

J Mathias Weber

List of Publications by Year in descending order

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97
papers

2,915
citations

109321

35
h-index

197818

49
g-index

103
all docs

103
docs citations

103
times ranked

1728
citing authors

#	ARTICLE	IF	CITATIONS
1	Isolating the Spectroscopic Signature of a Hydration Shell With the Use of Clusters: Superoxide Tetrahydrate. <i>Science</i> , 2000, 287, 2461-2463.	12.6	157
2	Vibrational resonance and threshold effects in inelastic electron collisions with methyl iodide molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1999, 32, 2153-2171.	1.5	99
3	Hydration of a structured excess charge distribution: Infrared spectroscopy of the $O_2^{\bullet-} \cdots (H_2O)_n$, $n = 1, 2, 3, 4, 5$ clusters. <i>Journal of Chemical Physics</i> , 2001, 114, 2698-2706.	3.0	93
4	Solvent-Driven Reductive Activation of Carbon Dioxide by Gold Anions. <i>Journal of the American Chemical Society</i> , 2012, 134, 18804-18808.	13.7	85
5	Aromatic Molecules in Anion Recognition: A Electrostatics versus H-Bonding. <i>Journal of the American Chemical Society</i> , 2007, 129, 13022-13026.	13.7	80
6	The interaction of negative charge with carbon dioxide – insight into solvation, speciation and reductive activation from cluster studies. <i>International Reviews in Physical Chemistry</i> , 2014, 33, 489-519.	2.3	80
7	Infrared Signatures of a Water Molecule Attached to Triatomic Domains of Molecular Anions: Evolution of the H-bonding Configuration with Domain Length. <i>Journal of Physical Chemistry A</i> , 2003, 107, 6527-6532.	2.5	74
8	Laser Photoelectron Attachment to Molecules in a Skimmed Supersonic Beam: Diagnostics of Weak Electric Fields and Attachment Cross Sections Down to 20 meV. <i>Physical Review Letters</i> , 1998, 81, 778-781.	7.8	71
9	Solvent-Mediated Reduction of Carbon Dioxide in Anionic Complexes with Silver Atoms. <i>Journal of Physical Chemistry A</i> , 2013, 117, 10764-10771.	2.5	69
10	Characterization of Intermediate Oxidation States in CO_2 Activation. <i>Annual Review of Physical Chemistry</i> , 2018, 69, 231-252.	10.8	65
11	Infrared Spectra and Structures of Anionic Complexes of Cobalt with Carbon Dioxide Ligands. <i>Journal of Physical Chemistry A</i> , 2014, 118, 4056-4062.	2.5	62
12	An Infrared Investigation of the $(CO_2)_n$ -Clusters: A Core Ion Switching from Both the Ion and Solvent Perspectives. <i>Journal of Physical Chemistry A</i> , 2005, 109, 3146-3152.	2.5	60
13	The infrared spectrum of $Au^+ \cdots CO_2$. <i>Journal of Chemical Physics</i> , 2005, 122, 154301.	3.0	56
14	Structural Diversity of Copper CO_2 Complexes: Infrared Spectra and Structures of $[Cu(CO_2)_n]^-$ Clusters. <i>Journal of Physical Chemistry A</i> , 2014, 118, 10246-10251.	2.5	56
15	Interaction of Nickel with Carbon Dioxide in $[Ni(CO_2)_n]^-$ Clusters Studied by Infrared Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2014, 118, 8753-8757.	2.5	52
16	Electron Autodetachment from Isolated Nickel and Copper Phthalocyanine Tetrasulfonate Tetraanions: A Isomer Specific Rates. <i>Journal of Physical Chemistry A</i> , 2003, 107, 794-803.	2.5	51
17	Nuclear-Excited Feshbach Resonances in Electron Attachment to Molecular Clusters. <i>Physical Review Letters</i> , 1999, 82, 516-519.	7.8	50
18	Photoelectron Spectroscopy of $C_8H_4^{2-}$ Dianions. <i>Physical Review Letters</i> , 2003, 91, 113006.	7.8	50

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19	Formation of small water cluster anions by attachment of very slow electrons at high resolution. <i>European Physical Journal D</i> , 1999, 7, 587-594.	1.3	49
20	Solvent-Driven Reductive Activation of CO ₂ by Bismuth: Switching from Metalloformate Complexes to Oxalate Products. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 15171-15174.	13.8	49
21	Electronic photodissociation spectroscopy of Au ₄ +Ar _n , n=0-4: Experiment and theory. <i>Journal of Chemical Physics</i> , 2003, 119, 3699-3710.	3.0	48
22	Rydberg electron transfer to C ₆₀ and C ₇₀ . <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1996, 37, 351-357.	1.0	47
23	Photoelectron Spectroscopy of Isolated Multiply Negatively Charged Oligonucleotides. <i>Journal of the American Chemical Society</i> , 2004, 126, 8585-8589.	13.7	47
24	Low-energy photoelectron imaging spectroscopy of nitromethane anions: Electron affinity, vibrational features, anisotropies, and the dipole-bound state. <i>Journal of Chemical Physics</i> , 2009, 130, 074307.	3.0	47
25	Unusual hydrogen bonding behavior in binary complexes of coinage metal anions with water. <i>Journal of Chemical Physics</i> , 2005, 123, 084307.	3.0	46
26	Observation of resonant two-photon photodetachment of water cluster anions via femtosecond photoelectron spectroscopy. <i>Chemical Physics Letters</i> , 2001, 339, 337-342.	2.6	45
27	Photodamage to isolated mononucleotides: photodissociation spectra and fragment channels. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 1740.	2.8	44
28	Infrared spectra of X ⁻ +CO ₂ +Ar cluster anions (X=Cl,Br,I). <i>Journal of Chemical Physics</i> , 2004, 120, 10056-10061.	3.0	41
29	Pressure Response of Photoluminescence in Cesium Lead Iodide Perovskite Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2018, 122, 11024-11030.	3.1	41
30	Vibrational Feshbach resonances in electron attachment to carbon dioxide clusters. <i>European Physical Journal D</i> , 2000, 12, 125-131.	1.3	40
31	Electronically excited states and visible region photodissociation spectroscopy of Au _m +Ar _n clusters (m=7-9): Molecular dimensionality transition?. <i>Journal of Chemical Physics</i> , 2008, 128, 114312.	3.0	40
32	Photoelectron spectroscopy of fullerene dianions C ₇₆ 2 ⁻ , C ₇₈ 2 ⁻ , and C ₈₄ 2 ⁻ . <i>Journal of Chemical Physics</i> , 2005, 122, 094321.	3.0	39
33	Vibrational Autodetachment: Intramolecular Vibrational Relaxation Translated into Electronic Motion. <i>Journal of Physical Chemistry A</i> , 2010, 114, 4017-4030.	2.5	39
34	The infrared predissociation spectra of Cl ⁻ +H ₂ O+Ar (n=1-5): experimental determination of the influence of Ar solvent atoms. <i>Chemical Physics Letters</i> , 2000, 327, 1-6.	2.6	37
35	Vibrational Spectroscopy of Nitroalkane Chains Using Electron Autodetachment and Ar Predissociation. <i>Journal of Physical Chemistry A</i> , 2008, 112, 7498-7506.	2.5	37
36	High resolution study of anion formation in low-energy electron attachment to SF ₆ molecules in a seeded supersonic beam. <i>European Physical Journal D</i> , 2005, 35, 177-191.	1.3	36

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37	Size-Dependent Pressure-Response of the Photoluminescence of CsPbBr ₃ Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 1975-1980.	4.6	35
38	Penning ionization of C60 and C70. <i>Chemical Physics</i> , 1998, 239, 271-286.	1.9	34
39	Vibrational Feshbach resonances in electron attachment to nitrous oxide clusters: decay into heterogeneous and homogeneous cluster anions. <i>Chemical Physics Letters</i> , 2000, 325, 345-353.	2.6	33
40	Ligand influence on the electronic spectra of monocationic copper-bipyridine complexes. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 31938-31946.	2.8	32
41	Argon predissociation and electron autodetachment spectroscopy of size-selected CH3NO2 ⁺ Ar _n clusters. <i>Journal of Chemical Physics</i> , 2001, 115, 10718-10723.	3.0	31
42	Structural Motifs of [Fe(CO) ₂ n] ⁺ Clusters (n = 3-7). <i>Journal of Physical Chemistry A</i> , 2017, 121, 4132-4138.	2.5	25
43	UV Spectra of Tris(2,2'-bipyridine)M(II) Complex Ions in Vacuo (M = Mn, Fe, Co, Ni, Cu, Zn). <i>Inorganic Chemistry</i> , 2016, 55, 11937-11943.	4.0	24
44	Interaction of CO ₂ with Atomic Manganese in the Presence of an Excess Negative Charge Probed by Infrared Spectroscopy of [Mn(CO) ₂] _n ⁻ Clusters. <i>Journal of Physical Chemistry A</i> , 2017, 121, 7534-7542.	2.5	24
45	Cryogenic Ion Spectroscopy of the Green Fluorescent Protein Chromophore in Vacuo. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 7817-7822.	4.6	24
46	Photodetachment spectroscopy of PtBr ₄ ⁻ : Probing the Coulomb barrier of a doubly charged anion. <i>Journal of Chemical Physics</i> , 2005, 123, 224308.	3.0	23
47	The electronic spectrum of cryogenic ruthenium-tris-bipyridine dications in vacuo. <i>Journal of Chemical Physics</i> , 2016, 145, 024304.	3.0	23
48	Odd Rydberg spectrum of 40Ar(I): high-resolution laser spectroscopy and multichannel quantum defect analysis of the <i>n</i> = 2 and 3 levels. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1999, 32, 2381-2398.	1.5	22
49	Effects of solvation on dissociative electron attachment to methyl iodide clusters. <i>European Physical Journal D</i> , 2000, 11, 247-256.	1.3	22
50	High-resolution measurement and quantum-defect analysis for the Ne nd' J= 1, 2 and 3 autoionizing resonances. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1994, 27, 4897-4907.	1.5	21
51	A pulsed ion source for the preparation of metal containing cluster anions using supersonic entrainment of laser vaporized metal. <i>Review of Scientific Instruments</i> , 2005, 76, 043301.	1.3	20
52	Infrared spectroscopy of anionic hydrated fluorobenzenes. <i>Journal of Chemical Physics</i> , 2007, 127, 114311.	3.0	20
53	Titanium Insertion into CO Bonds in Anionic Ti(CO) ₂ Complexes. <i>Journal of Physical Chemistry A</i> , 2018, 122, 2983-2991.	2.5	20
54	Structures of [CoO(CO) ₂] _n ⁺ and [NiO(CO) ₂] _n ⁺ Clusters Studied by Infrared Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2015, 119, 843-850.	2.5	19

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55	Electronic photodissociation spectra and decay pathways of gas-phase IrBr_6^{2-} . <i>Journal of Chemical Physics</i> , 2009, 131, 194309.	3.0	18
56	Pressure-Induced Changes in the Fluorescence Behavior of Red Fluorescent Proteins. <i>Journal of Physical Chemistry B</i> , 2012, 116, 10311-10316.	2.6	17
57	Mass spectrometry, photoelectron spectroscopy, and quantum chemical studies of fluorofullerene dianions. <i>International Journal of Mass Spectrometry</i> , 2005, 243, 223-230.	1.5	16
58	On the Photoabsorption by Permanganate Ions in Vacuo and the Role of a Single Water Molecule. <i>New Experimental Benchmarks for Electronic Structure Theory. ChemPhysChem</i> , 2013, 14, 1133-1137.	2.1	16
59	Vibrational Autodetachment from Anionic Nitroalkane Chains: From Molecular Signatures to Thermionic Emission. <i>Journal of Physical Chemistry A</i> , 2019, 123, 8562-8570.	2.5	16
60	Microhydration of Nitromethane Anions from Both a Solute and Solvent Perspective. <i>Journal of Physical Chemistry A</i> , 2010, 114, 8933-8938.	2.5	15
61	Energy broadening due to photoion space charge in a high resolution laser photoelectron source. <i>Review of Scientific Instruments</i> , 2001, 72, 4098-4105.	1.3	14
62	Infrared spectra of $\text{O}_2^{\bullet-}(\text{CO}_2)_n$ clusters ($n=1-6$): Asymmetric docking at the $\tilde{\nu}^*$ orbital. <i>Journal of Chemical Physics</i> , 2005, 123, 074316.	3.0	14
63	Electronic Spectra of Tris(2,2'-bipyridine)-M(II) Complex Ions in Vacuo (M = Fe and Os). <i>Inorganic Chemistry</i> , 2017, 56, 7029-7037.	4.0	14
64	Interactions of Molecular Titanium Oxides TiO_x ($x = 1-3$) with Carbon Dioxide in Cluster Anions. <i>Journal of Physical Chemistry A</i> , 2018, 122, 6909-6917.	2.5	13
65	UV-photodissociation of non-cyclic and cyclic mononucleotides. <i>International Journal of Mass Spectrometry</i> , 2011, 303, 129-136.	1.5	12
66	Electronic structure and UV spectrum of hexachloroplatinate dianions in vacuo. <i>Journal of Chemical Physics</i> , 2013, 139, 194310.	3.0	12
67	Gas-phase spectroscopy of singly reduced tris(bipyridine)ruthenium ions, $\text{Ru}(\text{bipy})_3^{+}$. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 5561-5564.	2.8	12
68	Gas-Phase Experiments on Au(III) Photochemistry. <i>Journal of Physical Chemistry A</i> , 2011, 115, 3006-3015.	2.5	11
69	Hydration of a Binding Site with Restricted Solvent Access: Solvatochromic Shift of the Electronic Spectrum of a Ruthenium Polypyridine Complex, One Molecule at a Time. <i>Journal of Physical Chemistry A</i> , 2016, 120, 7650-7658.	2.5	11
70	Infrared Photodissociation Spectra of $[\text{Sn}(\text{CO})_2]_n^+$ Cluster Ions. <i>Journal of Physical Chemistry A</i> , 2018, 122, 3772-3779.	2.5	11
71	Theoretical and infrared spectroscopic investigation of the $\text{O}_2^{\bullet-}$ benzene and $\text{O}_4^{\bullet-}$ benzene complexes. <i>Journal of Chemical Physics</i> , 2007, 127, 084319.	3.0	10
72	Infrared spectra of $\text{SF}_6(\text{H}_2\text{O})_n$ ($n=1-3$): Incipient reaction and delayed onset of water network formation. <i>Journal of Chemical Physics</i> , 2007, 127, 244310.	3.0	10

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73	Infrared spectroscopy of hydrated naphthalene cluster anions. <i>Journal of Chemical Physics</i> , 2012, 137, 104303.	3.0	10
74	Absorption Spectrum of a Ru(II)-Aquo Complex in Vacuo: Resolving Individual Charge-Transfer Transitions. <i>Journal of Physical Chemistry A</i> , 2015, 119, 11509-11513.	2.5	9
75	Ligand Influence on the Electronic Spectra of Dicationic Ruthenium-Bipyridine-Terpyridine Complexes. <i>Journal of Physical Chemistry A</i> , 2016, 120, 2350-2356.	2.5	9
76	Photoelectron spectroscopy of 1-nitropropane and 1-nitrobutane anions. <i>Journal of Chemical Physics</i> , 2012, 136, 064307.	3.0	8
77	Enhancement of infrared activity by moving electrons through bonds – The case of CO ₂ anion and carboxylate. <i>Chemical Physics Letters</i> , 2017, 683, 586-590.	2.6	8
78	Argon Cluster-Mediated Trapping and Vibrational Spectroscopic Characterization of an OH- \dot{A} -HCH ₂ -Intermediate in the O ⁻ + CH ₄ Reaction. <i>Journal of Physical Chemistry A</i> , 2004, 108, 10116-10121.	2.5	7
79	Infrared spectra of SF ₆ ⁻ ...HCOOH...Ar ⁿ⁻ (n=2): Infrared triggered reaction and Ar-induced reactive inhibition. <i>Journal of Chemical Physics</i> , 2009, 130, 174302.	3.0	7
80	Solvensinduzierte reduktive Aktivierung von CO ₂ durch Bismut und Änderung des Reaktionsprodukts von Metalloformiat nach Oxalat. <i>Angewandte Chemie</i> , 2016, 128, 15396-15399.	2.0	7
81	Intrinsic photophysics of nitrophenolate ions studied by cryogenic ion spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 28535-28543.	2.8	7
82	Probing the Microsolvation Environment of the Green Fluorescent Protein Chromophore in Vacuo. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 1940-1946.	4.6	7
83	Intrinsic Structure and Electronic Spectrum of Deprotonated Biliverdin: Cryogenic Ion Spectroscopy and Ion Mobility. <i>Journal of the American Chemical Society</i> , 2021, 143, 17778-17785.	13.7	7
84	Photodissociation Spectroscopy of the Anionic Copper Nitrate Association Complex Cu(NO ₃) ₃ ⁻ . <i>Journal of Physical Chemistry A</i> , 2014, 118, 9687-9691.	2.5	6
85	Spectroscopy of Resonant Intermediate States for Triplet-Triplet Annihilation Upconversion in Crystalline Rubrene: Radical Ions as Sensitizers. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 7212-7217.	4.6	6
86	Intrinsic electronic spectra of cryogenically prepared protoporphyrin IX ions in vacuo – deprotonation-induced Stark shifts. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 20295-20302.	2.8	6
87	Infrared spectra of HC ₂ ⁺ (C ₂ H ₂) _n and O ₂ ⁺ (C ₂ H ₂) _n clusters (n=2-5). <i>Journal of Chemical Physics</i> , 2006, 125, 094307.	3.0	5
88	Photoelectron imaging spectroscopy of nitroethane anions. <i>Journal of Chemical Physics</i> , 2011, 134, 244301.	3.0	5
89	Infrared spectroscopic studies on the cluster size dependence of charge carrier structure in nitrous oxide cluster anions. <i>Journal of Chemical Physics</i> , 2016, 144, 104302.	3.0	5
90	Spectroscopy and Photochemistry of Sodium Chromate Ester Cluster Ions. <i>Journal of Physical Chemistry A</i> , 2013, 117, 2144-2151.	2.5	4

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91	Tag-Free, Temperature Dependent Infrared Spectra of the GFP Chromophore: Revisiting the Question of Isomerism. <i>Journal of Physical Chemistry A</i> , 2020, 124, 7827-7831.	2.5	3
92	Effects of Formate Binding to a Bipyridine-Based Cobalt-4N Complex. <i>Journal of Physical Chemistry A</i> , 2021, 125, 7297-7302.	2.5	3
93	Vibrationally induced charge transfer in a bimolecular model complex in vacuo. <i>Journal of Chemical Physics</i> , 2013, 138, 224301.	3.0	2
94	Heavy atom vibrational modes and low-energy vibrational autodetachment in nitromethane anions. <i>Journal of Chemical Physics</i> , 2015, 142, 234304.	3.0	2
95	UV Photophysics of DNA and RNA Nucleotides In Vacuo: Dissociation Channels, Time Scales, and Electronic Spectra. <i>Physical Chemistry in Action</i> , 2013, , 181-207.	0.6	1
96	Spectroscopy and Fragmentation of Undercoordinated Bromoiridates. <i>Journal of Physical Chemistry A</i> , 2011, 115, 13482-13488.	2.5	0
97	Innentitelbild: Solvens-induzierte reduktive Aktivierung von CO ₂ durch Bismut und Änderung des Reaktionsprodukts von Metalloformiat nach Oxalat (<i>Angew. Chem.</i> 48/2016). <i>Angewandte Chemie</i> , 2016, 128, 15098-15098.	2.0	0