

Thomas Weiske

List of Publications by Year in descending order

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75
papers

3,217
citations

126907

33
h-index

155660

55
g-index

82
all docs

82
docs citations

82
times ranked

1511
citing authors

#	ARTICLE	IF	CITATIONS
1	Endohedral Cluster Compounds: Inclusion of Helium within C ₆₀ and C ₇₀ through Collision Experiments. <i>Angewandte Chemie International Edition in English</i> , 1991, 30, 884-886.	4.4	291
2	Dissociation behavior of Cu(urea) ⁺ complexes generated by electrospray ionization. <i>International Journal of Mass Spectrometry</i> , 2002, 219, 729-738.	1.5	150
3	Transfer Hydrogenation and Deuteration of Buckminsterfullerene C ₆₀ by 9,10-Dihydroanthracene and 9,9a,10,10a-tetrahydroanthracene. <i>Angewandte Chemie International Edition in English</i> , 1993, 32, 584-586.	4.4	136
4	Generation and characterization of neutral and cationic 3-sila-cyclopropenylidene in the gas phase. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1991, 107, 369-376.	1.8	134
5	Direct Conversion of Methane into Formaldehyde Mediated by [Al ₂ O ₃] ⁺ at Room Temperature. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 3703-3707.	13.8	98
6	The Neutralization of HeC ₆₀ ⁺ in the Gas Phase: Compelling Evidence for the Existence of an Endohedral Structure for He@C ₆₀ . <i>Angewandte Chemie International Edition in English</i> , 1992, 31, 183-185.	4.4	96
7	Electrostatic and Charge-Induced Methane Activation by a Concerted Double C-H Bond Insertion. <i>Journal of the American Chemical Society</i> , 2017, 139, 1684-1689.	13.7	96
8	Unexpected Mechanistic Variants in the Thermal Gas-Phase Activation of Methane. <i>Organometallics</i> , 2017, 36, 8-17.	2.3	91
9	Electronic Origins of the Variable Efficiency of Room-Temperature Methane Activation by Homo- and Heteronuclear Cluster Oxide Cations [XYO ₂] ⁺ (X, Y = Al, Si, Mg): Competition between Proton-Coupled Electron Transfer and Hydrogen-Atom Transfer. <i>Journal of the American Chemical Society</i> , 2016, 138, 7973-7981.	13.7	90
10	Formation of endohedral carbon-cluster noble-gas compounds with high-energy bimolecular reactions: C ₆₀ He _n ⁺ (n=1,2). <i>Chemical Physics Letters</i> , 1991, 186, 459-462.	2.6	86
11	Ta ₂ ⁺ -mediated ammonia synthesis from N ₂ and H ₂ at ambient temperature. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 11680-11687.	7.1	84
12	Oxidative Degradation of Small Cationic Vanadium Clusters by Molecular Oxygen: On the Way from V _n ⁺ (n = 2-5) to VO _m ⁺ (m = 1, 2). <i>Journal of Physical Chemistry A</i> , 2003, 107, 2855-2859.	2.5	83
13	Injection of helium atoms into doubly and triply charged carbon (C ₆₀) cations. <i>The Journal of Physical Chemistry</i> , 1991, 95, 8451-8452.	2.9	79
14	Endohedral fullerene-noble gas clusters formed with high-energy bimolecular reactions of C _x ⁿ⁺ (x = 1-10) and noble gas atoms. <i>Journal of Physical Chemistry A</i> , 1991, 95, 8453-8457.	1.8	77
15	Structure of the Oxygen-Rich Cluster Cation Al ₂ O ₇ ⁺ and its Reactivity toward Methane and Water. <i>Journal of the American Chemical Society</i> , 2011, 133, 16930-16937.	13.7	73
16	Generation of the distonic ion CH ₂ NH ₃ ^{•+} : nucleophilic substitution of the ketene cation radical by ammonia and unimolecular decarbonylation of ionized acetamide. <i>Journal of the American Chemical Society</i> , 1987, 109, 4810-4818.	13.7	70
17	Catalytic Redox Reactions in the CO/N ₂ O System Mediated by the Bimetallic Oxide Cluster Couple AlVO ₃ ⁺ /AlVO ₄ ⁺ . <i>Angewandte Chemie - International Edition</i> , 2011, 50, 12351-12354.	13.8	66
18	Combined ab initio MO and experimental studies on unimolecular hydrogen fluoride loss from protonated fluorobenzene in the gas phase. <i>Journal of the American Chemical Society</i> , 1993, 115, 2015-2020.	13.7	63

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19	Complete cleavage of the N≡N triple bond by Ta ₂ N ⁺ via degenerate ligand exchange at ambient temperature: A perfect catalytic cycle. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21416-21420.	7.1	60
20	Hidden Hydride Transfer as a Decisive Mechanistic Step in the Reactions of the Unligated Gold Carbide [AuC] ⁺ with Methane under Ambient Conditions. Angewandte Chemie - International Edition, 2016, 55, 13072-13075.	13.8	54
21	Hydroxyacetylene: Generation and Characterization of the Neutral Molecule, Radical Cation and Dication in the Gas Phase. Angewandte Chemie International Edition in English, 1986, 25, 282-284.	4.4	52
22	Study of ion structures produced by the reaction of 2-propyl cations with water and methanol; covalently bound v. Hydrogen-bridged adducts. Organic Mass Spectrometry, 1986, 21, 665-671.	1.3	48
23	Ab initio MO calculation on the energy barrier for the penetration of a benzene ring by a helium atom. Model studies for the formation of endohedral He@C ₆₀ ⁺ complexes by high-energy bimolecular reactions. Chemical Physics Letters, 1992, 193, 97-100.	2.6	46
24	Experiments aimed at generating the long-sought-after ethylenedione (O=C=C=O) by neutralization-reionization mass spectrometry. International Journal of Mass Spectrometry and Ion Processes, 1993, 125, 75-79.	1.8	42
25	Gas-Phase Ion Chemistry of Dimethyl Peroxide with the Bare Transition-Metal Cations Cr ⁺ , Mn ⁺ , Fe ⁺ , and Co ⁺ . Journal of the American Chemical Society, 1995, 117, 7711-7718.	13.7	40
26	Intrinsic Reactivity of Diatomic 3d Transition-Metal Carbides in the Thermal Activation of Methane: Striking Electronic Structure Effects. Journal of the American Chemical Society, 2019, 141, 599-610.	13.7	39
27	Intrinsic alkyl radical properties inferred from the study of unimolecular dissociations of gaseous carboxylic acid cation radicals. Tetrahedron, 1986, 42, 6245-6251.	1.9	38
28	Experimental evidence for the existence of the protonitronium dication (HONO ₂ ²⁺) in the gas phase and ab initio molecular orbital calculations of its potential energy surface. Journal of the American Chemical Society, 1993, 115, 6312-6316.	13.7	36
29	Transferhydrierung und -deuterierung von Buckminsterfulleren C ₆₀ durch 9,10-Dihydroanthracen bzw. 9,10-D ² ,10,10-D ² [D ₄]Dihydroanthracen. Angewandte Chemie, 1993, 105, 609-611.	3.0	34
30	Structural Aspects of Long-Lived C ₇ H ₈ ²⁺ Dications Generated by the Electron Ionization of Toluene. Journal of Physical Chemistry A, 2006, 110, 2970-2978.	2.5	34
31	Application of thermal kinetics to small carbon ion clusters. The Journal of Physical Chemistry, 1993, 97, 6592-6597.	2.9	33
32	Beweis der Existenz einer endohedralen He@C ₆₀ ⁺ -Struktur durch Gasphasenneutralisation von HeC ⁺ ₆₀ . Angewandte Chemie, 1992, 104, 242-244.	2.0	32
33	The neutralization-reionization mass spectrum of C ₆₀ . International Journal of Mass Spectrometry and Ion Processes, 1992, 113, R23-R29.	1.8	31
34	On divorcing isomers, dissecting reactivity, and resolving mechanisms of propane CH and aryl CX (X=halogen) bond activations mediated by a ligated copper(III) oxo complex. Chemical Physics Letters, 2014, 608, 408-424.	2.6	30
35	Thermal Methane Activation by a Binary V=O-Nb Transition-Metal Oxide Cluster Cation: A Further Example for the Crucial Role of Oxygen-Centered Radicals. Chemistry - A European Journal, 2013, 19, 11496-11501.	3.3	29
36	Aminoacetylene and Its Mono- and Dication ⁺ Identification of Potentially Interstellar Molecules. Angewandte Chemie International Edition in English, 1986, 25, 827-828.	4.4	28

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37	High-energy collisions of Kr@C60+ with helium. Evidence for the formation of HeKr@C60+. Chemical Physics Letters, 1994, 227, 87-90.	2.6	27
38	The CH ₂ ⁺ dication: Metastable or not? A combined theoretical and experimental investigation. Chemical Physics Letters, 1987, 142, 147-152.	2.6	24
39	Thermal Ethane Activation by Bare [V ₂ O ₅] ⁺ and [Nb ₂ O ₅] ⁺ Cluster Cations: on the Origin of Their Different Reactivities. Chemistry - A European Journal, 2014, 20, 6672-6677.	3.3	24
40	On the detailed pathway of the methyl loss from ionized methyl isobutyrate in the gas phase. Journal of the American Chemical Society, 1984, 106, 1167-1168.	13.7	23
41	Activation of carbon-hydrogen and carbon-carbon bonds of 4-octyne in the gas phase by bare transition-metal ions M ⁺ (M = chromium, manganese, iron). Organometallics, 1988, 7, 898-902.	2.3	23
42	Oriented external electric fields as mimics for probing the role of metal ions and ligands in the thermal gas-phase activation of methane. Dalton Transactions, 2018, 47, 15271-15277.	3.3	23
43	Reactivity of CH ₂ XCH ₃ (X = Cl, Br) with Electrophiles and Nucleophiles in the Gas Phase, a Fourier Transform Ion Cyclotron Resonance Investigation. Angewandte Chemie International Edition in English, 1984, 23, 733-734.	4.4	22
44	High-energy collisions of carbon cluster cations with helium: experimental support for the existence of imperfect fullerene structures. The Journal of Physical Chemistry, 1993, 97, 20-22.	2.9	22
45	Revisiting the Mechanism of the Unimolecular Fragmentation of Protonated Fluorobenzene. Journal of Physical Chemistry A, 1999, 103, 4609-4620.	2.5	22
46	Hidden Hydride Transfer as a Decisive Mechanistic Step in the Reactions of the Unligated Gold Carbide [AuC] ⁺ with Methane under Ambient Conditions. Angewandte Chemie, 2016, 128, 13266-13269.	2.0	22
47	A Reaction-Induced Localization of Spin Density Enables Thermal C-H Bond Activation of Methane by Pristine FeC ₄ ⁺ . Chemistry - A European Journal, 2019, 25, 12940-12945.	3.3	22
48	Cl ₂ C?Cl?Cl?, Cl ₂ C?Cl?Br?, and Br ₂ C?Br?Cl? by Gas-Phase Decarbonylation of CX ₃ COY?. Angewandte Chemie International Edition in English, 1985, 24, 869-870.	4.4	19
49	Sequential Insertion of ³ He and ⁴ He in C ₆₀ ^{TM+} . Angewandte Chemie International Edition in English, 1992, 31, 605-606.	4.4	19
50	Dissociation behavior of ionized valeramide. International Journal of Mass Spectrometry, 2002, 214, 155-170.	1.5	14
51	Effect of Adduct Formation with Molecular Nitrogen on the Measured Collisional Cross Sections of Transition Metal-1,10-Phenanthroline Complexes in Traveling Wave Ion-Mobility Spectrometry: N ₂ Is Not Always an "Inert" Buffer Gas. Analytical Chemistry, 2015, 87, 9769-9776.	6.5	14
52	Cationic and neutral nitrosamide: viable molecules in the dilute gas phase. Chemical Physics Letters, 1992, 199, 643-647.	2.6	13
53	Thermal O-H Bond Activation of Water As Mediated by Heteronuclear [Al ₂ Mg ₂ O ₅] ⁺ : Evidence for Oxygen-Atom Scrambling. Journal of the American Chemical Society, 2018, 140, 9275-9281.	13.7	13
54	Gas-phase dissociations of ionized methyl isopropyl ether. A case for ion / neutral complexes?. International Journal of Mass Spectrometry and Ion Processes, 1987, 76, 117-119.	1.8	12

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55	High-energy collisions of organofullerene cations with helium. Ligand evaporation caused by encapsulation of the noble gas atom. <i>Chemical Physics Letters</i> , 1992, 199, 640-642.	2.6	12
56	Chemical signatures of Buckminsterfullerene, C ₆₀ , under chemical ionization conditions. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1992, 116, R13-R21.	1.8	11
57	The CCl ₄ dication revisited. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1986, 72, 313-315.	1.8	10
58	On the Origin of Room-temperature, Au ⁺ -mediated Coupling of a Methylene Ligand with H ₂ . Implications for the Mechanism of Methane Dehydrogenation.. <i>ChemistrySelect</i> , 2016, 1, 444-447.	1.5	10
59	Counterintuitive Gas-Phase Reactivities of [V ₂] ⁺ and [V ₂ O] ⁺ towards CO ₂ Reduction: Insight from Electronic Structure Calculations. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 12308-12314.	13.8	10
60	The mechanism of methyl loss from ionized methoxypentamethylsilane: anchimeric assistance versus direct bond cleavage.. <i>Journal of Organometallic Chemistry</i> , 1987, 336, 105-113.	1.8	9
61	Sequentieller Einbau von ³ He und ⁴ He in C. <i>Angewandte Chemie</i> , 1992, 104, 639-640.	2.0	8
62	CNH ₂ ⁺ : Laboratory generation of a proposed interstellar species. <i>Chemical Physics Letters</i> , 1986, 132, 69-71.	2.6	7
63	On the Crucial Role of Isolated Electronic States in the Thermal Reaction of ReC ⁺ with Dihydrogen. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 9370-9376.	13.8	7
64	Methyl-Eliminierung aus dem metastabilen Homoadamantan-Radikalkation / Methyl Loss from Metastable Homoadamantane Cation Radical. <i>Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences</i> , 1980, 35, 207-211.	0.7	5
65	Stereoisomeric fragment ions arising from decomposition of enol cation radicals of different internal energy content. <i>Organic Mass Spectrometry</i> , 1984, 19, 617-622.	1.3	5
66	Reassessment of the Mechanisms of Thermal C-H Bond Activation of Methane by Cationic Magnesium Oxides: A Critical Evaluation of the Suitability of Different Density Functionals. <i>ChemPhysChem</i> , 2019, 20, 1812-1821.	2.1	5
67	Massenspektrometrischer Nachweis von Aminoacetylen sowie seinem Mono- und Dikation. <i>Angewandte Chemie</i> , 1986, 98, 834-835.	2.0	3
68	On the Crucial Role of Isolated Electronic States in the Thermal Reaction of ReC ⁺ with Dihydrogen. <i>Angewandte Chemie</i> , 2020, 132, 9456-9462.	2.0	3
69	Revisiting the Intriguing Electronic Features of the BeOBeC Carbyne and Some Isomers: A Quantum-Chemical Assessment. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17261-17265.	13.8	2
70	Experiment and Theory Clarify: Sc ⁺ Receives One Oxygen Atom from SO ₂ to Form ScO ⁺ , which Proves to be a Catalyst for the Hidden Oxygen-Exchange with SO ₂ . <i>ChemPhysChem</i> , 2021, , .	2.1	2
71	Counterintuitive Gas-Phase Reactivities of [V ₂] ⁺ and [V ₂ O] ⁺ towards CO ₂ Reduction: Insight from Electronic Structure Calculations. <i>Angewandte Chemie</i> , 2020, 132, 12406-12412.	2.0	1
72	Oxidative Degradation of Small Cationic Vanadium Clusters by Molecular Oxygen: On the Way from V ⁿ⁺ (n = 2-5) to VO ^{m+} (m = 1, 2).. <i>ChemInform</i> , 2003, 34, no.	0.0	0

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73	Frontispiece: Counterintuitive GasPhase Reactivities of $[V_2]^{+}$ and $[V_2O]^{+}$ towards CO_2 Reduction: Insight from Electronic Structure Calculations. <i>Angewandte Chemie - International Edition</i> , 2020, 59, .	13.8	0
74	Frontispiz: Counterintuitive GasPhase Reactivities of $[V_2]^{+}$ and $[V_2O]^{+}$ towards CO_2 Reduction: Insight from Electronic Structure Calculations. <i>Angewandte Chemie</i> , 2020, 132, .	2.0	0
75	Revisiting the Intriguing Electronic Features of the BeOBeC Carbyne and Some Isomers: A QuantumChemical Assessment. <i>Angewandte Chemie</i> , 2020, 132, 17414-17418.	2.0	0