal of Physical Chemistry, 1995, 99, 15595-15601.	2.9	16
62	Water cluster fragmentation probed by pickup experiments. Journal of Chemical Physics, 2016, 145, 104304.	3.0	16
63	Runaway electron beam stability and decay in COMPASS. Nuclear Fusion, 2019, 59, 096036.	3.5	16
64	Search for oriented HXeX molecules from the photolysis of HCl and HBr in xenon clusters. Chemical Physics, 2004, 301, 173-182.	1.9	15
65	Fragmentation of size-selected Xe clusters: Why does the monomer ion channel dominate the Xen and ionization?. International Journal of Mass Spectrometry, 2009, 280, 78-84.	1.5	15
66	Atmospheric processes on ice nanoparticles in molecular beams. Frontiers in Chemistry, 2014, 2, 4.	3.6	15
67	Imaging of hydrogen halides photochemistry on argon and ice nanoparticles. Journal of Chemical Physics, 2014, 141, 074309.	3.0	15
68	Photodissociation of aniline Nâ€“H bonds in clusters of different nature. Physical Chemistry Chemical Physics, 2015, 17, 25004-25013.	2.8	15
69	Ligand Stabilization and Charge Transfer in Dissociative Ionization of Fe(CO)₅ Aggregates. Journal of Physical Chemistry C, 2016, 120, 17810-17816.	3.1	15
70	Probing potential surfaces for hydrogen bonding: Near-infrared combination band spectroscopy of van der Waals stretch (Î½4) and geared bend (Î½5) vibrations in (HCl)2. Journal of Chemical Physics, 2002, 116, 6132-6145.	3.0	13
71	Electron Impact Fragmentation of Size-Selected Krypton Clusters. Journal of Physical Chemistry A, 2006, 110, 9108-9115.	2.5	13
72	Photochemistry of Nitrophenol Molecules and Clusters: Intra- vs Intermolecular Hydrogen Bond Dynamics. Journal of Physical Chemistry A, 2016, 120, 4139-4146.	2.5	13

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73	Beam scattering study of the charge transfer prcess N2+ (He, He+)N+ at low collision energies. International Journal of Mass Spectrometry and Ion Processes, 1990, 100, 197-207.	1.8	12
74	Singleâ€electron transfer in collisions of He2+ with NH3 and H2S: Vibrational state populations of NH+3 and H2S+. Journal of Chemical Physics, 1995, 103, 3495-3500.	3.0	12
75	Analysis of mixed nitric oxideâ€“water clusters by complementary ionization methods. International Journal of Mass Spectrometry, 2017, 421, 144-149.	1.5	12
76	Biomolecule Analogues 2-Hydroxypyridine and 2-Pyridone Base Pairing on Ice Nanoparticles. Journal of Physical Chemistry A, 2016, 120, 4720-4730.	2.5	11
77	Ring Formation and Hydration Effects in Electron Attachment to Misonidazole. International Journal of Molecular Sciences, 2019, 20, 4383.	4.1	11
78	Pyruvic acid proton and hydrogen transfer reactions in clusters. Physical Chemistry Chemical Physics, 2019, 21, 8221-8227.	2.8	11
79	Sodium doping and reactivity in pure and mixed ice nanoparticles*. European Physical Journal D, 2015, 69, 1.	1.3	10
80	Photodissociation dynamics of ethanethiol in clusters: complementary information from velocity map imaging, mass spectrometry and calculations. Physical Chemistry Chemical Physics, 2015, 17, 25734-25741.	2.8	10
81	Single-electron charge transfer between He2+ and NO. Population of vibrational states of NO(1Î£+) product from high-resolution scattering experiments. Chemical Physics Letters, 1993, 206, 376-380.	2.6	9
82	Beam scattering investigation of hydride-ion transfer processes. Reaction of CH+3 and CD+3 with C2H6. Chemical Physics Letters, 1993, 216, 458-464.	2.6	9
83	Probing hydrogen bond potential surfaces for out-of-plane geometries: Near-infrared combination band torsional (Î½6) spectroscopy in (HCl)2. Journal of Chemical Physics, 2003, 118, 10137-10148.	3.0	9
84	Proton Transfer in Hydrogen-Bonded Network of Phenol Molecules: Intracluster Formation of Water. Journal of Physical Chemistry A, 2013, 117, 11225-11232.	2.5	9
85	The reaction of CF₂Cl₂ with gas-phase hydrated electrons. Physical Chemistry Chemical Physics, 2016, 18, 23910-23915.	2.8	9
86	Electron-induced chemistry in microhydrated sulfuric acid clusters. Atmospheric Chemistry and Physics, 2017, 17, 14171-14180.	4.9	9
87	Vibrationally mediated photodissociation dynamics of pyrrole. AIP Advances, 2019, 9, 035151.	1.3	9
88	Clustering of Uracil Molecules on Ice Nanoparticles. Journal of Physical Chemistry A, 2017, 121, 1069-1077.	2.5	8
89	Ionization of Ammonia Nanoices with Adsorbed Methanol Molecules. Journal of Physical Chemistry A, 2018, 122, 8458-8468.	2.5	8
90	Uptake of methanol on mixed HNO3/H2O clusters: An absolute pickup cross section. Journal of Chemical Physics, 2018, 148, 154301.	3.0	8

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91	Proton Transfer Reactions between Methanol and Formic Acid Deposited on Free Ar_N Nanoparticles. Journal of Physical Chemistry A, 2019, 123, 7201-7209.	2.5	8
92	Dissociative electron attachment to HNO₃ and its hydrates: energy-selective electron-induced chemistry. Physical Chemistry Chemical Physics, 2019, 21, 8691-8697.	2.8	8
93	Oxidation Enhances Aerosol Nucleation: Measurement of Kinetic Pickup Probability of Organic Molecules on Hydrated Acid Clusters. Journal of Physical Chemistry Letters, 2020, 11, 2101-2105.	4.6	8
94	Imaging of rotational wave-function in photodissociation of rovibrationally excited HCl molecules. Journal of Chemical Physics, 2017, 147, 013901.	3.0	7
95	Vibrationally Mediated Stabilization of Electrons in Nonpolar Matter. Journal of Physical Chemistry Letters, 2020, 11, 2482-2489.	4.6	7
96	Ion and radical chemistry in (H₂O₂)_N clusters. Physical Chemistry Chemical Physics, 2020, 22, 15312-15320.	2.8	7
97	Temperature evolution in IR action spectroscopy experiments with sodium doped water clusters. Physical Chemistry Chemical Physics, 2021, 23, 7682-7695.	2.8	7
98	Uptake of Hydrogen Bonding Molecules by Benzene Nanoparticles. Journal of Physical Chemistry Letters, 2022, 13, 3781-3788.	4.6	7
99	Photodissociation of HBr molecules in clusters: from rare gas clusters to water nanoparticles. Physica Scripta, 2007, 76, C73-C78.	2.5	6
100	Driving photochemistry by clustering: The ICl-Xe case. Journal of Chemical Physics, 2012, 137, 154306.	3.0	6
101	Short review on the acetylene photochemistry in clusters: photofragment caging and reactivity. Molecular Physics, 2012, 110, 2817-2828.	1.7	6
102	Ionization of carboxylic acid clusters in the gas phase and on free ArN and (H2O)N nanoparticles: valeric acid as a model for small carboxylic acids. Physical Chemistry Chemical Physics, 2019, 21, 19201-19208.	2.8	6
103	Proton transfer from pinene stabilizes water clusters. Physical Chemistry Chemical Physics, 2019, 21, 13925-13933.	2.8	5
104	Generation of (H2O2)N clusters on argon and ice nanoparticles. International Journal of Mass Spectrometry, 2021, 461, 116514.	1.5	5
105	Electron attachment to microhydrated 4-nitro- and 4-bromo-thiophenol. Physical Chemistry Chemical Physics, 2021, 23, 18173-18181.	2.8	5
106	Bimolecular reactions on sticky and slippery clusters: Electron-induced reactions of hydrogen peroxide. Journal of Chemical Physics, 2022, 156, 054306.	3.0	5
107	Clustering and multiphoton effects in velocity map imaging of methyl chloride. Molecular Physics, 2021, 119, e1823507.	1.7	4
108	Proton transfer and isotope-induced reaction in aniline cluster ions. Journal of Mass Spectrometry, 2015, 50, 643-649.	1.6	3

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109	Long time scale dynamics of vibrationally excited (HBr)n clusters. Journal of Chemical Physics, 2018, 149, 094303.	3.0	3
110	Radiometry for the vertical electron cyclotron emission from the runaway electrons at the COMPASS tokamak. Review of Scientific Instruments, 2019, 90, 113501.	1.3	3
111	Different Dynamics of CH3 and Cl Fragments from Photodissociation of CH3Cl in Clusters. Journal of Physical Chemistry A, 2020, 124, 7633-7643.	2.5	3
112	Water-Assisted Electron-Induced Chemistry of the Nanofabrication Precursor Iron Pentacarbonyl. Journal of Physical Chemistry A, 2021, 125, 1919-1926.	2.5	3
113	Photochemistry of Amylene Double Bond in Clusters on Free Argon Nanoparticles. Journal of Physical Chemistry A, 2020, 124, 3038-3047.	2.5	2
114	Stability of pyruvic acid clusters upon slow electron attachment. Physical Chemistry Chemical Physics, 2021, 23, 4317-4325.	2.8	2
115	Energy partitioning and spinâ€“orbit effects in the photodissociation of higher chloroalkanes. Physical Chemistry Chemical Physics, 2021, 23, 14340-14351.	2.8	2
116	First Measurement of X-rays Generated by Runaway Electrons in Tokamaks Using a TimePix3 Device with 1 mm thick Silicon Sensor. , 2018, , .		1
117	Positive ionization and electron attachment of hexafluoropropylene oxide in different cluster environments. International Journal of Mass Spectrometry, 2019, 435, 145-150.	1.5	1
118	Heterogeneous Reactions of Methane with Cl Radicals on Large ArN Clusters. Journal of Physical Chemistry A, 2022, 126, 249-258.	2.5	1
119	Effect of Hydration on Electron Attachment to Methanesulfonic Acid Clusters. Journal of Physical Chemistry A, 2022, 126, 1542-1550.	2.5	1
120	Growth of ice nanoparticles via uptake of individual molecules: pickup cross sections. Journal of Physics: Conference Series, 2014, 488, 102016.	0.4	0