Vitaly V Kresin

List of Publications by Year
in descending order

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107 papers	2,883 citations	236925 25 h-index	206112 48 g-index
108 all docs	108 docs citations	108 times ranked	1740 citing authors

#	Article	IF	Citations
1	Collective dipole oscillations in small sodium clusters. Physical Review Letters, 1987, 59, 1805-1808.	7.8	323
2	Surface plasma resonances in free metal clusters. Physical Review B, 1989, 40, 5417-5427.	3.2	268
3	Photoabsorption spectra of sodium clusters. Physical Review B, 1991, 43, 4565-4572.	3.2	204
4	Collective resonances and response properties of electrons in metal clusters. Physics Reports, 1992, 220, 1-52.	25.6	177
5	Collective resonances in silver clusters: Role ofdelectrons and the polarization-free surface layer. Physical Review B, 1995, 51, 1844-1849.	3.2	96
6	Photoabsorption of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Ag</mml:mi><mml:mi>N</mml:mi></mml:msub><mml:mo stretchy="false">(</mml:mo><mml:mi>N</mml:mi><mml:mo>â‰¼</mml:mo><mml:mn>6</mml:mn><mml:mo>â€“</mml:mo><mml:mn>8</mml:mn><mml:mo stretchy="false">)</mml:mo></mml:math>Clusters: Transition from Compact to Multicenter Aggregation. Physical Review Letters, 2011, 106, 233401.	7.8	71
7	Static electric polarizabilities and collective resonance frequencies of small metal clusters. Physical Review B, 1989, 39, 3042-3046.	3.2	68
8	A measurement of the polarizability of sodium clusters. Physical Review A, 2001, 64, .	2.5	57
9	Electric Dipole Moments of Water Clusters from a Beam Deflection Measurement. Physical Review Letters, 2006, 97, 123401.	7.8	56
10	Photoabsorption by Volume Plasmons in Metal Nanoclusters. Physical Review Letters, 2009, 102, 156802.	7.8	49
11	Capture of lithium by4He clusters: Surface adsorption, Penning ionization, and formation of HeLi+. Journal of Chemical Physics, 1997, 107, 2839-2844.	3.0	47
12	Electronic structure of small metal clusters: Thomas-Fermi statistical theory. Physical Review B, 1988, 38, 3741-3746.	3.2	46
13	Photodissociation of hydrogen halide molecules on free ice nanoparticles. Journal of Chemical Physics, 2007, 126, 071101.	3.0	37
14	Photoabsorption of small metal clusters: Surface and volume modes. Physical Review B, 1990, 42, 3247-3252.	3.2	34
15	Work functions, ionization potentials, and in between: Scaling relations based on the image-charge model. Physical Review B, 2003, 67, .	3.2	34
16	Critical sizes for the submersion of alkali clusters into liquid helium. Physical Review B, 2010, 81, .	3.2	33
17	Measuring cluster temperatures via kinetic-energy release. Physical Review A, 1999, 59, 495-502.	2.5	32
18	Electron Capture by the Image Charge of a Metal Nanoparticle. Physical Review Letters, 2000, 85, 2729-2732.	7.8	32

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19	Surface location of alkaline-earth-metal-atom impurities on helium nanodroplets. Physical Review A, 2007, 76, .	2.5	31
20	Collective resonance frequencies of metal cluster ions. Physical Review B, 1989, 40, 12507-12508.	3.2	29
21	Influence of source parameters on the growth of metal nanoparticles by sputter-gas-aggregation. Applied Nanoscience (Switzerland), 2017, 7, 875-883.	3.1	29
22	Temperature-dependent work functions of free alkali-metal nanoparticles. Physical Review B, 2002, 66, .	3.2	28
23	Unusual pickup statistics of high-spin alkali agglomerates on helium nanodroplets. Journal of Chemical Physics, 2003, 119, 11124-11129.	3.0	28
24	Low-energy electron capture by free C60 and the importance of polarization interaction. Chemical Physics Letters, 2001, 337, 55-60.	2.6	27
25	Electrostatic deflection of the water molecule: A fundamental asymmetric rotor. Physical Review A, 2007, 75, .	2.5	26
26	A Novel Feature in Aluminum Cluster Photoionization Spectra and Possibility of Electron Pairing at T â‰³ 100 K. Nano Letters, 2015, 15, 1410-1413.	9.1	26
27	Growing ultracold sodium clusters by using helium nanodroplets. Chemical Physics Letters, 2002, 353, 89-94.	2.6	25
28	Scattering of neutral metal clusters: Longâ€•range interactions and response properties. Journal of Chemical Physics, 1993, 98, 6982-6988.	3.0	24
29	Polarization forces in collisions between low-energy electrons and sodium clusters. Physical Review A, 1999, 60, 3071-3075.	2.5	24
30	Suppressing the fragmentation of fragile molecules in helium nanodroplets by coembedding with water: Possible role of the electric dipole moment. Journal of Chemical Physics, 2008, 128, 074303.	3.0	23
31	Electric Dipole Moments of Nanosolvated Acid Molecules in Water Clusters. Physical Review Letters, 2015, 114, 043401.	7.8	23
32	van der Waals forces between metal microclusters and fullerenes. Physical Review A, 1994, 49, R4293-R4296.	2.5	22
33	Ultraviolet photoabsorption spectra of silver and gold nanoclusters. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1998, 78, 385-396.	0.6	21
34	Velocity distribution measurement and two-wire field effects for electric deflection of a neutral supersonic cluster beam. Review of Scientific Instruments, 2002, 73, 1204-1211.	1.3	21
35	Strong long-range forces betweenC60and Na atoms and microclusters. Physical Review A, 1998, 57, 383-387.	2.5	20
36	Spectroscopy of metal â€œsuperatomâ€•nanoclusters and high-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:ma pairing. Physical Review B, 2015, 92, .	3.2	20

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37	Transparency of graphene and other direct-gap two-dimensional materials. Physical Review B, 2016, 94, .	3.2	20
38	Beam depletion method for measuring velocity distributions of cluster beams. Review of Scientific Instruments, 1988, 59, 1965-1970.	1.3	19
39	Photo-ionization efficiency curves of alkali nanoclusters in a beam and determination of metal work functions. Applied Physics B: Lasers and Optics, 2001, 73, 407-410.	2.2	18
40	Amino-acid and water molecules adsorbed on water clusters in a beam. Journal of Chemical Physics, 2005, 123, 074301.	3.0	16
41	Orientation of dipole molecules and clusters upon adiabatic entry into an external field. Journal of Chemical Physics, 2008, 129, 024101.	3.0	16
42	Photoionization profiles of metal clusters and the Fowler formula. Physical Review A, 2012, 85, .	2.5	16
43	Water cluster fragmentation probed by pickup experiments. Journal of Chemical Physics, 2016, 145, 104304.	3.0	16
44	Conduction-band plasmons in cluster-type compounds: Application to fullerides and quantum-dot arrays. Physical Review B, 1994, 49, 2715-2720.	3.2	15
45	Nanocluster ionization energies and work function of aluminum, and their temperature dependence. Journal of Chemical Physics, 2015, 143, 164313.	3.0	15
46	van der Waals interaction of finite metallic systems: A study of cluster-atom scattering. Physical Review A, 1994, 49, 2696-2701.	2.5	14
47	Fast electronic relaxation in metal nanoclusters via excitation of coherent shape deformations. Physical Review B, 2006, 73, .	3.2	14
48	Collective resonance frequencies in metal clusters. Physics Letters, Section A: General, Atomic and Solid State Physics, 1988, 133, 89-90.	2.1	13
49	Long-range van der Waals forces between alkali clusters and atoms. Journal of Chemical Physics, 1998, 108, 6660-6666.	3.0	13
50	Long-range polarization interactions of metal clusters. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1401-1411.	0.6	13
51	Changing the fragmentation pattern of molecules in helium nanodroplets by co-embedding with water. European Physical Journal D, 2007, 43, 109-112.	1.3	13
52	Pick-up cell for cluster beam experiments. Review of Scientific Instruments, 2005, 76, 056104.	1.3	12
53	Slow Electron Attachment as a Probe of Cluster Evaporation Processes. Journal of Physical Chemistry A, 2011, 115, 6961-6972.	2.5	12
54	Electrostatic Deflection of a Molecular Beam of Massive Neutral Particles: Fully Field-Oriented Polar Molecules within Superfluid Nanodroplets. Journal of Physical Chemistry Letters, 2016, 7, 4879-4883.	4.6	12

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55	Electron distribution and collective resonances in nonspherical metal clusters. Physical Review B, 1992, 45, 14321-14327.	3.2	11
56	Proton transfer in histidine-tryptophan heterodimers embedded in helium droplets. Journal of Chemical Physics, 2015, 142, 114306.	3.0	11
57	Surface and volume collective modes in small clusters and their interaction with single-particle levels. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1991, 19, 105-107.	1.0	10
58	Oriented Polar Molecules Trapped in Cold Helium Nanodropets: Electrostatic Deflection, Size Separation, and Charge Migration. Physical Review Letters, 2019, 123, 043203.	7.8	10
59	Electron-impact spectroscopy of small metal clusters: Inelastic collisions. Physical Review A, 1991, 44, R4106-R4109.	2.5	8
60	Photoionization Yields, Appearance Energies, and Densities of States of Copper Clusters. Journal of Physical Chemistry C, 2015, 119, 11178-11183.	3.1	8
61	Negative-ion formation in collisions of low-energy electrons with neutral sodium clusters. Physical Review A, 2000, 62, .	2.5	7
62	Photoionization threshold shapes of metal clusters. Journal of Chemical Physics, 2003, 118, 7141-7143.	3.0	7
63	Density of states of helium droplets. Physical Review B, 2007, 76, .	3.2	7
64	FORMATION OF UNUSUAL COPPER CLUSTERS IN HELIUM NANODROPLETS. International Journal of Nanoscience, 2013, 12, 1350014.	0.7	7
65	Ordered States in Disordered Particles: Electronic Shells and Structural Effects in Metal Clusters. Zeitschrift Fur Physikalische Chemie, 1998, 203, 57-72.	2.8	6
66	Intramolecular quantum chaos in doped helium nanodroplets. Chemical Physics Letters, 2003, 375, 253-260.	2.6	6
67	Loss of chlorine in mass spectra of DCl picked up by water clusters in a beam. Journal of Chemical Physics, 2006, 124, 146102.	3.0	6
68	Controlled deposition of size-selected MnO nanoparticle thin films for water splitting applications: reduction of onset potential with particle size. Nanotechnology, 2018, 29, 215603.	2.6	6
69	Evaporative attachment of slow electrons to alkali-metal nanoclusters. Physical Review A, 2008, 77, .	2.5	5
70	Double and triple ionization of silver clusters by electron impact. Journal of Physics Condensed Matter, 2012, 24, 104009.	1.8	5
71	Strong permanent magnet gradient deflector for Sternâ€“Gerlach-type experiments on molecular beams. Review of Scientific Instruments, 2020, 91, 053202.	1.3	5
72	Electron-cluster interactions. Hyperfine Interactions, 1994, 89, 253-262.	0.5	4

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73	Comment on â€œShape Phase Transitions in the Absorption Spectra of Atomic Clustersâ€. Physical Review Letters, 1998, 81, 5702-5702.	7.8	4
74	Electric Dipole Moments of Nitric Acid-Water Complexes Measured by Cluster Beam Deflection. AIP Conference Proceedings, 2009, , .	0.4	4
75	Beam broadening of polar molecules and clusters in deflection experiments. Journal of Chemical Physics, 2012, 136, 014301.	3.0	4
76	Energies and densities of electrons confined in elliptical and ellipsoidal quantum dots. Journal of Physics Condensed Matter, 2016, 28, 395302.	1.8	4
77	Direct detection of polar structure formation in helium nanodroplets by beam deflection measurements. Physical Chemistry Chemical Physics, 2019, 21, 20764-20769.	2.8	4
78	Quantized Electronic States in Metal Microclusters: Electronic Shells, Structural Effects, and Correlations. , 1998, , 245-261.		4
79	Loading system for alkali metal sources. Review of Scientific Instruments, 1991, 62, 2046-2047.	1.3	3
80	Elastic and reactive collisions of atoms and molecules with neutral alkali clusters. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1993, 26, 13-16.	1.0	3
81	Kinetic energy deposited into a nanodroplet, cluster, or molecule in a sticking collision with background gas. Journal of Chemical Physics, 2020, 153, 196101.	3.0	3
82	Electric deflection of imidazole dimers and trimers in helium nanodroplets: Dipole moments, structure, and fragmentation. Journal of Chemical Physics, 2020, 153, 081101.	3.0	3
83	Quantum transition theory and dynamics of ionic molecule formation in cluster collisions. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1997, 40, 381-384.	1.0	2
84	Stability, evaporation, and temperature of metal clusters. Journal of Non-Crystalline Solids, 1999, 250-252, 191-198.	3.1	2
85	Formation of manganese nanoclusters in a sputtering/aggregation source and the roles of individual operating parameters. Proceedings of SPIE, 2016, , .	0.8	2
86	Note: Contamination-free loading of lithium metal into a nozzle source. Review of Scientific Instruments, 2016, 87, 066105.	1.3	2
87	Low-Energy Electron Collisions with Metal Clusters: Electron Capture and Cluster Fragmentation. , 1994, , 183-193.		2
88	High-Temperature Superconductivity in Size-Selected Metal Nanoclusters: Gas-Phase Spectroscopy and Prototype Devices for Deposition Studies. Journal of Superconductivity and Novel Magnetism, 2022, 35, 997-1004.	1.8	2
89	Shells in CO₂ clusters. Physical Chemistry Chemical Physics, 2022, 24, 5343-5350.	2.8	2
90	An inelastic threshold in electron - alkali cluster collisions. European Physical Journal D, 2001, 16, 99-102.	1.3	1

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91	Surface-impact ionization of alkali nanoparticles. International Journal of Mass Spectrometry, 2006, 252, 142-144.	1.5	1
92	Photoabsorption resonances of Na20, Na21Cl and Na22Cl2 clusters. European Physical Journal D, 2009, 52, 183-185.	1.3	1
93	Flat Thomas-Fermi artificial atoms. Europhysics Letters, 2014, 107, 37001.	2.0	1
94	Decoration of suspended single-walled carbon nanotubes with soft-landed size-selected metal nanoparticles. Thin Solid Films, 2020, 699, 137907.	1.8	1
95	Probing the presence and absence of metal-fullerene electron transfer reactions in helium nanodroplets by deflection measurements. Physical Chemistry Chemical Physics, 2022, 24, 10378-10383.	2.8	1
96	SDI, Lysenko: Fair to Compare?. Physics Today, 1987, 40, 13-15.	0.3	0
97	Photodisintegration sum rule and electron distribution in metal clusters. Physical Review B, 1992, 46, 9812-9814.	3.2	0
98	Analysis of Collective Resonances in Clusters: Metals and Carbon. Materials Research Society Symposia Proceedings, 1992, 272, 177.	0.1	0
99	Low-frequency â€œdemonâ€•like excitations in small metal particles and their interaction with light. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1996, 74, 301-307.	0.6	0
100	Walter David Knight: An appreciation. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1225-1229.	0.6	0
101	To Walter D. Knight on his eightieth birthday. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1223-1224.	0.6	0
102	Obtaining colder ensembles of free clusters by using evaporation and recoil. European Physical Journal D, 2005, 32, 339-345.	1.3	0
103	Nanoclusters as a new family of high temperature superconductors (Conference Presentation). , 2017, , .		0
104	PHOTOIONIZATION OF ALKALI NANOPARTICLES AND CLUSTERS. , 2004, , 223-232.		0
105	Inelastic Collisions of Electrons with Small Metal Clusters. , 1992, , 957-962.		0
106	Quantum transition theory and dynamics of ionic molecule formation in cluster collisions. , 1997, , 381-384.		0
107	Electron scattering and electromagnetic response properties of metal clusters. , 1992, , 214-221.		0