

# Michael Gatchell

## List of Publications by Year in descending order

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83  
papers

1,298  
citations

331259

21  
h-index

395343

33  
g-index

86  
all docs

86  
docs citations

86  
times ranked

963  
citing authors

#	ARTICLE	IF	CITATIONS
1	First storage of ion beams in the Double Electrostatic Ion-Ring Experiment: DESIREE. Review of Scientific Instruments, 2013, 84, 055115.	0.6	116
2	Molecular Growth Inside of Polycyclic Aromatic Hydrocarbon Clusters Induced by Ion Collisions. Journal of Physical Chemistry Letters, 2015, 6, 1536-1542.	2.1	62
3	Formation of $C_{118}^{+}$ and $C_{119}^{+}$ inside Clusters of Polycyclic Aromatic Hydrocarbons. Journal of Physical Chemistry Letters, 2015, 6, 1536-1542.	2.9	61
4	Nonstatistical fragmentation of large molecules. Physical Review A, 2014, 89, .	1.0	57
5	Knockout driven reactions in complex molecules and their clusters. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 162001.	0.6	52
6	Highly Charged Droplets of Superfluid Helium. Physical Review Letters, 2019, 123, 165301.	2.9	51
7	Formation of H <sub>2</sub> from internally heated polycyclic aromatic hydrocarbons: Excitation energy dependence. Journal of Chemical Physics, 2015, 142, 144305.	1.2	43
8	Rotationally Cold $OH^+$ Ions in the Cryogenic Electrostatic Ion-Beam Storage Ring DESIREE. Physical Review Letters, 2017, 119, 073001.	2.9	41
9	Failure of hydrogenation in protecting polycyclic aromatic hydrocarbons from fragmentation. Physical Review A, 2015, 92, .	1.0	40
10	Solvation of ions in helium. International Reviews in Physical Chemistry, 2020, 39, 465-516.	0.9	38
11	Absolute fragmentation cross sections in atom-molecule collisions: Scaling laws for non-statistical fragmentation of polycyclic aromatic hydrocarbon molecules. Journal of Chemical Physics, 2014, 140, 224306.	1.2	35
12	Non-statistical fragmentation of PAHs and fullerenes in collisions with atoms. International Journal of Mass Spectrometry, 2014, 365-366, 260-265.	0.7	34
13	Formation of $C_{60}^{+}$ as a diffuse interstellar band carrier; a spectroscopic story in 6 acts. Journal of Molecular Spectroscopy, 2020, 367, 111243.	1.0	27
14	Roadmap on dynamics of molecules and clusters in the gas phase. European Physical Journal D, 2021, 75, 1.	0.6	32
15	Formation dynamics of fullerene dimers $C_{120}^{+}$ and $C_{119}^{+}$ . Physical Review A, 2014, 89, .	1.0	27
16	Threshold Energies for Single-Carbon Knockout from Polycyclic Aromatic Hydrocarbons. Journal of Physical Chemistry Letters, 2015, 6, 4504-4509.	2.1	26
17	Isomeric Broadening of $C_{60}^{+}$ Electronic Excitation in Helium Droplets: Experiments Meet Theory. Journal of Physical Chemistry Letters, 2018, 9, 1237-1242.	2.1	26
18	Lithium ions solvated in helium. Physical Chemistry Chemical Physics, 2018, 20, 25569-25576.	1.3	25

#	ARTICLE	IF	CITATIONS
19	Fragmentation of anthracene C <sub>14</sub> H <sub>10</sub> , acridine C <sub>13</sub> H <sub>9</sub> N and phenazine C <sub>12</sub> H <sub>8</sub> N <sub>2</sub> ions in collisions with atoms. Physical Chemistry Chemical Physics, 2014, 16, 21980-21987.	1.3	24
20	Spontaneous decay of small copper-cluster anions $Cu_n^-$ on long time scales. Physical Review A, 2017, 95, .	1.0	13
21	Ions colliding with clusters of fullerenes: Decay pathways and covalent bond formations. Journal of Chemical Physics, 2013, 139, 034309.	1.2	21
22	Isomer effects in fragmentation of Polycyclic Aromatic Hydrocarbons. International Journal of Mass Spectrometry, 2015, 392, 58-62.	0.7	19
23	Ions interacting with planar aromatic molecules: Modeling electron transfer reactions. Journal of Chemical Physics, 2013, 138, 054306.	1.2	18
24	Spectroscopy of corannulene cations in helium nanodroplets. Faraday Discussions, 2019, 217, 276-289.	1.6	17
25	Radiative cooling of carbon cluster anions C <sub>2n+1</sub> <sup>-</sup> (n=3-5). European Physical Journal D, 2020, 74, 1.	0.6	17
26	Splashing of Large Helium Nanodroplets upon Surface Collisions. Physical Review Letters, 2021, 127, 263401.	2.9	17
27	A precedent of van-der-Waals interactions outmatching Coulomb explosion. Carbon, 2016, 109, 843-850.	5.4	16
28	Magic sizes of cationic and protonated argon clusters. Physical Review A, 2018, 98, .	1.0	16
29	Ions colliding with mixed clusters of C <sub>60</sub> and coronene: Fragmentation and bond formation. Physical Review A, 2014, 90, .	1.0	15
30	Dimethylsilanone Generation from Pyrolysis of Polysiloxanes Filled with Nanosized Silica and Ceria/Silica. ChemPlusChem, 2016, 81, 1003-1013.	1.3	15
31	Hydrogenated pyrene: Statistical single-carbon loss below the knockout threshold. European Physical Journal D, 2016, 70, 1.	0.6	15
32	Large expert-curated database for benchmarking document similarity detection in biomedical literature search. Database: the Journal of Biological Databases and Curation, 2019, 2019, .	1.4	15
33	Survival of polycyclic aromatic hydrocarbon knockout fragments in the interstellar medium. Nature Communications, 2021, 12, 6646.	5.8	15
34	Decays of excited silver-cluster anions Ag <sub>n</sub> <sup>-</sup> , $Ag_n^-$ to 7, in the Double ElectroStatic Ion Ring ExpERiment. Physical Review A, 2018, 98, .	1.0	13
35	Multiply Charged Helium Droplet Anions. Chemistry - A European Journal, 2021, 27, 7283-7287.	1.7	13
36	The structure of coronene cluster ions inferred from H <sub>2</sub> uptake in the gas phase. Physical Chemistry Chemical Physics, 2017, 19, 27968-27973.	1.3	12

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37	X-ray diffractive imaging of highly ionized helium nanodroplets. <i>Physical Review Research</i> , 2022, 4, .	1.3	12
38	Disc scalelengths out to redshift 5.8. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2012, 423, L112-L116.	1.2	11
39	The adsorption of helium atoms on small cationic gold clusters. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 9554-9560.	1.3	11
40	Ion-induced molecular growth in clusters of small hydrocarbon chains. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 19665-19672.	1.3	10
41	Formation of positive and negative clusters of gold atoms inside helium nanodroplets close to zero K. <i>International Journal of Mass Spectrometry</i> , 2018, 434, 136-141.	0.7	10
42	Protonated Clusters of Neon and Krypton. <i>Journal of the American Society for Mass Spectrometry</i> , 2019, 30, 2632-2636.	1.2	10
43	Hydrogenated Gold Clusters from Helium Nanodroplets: Cluster Ionization and Affinities for Protons and Hydrogen Molecules. <i>Journal of the American Society for Mass Spectrometry</i> , 2019, 30, 1906-1913.	1.2	10
44	Protonated and Cationic Helium Clusters. <i>Molecules</i> , 2020, 25, 1066.	1.7	10
45	Shock-driven formation of covalently bound carbon nanoparticles from ion collisions with clusters of C <sub>60</sub> fullerenes. <i>Carbon</i> , 2018, 129, 766-774.	5.4	9
46	Multiple electron capture, excitation, and fragmentation in $C_6^+$ collisions. <i>Physical Review A</i> , 2014, 90, .	1.0	8
47	Complexes of gold and imidazole formed in helium nanodroplets. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 7739-7745.	1.3	8
48	Ion collision-induced chemistry in pure and mixed loosely bound clusters of coronene and C <sub>60</sub> molecules. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 15052-15060.	1.3	8
49	Atomic Gold Ions Clustered with Noble Gases: Helium, Neon, Argon, Krypton, and Xenon. <i>Journal of Physical Chemistry A</i> , 2019, 123, 9505-9513.	1.1	8
50	DESIREE electrospray ion source test bench and setup for collision induced dissociation experiments. <i>Review of Scientific Instruments</i> , 2018, 89, 075102.	0.6	7
51	Considerable matrix shift in the electronic transitions of helium-solvated cesium dimer cation Cs <sub>2</sub> He <sup>+n</sup> . <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 25362-25368.	1.3	7
52	Isotope enrichment in neon clusters grown in helium nanodroplets. <i>Journal of Chemical Physics</i> , 2020, 153, 164305.	1.2	7
53	Spontaneous decay of small copper cluster anions, Cu <sup>N</sup> = 3 <sup>+</sup> 6. <i>Journal of Physics: Conference Series</i> , 2015, 635, 072090.	0.3	5
54	The threshold displacement energy of buckminsterfullerene C <sub>60</sub> and formation of the endohedral defect fullerene He@C <sub>59</sub> . <i>Carbon</i> , 2018, 139, 906-912.	5.4	5

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55	Ionization and fragmentation of cold clusters of PAH molecules $\hat{\epsilon}$ collisions with keV ions. Journal of Physics: Conference Series, 2012, 388, 012051.	0.3	4
56	DESIREE: Physics with cold stored ion beams. EPJ Web of Conferences, 2015, 84, 01004.	0.1	3
57	Ion-Induced Reactivity in Pyrene Clusters. Journal of Physics: Conference Series, 2015, 583, 012011.	0.3	3
58	Hydrogenated gold clusters from helium nanodroplets: displacement of H <sub>2</sub> by H <sub>2</sub> O. European Physical Journal D, 2020, 74, 1.	0.6	3
59	Open questions on the interaction dynamics of molecules and clusters in the gas phase. Communications Chemistry, 2022, 5, .	2.0	3
60	Commissioning of the DESIREE storage rings $\hat{\epsilon}$ a new facility for cold ion-ion collisions. Journal of Physics: Conference Series, 2014, 488, 012040.	0.3	2
61	Knockout driven fragmentation of porphyrins. Physical Chemistry Chemical Physics, 2017, 19, 19750-19755.	1.3	2
62	A new take on circumstellar carbon chemistry. Nature Astronomy, 2020, 4, 21-22.	4.2	2
63	Complexes with Atomic Gold Ions: Efficient Bis-Ligand Formation. Molecules, 2021, 26, 3484.	1.7	2
64	Ions colliding with polycyclic aromatic hydrocarbon clusters. Physica Scripta, 2013, T156, 014062.	1.2	1
65	First results from the Double ElectroStatic Ion-Ring ExpEriment, DESIREE. Journal of Physics: Conference Series, 2014, 488, 092003.	0.3	1
66	Non-statistical fragmentation of large molecules in collisions with atoms. Journal of Physics: Conference Series, 2015, 635, 012036.	0.3	1
67	Molecular dynamics studies of impulse driven reactions in molecules and molecular clusters. Journal of Physics: Conference Series, 2015, 635, 032043.	0.3	1
68	H <sub>2</sub> formation from Polycyclic Aromatic Hydrocarbon molecules. Journal of Physics: Conference Series, 2015, 635, 032081.	0.3	1
69	Rotationally cold (> 99% J = 0) OH $\hat{\epsilon}$ molecular ions in a cryogenic storage ring. Journal of Physics: Conference Series, 2017, 875, 012016.	0.3	1
70	Going large(r): general discussion. Faraday Discussions, 2019, 217, 476-513.	1.6	1
71	Controlling internal degrees: general discussion. Faraday Discussions, 2019, 217, 138-171.	1.6	1
72	Pushing resolution in frequency and time: general discussion. Faraday Discussions, 2019, 217, 290-321.	1.6	1

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73	Mixed cationic clusters of nitrogen and hydrogen. <i>Journal of Chemical Physics</i> , 2020, 152, 014303.	1.2	1
74	Negative ion relaxation and reactions in a cryogenic storage ring. <i>Journal of Physics: Conference Series</i> , 2020, 1412, 062006.	0.3	1
75	Modeling electron and energy transfer processes in collisions between ions and Polycyclic Aromatic Hydrocarbon molecules. <i>Journal of Physics: Conference Series</i> , 2014, 488, 102015.	0.3	0
76	Bond formation in C <sup>+59</sup> C <sub>60</sub> collisions. <i>Journal of Physics: Conference Series</i> , 2014, 488, 012028.	0.3	0
77	Fragmentation studies of Hydrogenated-Pyrene Polycyclic Aromatic Hydrocarbons in collisions with He. <i>Journal of Physics: Conference Series</i> , 2015, 635, 022020.	0.3	0
78	Radiative cooling of hot C <sub>n</sub> <sup>+</sup> and C <sub>n</sub> H <sup>+</sup> molecules. <i>Journal of Physics: Conference Series</i> , 2015, 635, 112124.	0.3	0
79	Collision Induced Dissociation of PAHs and Biomolecules. <i>Journal of Physics: Conference Series</i> , 2015, 635, 022045.	0.3	0
80	Fusion reaction dynamics of fullerene molecules. <i>Journal of Physics: Conference Series</i> , 2015, 635, 032093.	0.3	0
81	Exotic systems: general discussion. <i>Faraday Discussions</i> , 2019, 217, 601-622.	1.6	0
82	Ionization of large helium nanodroplets. <i>Journal of Physics: Conference Series</i> , 2020, 1412, 122019.	0.3	0
83	Non-statistical fragmentation of C <sub>60</sub> and the formation of endohedral defect fullerenes. <i>Journal of Physics: Conference Series</i> , 2020, 1412, 202032.	0.3	0