

Karl-Heinz Meiwes-Broer

List of Publications by Year in descending order

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105
papers

4,343
citations

109321

35
h-index

110387

64
g-index

108
all docs

108
docs citations

108
times ranked

3809
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic and structural properties of isolated and assembled clusters. Surface Science Reports, 2005, 56, 189-275.	7.2	384
2	Laser-driven nonlinear cluster dynamics. Reviews of Modern Physics, 2010, 82, 1793-1842.	45.6	384
3	Blue shift of the Mie plasma frequency in Ag clusters and particles. Physical Review A, 1993, 48, R1749-R1752.	2.5	261
4	Cluster-surface interaction: From soft landing to implantation. Surface Science Reports, 2011, 66, 347-377.	7.2	222
5	Giant resonances in silver-cluster photofragmentation. Chemical Physics Letters, 1992, 190, 42-47.	2.6	168
6	Multistep Ionization of Argon Clusters in Intense Femtosecond Extreme Ultraviolet Pulses. Physical Review Letters, 2008, 100, 133401.	7.8	150
7	Plasmon-Enhanced Multi-Ionization of Small Metal Clusters in Strong Femtosecond Laser Fields. Physical Review Letters, 1999, 82, 3783-3786.	7.8	144
8	Metal Clusters at Surfaces. Springer Series in Cluster Physics, 2000, , .	0.3	125
9	Photoelectron spectroscopy of silver and palladium cluster anions. Electron delocalization versus, localization. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 2483-2488.	1.7	117
10	Size-dependent selectivity and activity of silver nanoclusters in the partial oxidation of propylene to propylene oxide and acrolein: A joint experimental and theoretical study. Catalysis Today, 2011, 160, 116-130.	4.4	115
11	The behaviour of nanostructured magnetic materials produced by depositing gas-phase nanoparticles. Journal Physics D: Applied Physics, 2005, 38, R357-R379.	2.8	105
12	Electron Delocalization in Magnesium Clusters Grown in Supercold Helium Droplets. Physical Review Letters, 2001, 86, 4807-4810.	7.8	102
13	Ultrafast X-Ray Scattering of Xenon Nanoparticles: Imaging Transient States of Matter. Physical Review Letters, 2012, 108, 093401.	7.8	88
14	Ultraviolet photodetachment spectroscopy on jet-cooled metal-cluster anions. Faraday Discussions of the Chemical Society, 1988, 86, 197-208.	2.2	84
15	Plasmon-Enhanced Electron Acceleration in Intense Laser Metal-Cluster Interactions. Physical Review Letters, 2007, 98, 143401.	7.8	84
16	The 3D-architecture of individual free silver nanoparticles captured by X-ray scattering. Nature Communications, 2015, 6, 6187.	12.8	82
17	Ionization dynamics of simple metal clusters in intense fields by the Thomas-Fermi-Vlasov method. European Physical Journal D, 2004, 29, 367-378.	1.3	76
18	Two-Color Strong-Field Photoelectron Spectroscopy and the Phase of the Phase. Physical Review Letters, 2015, 115, 043001.	7.8	73

#	ARTICLE	IF	CITATIONS
19	Spectroscopy on rare gas "doped silver clusters in helium droplets. Journal of Chemical Physics, 2002, 116, 3263-3269.	3.0	69
20	Core-Hole Screening as a Probe for a Metal-to-Nonmetal Transition in Lead Clusters. Physical Review Letters, 2009, 102, 138303.	7.8	69
21	Excited-State Relaxation of Ag ₈ Clusters Embedded in Helium Droplets. Physical Review Letters, 2004, 92, 173403.	7.8	65
22	Thomson scattering from near-solid density plasmas using soft X-ray free electron lasers. High Energy Density Physics, 2007, 3, 120-130.	1.5	61
23	Structure and magnetic moments of mass-filtered deposited nanoparticles. Journal of Applied Physics, 2007, 101, 114318.	2.5	56
24	Light-induced collapse of metastable magnesium complexes formed in helium nanodroplets. Physical Review A, 2008, 78, .	2.5	56
25	Infrared and Raman spectroscopy of WO ₃ and CdWO ₄ . Electrochimica Acta, 2001, 46, 2229-2231.	5.2	54
26	Coherent Electronic Wave Packet Motion in C_{60} by the Waveform and Polarization of Few-Cycle Laser Fields. Physical Review Letters, 2015, 114, 123004.	7.8	51
27	Shell structure of magnesium and other divalent metal clusters. Physical Review A, 2005, 72, .	2.5	47
28	Steplike Intensity Threshold Behavior of Extreme Ionization in Laser-Driven Xenon Clusters. Physical Review Letters, 2010, 105, 053401.	7.8	42
29	Design and capabilities of an experimental setup based on magnetron sputtering for formation and deposition of size-selected metal clusters on ultra-clean surfaces. Review of Scientific Instruments, 2012, 83, 073304.	1.3	42
30	Ion and electron emission from silver nanoparticles in intense laser fields. Physical Review A, 2006, 73, .	2.5	41
31	Combined temperature-programmed reaction and <i>in situ</i> x-ray scattering studies of size-selected silver clusters under realistic reaction conditions in the epoxidation of propene. Journal of Chemical Physics, 2009, 131, 121104.	3.0	41
32	Femtosecond ionization of magnesium clusters grown in ultracold helium droplets. European Physical Journal D, 2001, 16, 13-16.	1.3	40
33	Bound-free collective electron excitations in negatively charged silver clusters. Chemical Physics Letters, 1996, 260, 428-432.	2.6	39
34	Size-dependent magnetic spin and orbital moments of Fe nanoparticles deposited onto Co/W(110). Physical Review B, 2009, 79, .	3.2	39
35	Ion induced snowballs as a diagnostic tool to investigate the caging of metal clusters in large helium droplets. Journal of Chemical Physics, 2007, 126, 244513.	3.0	38
36	Charging of metal clusters in helium droplets exposed to intense femtosecond laser pulses. Physical Chemistry Chemical Physics, 2007, 9, 4639.	2.8	32

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37	Nanoplasmonic electron acceleration by attosecond-controlled forward rescattering in silver clusters. <i>Nature Communications</i> , 2017, 8, 1181.	12.8	31
38	Photoelectron and theoretical investigations on bismuth and antimony pentamer anions. <i>Chemical Physics Letters</i> , 1994, 230, 99-102.	2.6	30
39	Pb 4f photoelectron spectroscopy on mass-selected anionic lead clusters at FLASH. <i>New Journal of Physics</i> , 2012, 14, 075008.	2.9	29
40	Time-resolved studies on the collapse of magnesium atom foam in helium nanodroplets. <i>New Journal of Physics</i> , 2013, 15, 015026.	2.9	27
41	Charging dynamics of metal clusters in intense laser fields. <i>Applied Physics B: Lasers and Optics</i> , 2000, 71, 357-360.	2.2	23
42	Geometric structure of thin SiOxNy films on Si(100). <i>Surface Science</i> , 1998, 402-404, 729-733.	1.9	22
43	Confined Doping on a Metallic Atomic Chain Structure. <i>Physical Review Letters</i> , 2012, 109, 066801.	7.8	22
44	Mass-filtered ferromagnetic alloy clusters on surfaces. <i>Surface Science</i> , 2004, 566-568, 332-336.	1.9	21
45	Structural Transition in Atomic Chains Driven by Transient Doping. <i>Physical Review Letters</i> , 2013, 111, 156801.	7.8	21
46	Size-dependent alignment of Fe nanoparticles upon deposition onto W(110). <i>Physical Review B</i> , 2010, 81, .	3.2	20
47	Collimation of metal nanoparticle beams using aerodynamic lenses. <i>Review of Scientific Instruments</i> , 2006, 77, 093304.	1.3	19
48	The effect of volumetric weighting in the interaction of intense laser fields with clusters. <i>European Physical Journal D</i> , 2007, 43, 261-266.	1.3	17
49	Non-resonant absorption enhancement in laser-excited simple metal clusters through electron-electron collisions. <i>Physical Review A</i> , 2008, 77, .	2.5	17
50	Pronounced Size Dependence in Structure and Morphology of Gas-Phase Produced, Partially Oxidized Cobalt Nanoparticles under Catalytic Reaction Conditions. <i>ACS Nano</i> , 2015, 9, 5984-5998.	14.6	17
51	The structure of cobalt nanoparticles on Ge(001). <i>European Physical Journal D</i> , 2007, 45, 433-437.	1.3	16
52	Magnetism of 3d transition metal nanoparticles on surfaces probed with synchrotron radiation "from ensembles towards individual objects. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1152-1160.	1.5	16
53	Additive Manufacturing of Drug Delivery Systems. <i>Biomedizinische Technik</i> , 2012, 57, .	0.8	16
54	Magnetic properties of Fe nanoclusters on Cu(111) studied with X-ray magnetic circular dichroism. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1170-1179.	1.5	15

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55	Ionization-Induced Subcycle Metallization of Nanoparticles in Few-Cycle Pulses. ACS Photonics, 2020, 7, 3207-3215.	6.6	15
56	Temporal Development of a Laser-Induced Helium Nanoplasma Measured through Auger Emission and Above-Threshold Ionization. Physical Review Letters, 2020, 125, 093202.	7.8	15
57	Photoelectron studies of neutral Ag ₃ in helium droplets. Journal of Chemical Physics, 2007, 126, 184306.	3.0	14
58	Strong field dual-pulse excitation of AgN. European Physical Journal D, 2005, 36, 165-171.	1.3	13
59	Current-dependent periodicities of Si(553)-Au. Physical Review B, 2014, 89, .	3.2	13
60	Surface photovoltage of Ag nanoparticles and Au chains on Si(111). Physica Status Solidi (B): Basic Research, 2010, 247, 1087-1094.	1.5	12
61	Auger emission from the Coulomb explosion of helium nanoplasmas. Journal of Chemical Physics, 2019, 150, 204302.	3.0	12
62	Temperature dependent magnetic spin and orbital moments of mass-filtered cobalt clusters on Au(111). European Physical Journal D, 2007, 45, 521-528.	1.3	11
63	Reflection high energy electron diffraction as a tool in cluster deposition experiments. Physica Status Solidi (B): Basic Research, 2010, 247, 1048-1055.	1.5	11
64	Machining of Biocompatible Ceramics with Femtosecond Laser Pulses. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	11
65	Formation of coherent rotational wavepackets in small molecule-helium clusters using impulsive alignment. Faraday Discussions, 2014, 171, 195-218.	3.2	11
66	Photoelectron Spectroscopy on Magnesium Ensembles in Helium Nanodroplets. Journal of Physical Chemistry A, 2019, 123, 5951-5956.	2.5	11
67	Metal clusters under strong laser field conditions. International Journal of Mass Spectrometry, 1999, 192, 387-391.	1.5	10
68	Size effects in the temperature-dependent magnetization of iron clusters. Materials Science and Engineering C, 2002, 19, 305-310.	7.3	10
69	Tunnelling spectroscopy on silver islands and large deposited silver clusters on Ge(001). Applied Physics A: Materials Science and Processing, 2006, 82, 131-137.	2.3	10
70	Electronic excitations induced by the impact of coinage metal ions and clusters on a rare gas matrix: Neutralization and luminescence. Physical Review B, 2007, 76, .	3.2	10
71	Electronic Level Structure of Metal Clusters at Surfaces. Springer Series in Cluster Physics, 2000, , 151-173.	0.3	10
72	Exoelectron emission from magnesium surfaces. Surface Science, 1999, 442, 477-484.	1.9	9

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73	Generation of Highly Charged and Energetic Ions From the Interaction of Strong Laser Pulses with Coinage Metal Clusters. Contributions To Plasma Physics, 2005, 45, 424-431.	1.1	8
74	Highly Charged Rydberg Ions from the Coulomb Explosion of Clusters. Physical Review Letters, 2018, 120, 133207.	7.8	8
75	Spectrometer for shot-to-shot photon energy characterization in the multi-bunch mode of the free electron laser at Hamburg. Review of Scientific Instruments, 2015, 86, 113107.	1.3	7
76	Comparison of Electron and Ion Emission from Xenon Cluster-Induced Ignition of Helium Nanodroplets. Journal of Physical Chemistry A, 2018, 122, 8107-8113.	2.5	7
77	Systematically shaped laser pulses for intense laser-cluster studies. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 225601.	1.5	6
78	Cresting the Coulomb Barrier of Polyanionic Metal Clusters. Physical Review Letters, 2021, 126, 133001.	7.8	6
79	Collision-induced luminescence from the impact of ions and cluster ions on solid rare gases. Chemical Physics Letters, 2006, 433, 32-36.	2.6	5
80	Intense colored pulse trains: generation, characterization, and applications. Journal of Optics (United Kingdom), 2017, 19, 022201.	2.2	5
81	Focus on correlation effects in radiation fields. New Journal of Physics, 2013, 15, 065015.	2.9	5
82	Mapping Long-Lived Dark States in Copper Porphyrin Nanostructures. Journal of Physical Chemistry C, 2016, 120, 16977-16984.	3.1	5
83	Bi N ⁷⁺ produced in the PACIS: Electronically excited states studied by photoelectron spectroscopy. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1993, 26, 146-149.	1.0	4
84	Measurement of high-dynamic range x-ray Thomson scattering spectra for the characterization of nano-plasmas at LCLS. Review of Scientific Instruments, 2016, 87, 11E709.	1.3	4
85	Virtual Plasmonic Dimers for Ultrasensitive Inspection of Cluster-Surface Coupling. Journal of Physical Chemistry C, 2019, 123, 1379-1388.	3.1	4
86	Control of chirped pulse trains: a speedway for free-optimization experiments. Applied Physics B: Lasers and Optics, 2011, 105, 293-300.	2.2	3
87	Periodic variations in the local surface potential of Si(111)-(5Å ²)-Au. Physical Review B, 2012, 85, .	3.2	3
88	Morphological impact on the reaction kinetics of size-selected cobalt oxide nanoparticles. Journal of Chemical Physics, 2015, 143, 114301.	3.0	3
89	High performance charge-state resolving ion energy analyzer optimized for intense laser studies on low-density cluster targets. Review of Scientific Instruments, 2016, 87, 103110.	1.3	3
90	The interaction of intense femtosecond laser pulses with argon microdroplets studied near the soft x-ray emission threshold. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 024006.	1.5	3

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91	Size and charge-state dependence of detachment energies of polyanionic silver clusters. Journal of Chemical Physics, 2021, 155, 164303.	3.0	3
92	Material Processing with Femtosecond Laser Pulses for Medical Applications. Biomedizinische Technik, 2012, 57, .	0.8	2
93	Loading method for discrete drug depots on implant surfaces. Biomedizinische Technik, 2012, 57, .	0.8	2
94	Control of Ionization in the Interaction of Strong Laser Fields with Dense Nanoplasmas. Contributions To Plasma Physics, 2012, 52, 28-32.	1.1	2
95	Dual crystal x-ray spectrometer at 1.8 keV for high repetition-rate single-photon counting spectroscopy experiments. Journal of Instrumentation, 2016, 11, P08015-P08015.	1.2	2
96	A versatile setup for studying size and charge-state selected polyanionic nanoparticles. Review of Scientific Instruments, 2022, 93, 043301.	1.3	2
97	STATIC POLARIZABILITIES OF CHARGED SILVER METAL CLUSTERS EXTRACTED FROM THE OPTICAL SPECTRA. Surface Review and Letters, 1996, 03, 509-513.	1.1	1
98	Development of ion recoil energy distributions in the Coulomb explosion of argon clusters resolved by charge-state selective ion energy spectroscopy. European Physical Journal: Special Topics, 0, , 1.	2.6	1
99	Focus on Clusters at Surfaces. New Journal of Physics, 0, 4, .	2.9	1
100	SCANNING TUNNELING SPECTROSCOPY ON SILVER CLUSTERS. , 2000, , .		1
101	Excitation of Heavy Metal Clusters by Strong fs Laser Pulses. Australian Journal of Physics, 1999, 52, 555.	0.6	1
102	Correlated matter in radiation fields: from femtosecond spectroscopy to the free electron laser. European Physical Journal D, 2005, 36, 141-141.	1.3	0
103	Ex situ investigations of MOCVD-grown gallium nitride nanowires using reflection high energy electron diffraction. IOP Conference Series: Materials Science and Engineering, 2011, 23, 012038.	0.6	0
104	Machining of Biocompatible Polymers with Shaped Femtosecond Laser Pulses. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	0
105	Resolving the Ion and Electron Dynamics in Finite Systems Exposed to Intense Optical Laser Fields. Springer Series in Materials Science, 2010, , 85-113.	0.6	0