Caroline Chick Jarrold

List of Publications by Year
in descending order

83 papers	1,646 citations	218592 26 h-index	360920 35 g-index
84 all docs	84 docs citations	84 times ranked	630 citing authors

#	Article	IF	Citations
1	Study of the low-lying states of NiOâ˜ and NIO using anion photoelectron spectroscopy. Journal of Chemical Physics, 1998, 108, 1804-1810.	1.2	78
2	Structures of Mo2Oyâ˜ and Mo2Oy (y=2, 3, and 4) studied by anion photoelectron spectroscopy and density functional theory calculations. Journal of Chemical Physics, 2005, 122, 094313.	1.2	75
3	Reactivity of Small MoxOy-Clusters toward Methane and Ethane. Journal of Physical Chemistry A, 2006, 110, 2157-2164.	1.1	49
4	Anion photoelectron spectroscopy of small tin clusters. Journal of Chemical Physics, 1999, 110, 5079-5088.	1.2	44
5	Separating contributions from multiple structural isomers in anion photoelectron spectra: Al3O3â˜ beam hole burning. Journal of Chemical Physics, 2003, 118, 1773-1778.	1.2	43
6	Unusual products observed in gas-phase WxOyâ˜+H2O and D2O reactions. Journal of Chemical Physics, 2009, 130, 124314.	1.2	42
7	New Insights on Photocatalytic H₂ Liberation from Water Using Transition-Metal Oxides: Lessons from Cluster Models of Molybdenum and Tungsten Oxides. Journal of the American Chemical Society, 2013, 135, 17039-17051.	6.6	41
8	Asymmetric Partitioning of Metals among Cluster Anions and Cations Generated via Laser Ablation of Mixed Aluminum/Group 6 Transition Metal Targets. Journal of Physical Chemistry A, 2013, 117, 1765-1772.	1.1	41
9	The electronic structure of ZnO and ZnF determined by anion photoelectron spectroscopy. Chemical Physics Letters, 2001, 341, 313-318.	1.2	40
10	Water reactivity with tungsten oxides: H2 production and kinetic traps. Journal of Chemical Physics, 2009, 131, 144302.	1.2	39
11	Electronic structures of MoWOyâ˜ and MoWOy determined by anion photoelectron spectroscopy and DFT calculations. Journal of Chemical Physics, 2009, 130, 124313.	1.2	39
12	Properties of metal oxide clusters in non-traditional oxidation states. Chemical Physics Letters, 2012, 525-526, 1-12.	1.2	38
13	Anion photoelectron spectroscopy of PdCOâ˜ and PdCN: Reactivity of Pdâ˜. Journal of Chemical Physics, 1999, 110, 8986-8991.	1.2	37
14	Addition of water to Al5O4â˜ determined by anion photoelectron spectroscopy and quantum chemical calculations. Journal of Chemical Physics, 2005, 122, 014313.	1.2	37
15	Addition of water and methanol to Al3O3â˜ studied by mass spectrometry and anion photoelectron spectroscopy. Journal of Chemical Physics, 2003, 118, 5841-5851.	1.2	33
16	Structures of MoxW(3â˜x)O6â€ˆ(x=â€“3) anion and neutral clusters determined by anion photoelectron spectroscopy and density functional theory calculations. Journal of Chemical Physics, 2009, 131, 044310.	1.2	32
17	CO 2 reduction by group 6 transition metal suboxide cluster anions. Journal of Chemical Physics, 2010, 133, 024305.	1.2	32
18	Disparate product distributions observed in Mo(3â˜x)WxOyâ˜â€ˆ(x=â€“3;â€‚y=3â€“9) reactions with D2O and CO2. Journal of Chemical Physics, 2010, 132, 064302.	1.2	32

#	Article	IF	Citations
19	Ce_xO_y^{â€“} (x = 2â€“3) + D₂O Reactions: Stoichiometric Cluster Formation from Deuteroxide Decomposition and Anti-Arrhenius Behavior. Journal of Physical Chemistry A, 2014, 118, 9960-9969.	1.1	32
20	H2 production from reactions between water and small molybdenum suboxide cluster anions. Journal of Chemical Physics, 2010, 133, 054305.	1.2	31
21	Structures of trimetallic molybdenum and tungsten suboxide cluster anions. Journal of Chemical Physics, 2011, 135, 104312.	1.2	30
22	Production of C6O6-from Oligomerization of CO on Molybdenum Anions. Journal of the American Chemical Society, 2006, 128, 13688-13689.	6.6	29
23	Termination of the W2Oyâ^'+H2O/D2Oâ†'W2Oy+1â^'+H2/D2 sequential oxidation reaction: An exploration of kinetic versus thermodynamic effects. Journal of Chemical Physics, 2009, 131, 144306.	1.2	29
24	Comparative study of water reactivity with Mo2Oyâ^' and W2Oyâ^' clusters: A combined experimental and theoretical investigation. Journal of Chemical Physics, 2014, 141, 104310.	1.2	28
25	Measurement of the electron affinity of atomic Ce. Physical Review A, 2014, 89, .	1.0	28
26	Molecular and electronic structures of cerium and cerium suboxide clusters. Journal of Chemical Physics, 2016, 145, 154306.	1.2	27
27	Photoelectron spectra of CeOâ^' and Ce(OH)2â^'. Journal of Chemical Physics, 2015, 142, 064305.	1.2	26
28	Study of Nb2Oy (y = 2â€“5) anion and neutral clusters using anion photoelectron spectroscopy and density functional theory calculations. Journal of Chemical Physics, 2011, 135, 104317.	1.2	25
29	Study of MoNbO_y (y = 2â€“5) Anion and Neutral Clusters Using Photoelectron Spectroscopy and Density Functional Theory Calculations: Impact of Spin Contamination on Single Point Calculations. Journal of Physical Chemistry A, 2012, 116, 9639-9652.	1.1	24
30	Reactivity of Al3O3â^' cluster toward H2O studied by density functional theory. Journal of Chemical Physics, 2004, 120, 8698-8706.	1.2	22
31	Study of MoVO_y (y = 2â^'5) Anion and Neutral Clusters using Anion Photoelectron Spectroscopy and Density Functional Theory Calculations. Journal of Physical Chemistry A, 2010, 114, 11312-11321.	1.1	22
32	Electronic and Molecular Structures of the CeB₆ Monomer. Journal of Physical Chemistry A, 2019, 123, 2040-2048.	1.1	22
33	Exceptionally Complex Electronic Structures of Lanthanide Oxides and Small Molecules. Accounts of Chemical Research, 2019, 52, 3265-3273.	7.6	20
34	Photoelectron spectrum of PrOâ^'. Journal of Chemical Physics, 2015, 143, 064305.	1.2	19
35	Low-lying electronic structure of EuH, EuOH, and EuO neutrals and anions determined by anion photoelectron spectroscopy and DFT calculations. Journal of Chemical Physics, 2015, 143, 034305.	1.2	18
36	Photoelectron Imaging Spectra of O2â€“Â·VOC and O4â€“Â·VOC Complexes. Journal of Physical Chemistry A, 2016, 120, 7828-7838.	1.1	17

#	Article	IF	Citations
37	The electron shuffle: Cerium influences samarium 4f orbital occupancy in heteronuclear Ceâ€“Sm oxide clusters. Journal of Chemical Physics, 2017, 146, 194310.	1.2	17
38	Insight into ethylene interactions with molybdenum suboxide cluster anions from photoelectron spectra of chemifragments. Journal of Chemical Physics, 2018, 148, 054308.	1.2	17
39	A comparison of stable carbonyls formed in the gas-phase reaction between group 10 atomic anions and methanol or methoxy radicals: Anion photoelectron spectroscopy and density functional theory calculations on HNiCOâ¯, PdCOâ¯, and PtCOâ¯. Journal of Chemical Physics, 2003, 119, 10591-10599.	1.2	16
40	Tungsten carbide revisited: New anion photoelectron spectrum and density functional theory calculations. Journal of Chemical Physics, 2008, 129, 114304.	1.2	16
41	RH and H₂ Production in Reactions between ROH and Small Molybdenum Oxide Cluster Anions. Journal of Physical Chemistry A, 2014, 118, 8493-8504.	1.1	16
42	Reactions between CO and small molybdenum suboxide cluster anions. Journal of Chemical Physics, 2007, 126, 214309.	1.2	15
43	Mixed cerium-platinum oxides: Electronic structure of [CeO]Ptn (n = 1, 2) and [CeO2]Pt complex anions and neutrals. Journal of Chemical Physics, 2016, 145, 044317.	1.2	15
44	The striking influence of oxophilicity differences in heterometallic Moâ€“Mn oxide cluster reactions with water. Journal of Chemical Physics, 2020, 152, 054301.	1.2	15
45	Photoelectron spectrum of PdOâ¯. Journal of Chemical Physics, 1999, 110, 10216-10217.	1.2	14
46	Photoelectron imaging and photodissociation of ozonide in O3â¯ â‹… (O2)n (n = 1-4) clusters. Journal of Chemical Physics, 2015, 142, 124305.	1.2	14
47	Explaining the MoVO4â¯ photoelectron spectrum: Rationalization of geometric and electronic structure. Journal of Chemical Physics, 2017, 146, 104301.	1.2	14
48	Hydrogen evolution from water reactions with molybdenum sulfide cluster anions. International Journal of Mass Spectrometry, 2018, 434, 193-201.	0.7	14
49	Exotic electronic structures of SmxCe3â¯xOy (x = 0-3; y = 2-4) clusters and the effect of high neutral density of low-lying states on photodetachment transition intensities. Journal of Chemical Physics, 2018, 149, 054305.	1.2	13
50	The electronic structure of PdC2H and PdC2HN determined by anion photoelectron spectroscopy. Journal of Chemical Physics, 2000, 112, 792-798.	1.2	12
51	Electronic structure of coordinatively unsaturated molybdenum and molybdenum oxide carbonyls. Journal of Chemical Physics, 2009, 130, 064301.	1.2	11
52	Role of weakly bound complexes in temperature-dependence and relative rates of MxOyâ¯ + H2O (M = Mo, W) reactions. Journal of Chemical Physics, 2016, 144, 074307.	1.2	11
53	Electronic structures of AlMoOyâ¯ (y = 1â€“4) determined by photoelectron spectroscopy and density functional theory calculations. Journal of Chemical Physics, 2012, 137, 024302.	1.2	10
54	Electronic structures of WAlOy and WAlOyâ¯ (y = 2â€“4) determined by anion photoelectron spectroscopy and density functional theory calculations. Journal of Chemical Physics, 2012, 137, 044301.	1.2	10

#	Article	IF	Citations
55	Ce in the +4 oxidation state: Anion photoelectron spectroscopy and photodissociation of small CexOyHzâ¯ molecules. Journal of Chemical Physics, 2017, 147, 104303.	1.2	10
56	O₂^{â€“}Â·[Polar VOC] Complexes: H-Bonding versus Chargeâ€“Dipole Interactions, and the Noninnocence of Formaldehyde. Journal of Physical Chemistry A, 2017, 121, 5459-5467.	1.1	10
57	Molybdenum Oxide Cluster Anion Reactions with C₂H₄ and H₂O: Cooperativity and Chemifragmentation. Journal of Physical Chemistry A, 2018, 122, 41-52.	1.1	10
58	Study of tin- and tin clusterâ€“cyano complexes using anion photoelectron spectroscopy and density functional calculations. Journal of Chemical Physics, 2000, 113, 1035-1045.	1.2	9
59	Comparison of Nickel-Group Metal Cyanides and Acetylides and Their Anions Using Anion Photoelectron Spectroscopy and Density Functional Theory Calculations. Journal of Physical Chemistry A, 2005, 109, 6880-6886.	1.1	9
60	Simple Relationship between Oxidation State and Electron Affinity in Gas-Phase Metalâ€“Oxo Complexes. Journal of Physical Chemistry A, 2013, 117, 13919-13925.	1.1	9
61	A Tale of Two Stabilities: How One Boron Atom Affects a Switch in Bonding Motifs in CeO₂B_x^{â€“} (x = 2, 3) Complexes. Journal of Physical Chemistry A, 2018, 122, 9879-9885.	1.1	9
62	Photoelectron Spectra of Gd₂O₂^{â€“} and Nonmonotonic Photon-Energy-Dependent Variations in Populations of Close-Lying Neutral States. Journal of Physical Chemistry A, 2021, 125, 857-866.	1.1	9
63	Photoelectrons Are Not Always Quite Free. Journal of Physical Chemistry Letters, 2019, 10, 144-149.	2.1	8
64	Addition of NH3 to Al3O3â¯. Journal of Chemical Physics, 2006, 124, 201101.	1.2	7
65	Mo Insertion into the H₂ Bond in Mo_xS_y^{â€“} + H₂ Reactions. Journal of Physical Chemistry A, 2019, 123, 7261-7269.	1.1	7
66	Temporary anion states of fluorine substituted benzenes probed by charge transfer in O2â¯Â·C6H6â¯xFx (x = 0â€“5) ionâ€“molecule complexes. Journal of Chemical Physics, 2020, 152, 204309.	1.2	7
67	Emerging Nonvalence Anion States of [Isoprene-HÂ·]Â·H₂O Accessed via Detachment of OH^{â€“}Â·Isoprene. Journal of Physical Chemistry A, 2020, 124, 2279-2287.	1.1	7
68	More than little fragments of matter: Electronic and molecular structures of clusters. Journal of Chemical Physics, 2021, 154, 200901.	1.2	7
69	Autodetachment over Broad Photon Energy Ranges in the Anion Photoelectron Spectra of [O₂â€“M]^{â¯} (M = Glyoxal, Methylglyoxal, or) Tj ETQq1 1 0.784314 rgBT /Ov		
70	New Photoelectronâ€“Valence Electron Interactions Evident in the Photoelectron Spectrum of Gd₂O^{â€“}. Journal of Physical Chemistry A, 2021, 125, 9892-9903.	1.1	6
71	Resonant two-photon detachment of WO2â¯. Chemical Physics Letters, 2011, 506, 31-36.	1.2	5
72	Shift from Covalent to Ionic Bonding in Al2MoOy (y = 2â€“4) Anion and Neutral Clusters. Journal of Physical Chemistry A, 2013, 117, 12116-12124.	1.1	5

#	Article	IF	Citations
73	Probing alkenoxy radical electronic structure using anion PEI spectroscopy. Journal of Chemical Physics, 2019, 150, 034302.	1.2	5
74	Using anion photoelectron spectroscopy of cluster models to gain insights into mechanisms of catalyst-mediated H₂ production from water. Physical Chemistry Chemical Physics, 2020, 22, 27936-27948.	1.3	5
75	Solvation of O2â^' and O4â^' by p-difluorobenzene and p-xylene studied by photoelectron spectroscopy. Journal of Chemical Physics, 2008, 128, 104309.	1.2	4
76	Effect of Alkyl Group on M_xO_y^{â€“} + ROH (M = Mo, W;) Tj ETQq0 0 0 rgBT /Overloc	1.1	4
77	Mechanistic Role of Two-State Reactivity in a Molecular MoS₂ Edge-Site Analogue for Hydrogen Evolution Electrocatalysis. Inorganic Chemistry, 2018, 57, 9167-9174.	1.9	4
78	Lanthanide Oxides: From Diatomics to High-Spin, Strongly Correlated Homo- and Heterometallic Clusters. Journal of Physical Chemistry A, 2021, 125, 6315-6331.	1.1	3
79	Identification of Isoprene Oxidation Reaction Products via Anion Photoelectron Spectroscopy. Journal of Physical Chemistry A, 2021, 125, 10089-10102.	1.1	3
80	Identification of Stable Perfluorocarbons Formed by Hyperthermal Decomposition of Graphite Fluoride Using Anion Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2022, 126, 9965-9978.	1.5	3
81	Evidence of CF₂ Loss from Fluorine-Rich Cluster Anions Generated from Laser Ablation of Graphite Fluoride. Journal of Physical Chemistry A, 2018, 122, 9894-9900.	1.1	2
82	Synthesis and Laser Ablation Mass Spectrometry of Nitrogen-Doped Carbon Materials. Journal of Physical Chemistry C, 2021, 125, 1570-1577.	1.5	1
83	Vibrationally resolved photoelectron spectrum of ZnBrâ^'. Journal of Molecular Spectroscopy, 2019, 357, 38-40.	0.4	0