## Selective Activation of Alkanes by Gas-Phase Metal Ions

Chemical Reviews 110, 1170-1211 DOI: 10.1021/cr900183p

Citation Report

#	Article	IF	CITATIONS
1	Intramolecular Scrambling of Aryl Groups in Organopalladium Complexes [ArPd(PPh <sub>3</sub> ) <sub>2</sub> ] <sup>+</sup> : From Solution to the Gas Phase, Back Again, and Inâ€Between. Chemistry - an Asian Journal, 2010, 5, 1667-1676.	1.7	25
2	Reactions of H <sub>2</sub> , CH <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> , and C <sub>3</sub> H <sub>8</sub> with [(MgO) <sub><i>n</i></sub> ] <sup>+</sup> Clusters Studied by Density Functional Theory. ChemCatChem, 2010, 2, 819-826.	1.8	51
3	Thermal Activation of Methane by Diatomic Metal Oxide Radical Cations: PbO <sup>+â&lt;</sup> as One of the Missing Pieces. ChemCatChem, 2010, 2, 1391-1394.	1.8	30
4	Reversible Heterolytic Methane Activation of Metalâ€Free Closedâ€5hell Molecules: A Computational Proofâ€ofâ€Principle Study. European Journal of Inorganic Chemistry, 2010, 2010, 2254-2260.	1.0	35
5	Competitive Hydrogenâ€Atom Abstraction versus Oxygenâ€Atom and Electron Transfers in Gasâ€Phase Reactions of [X <sub>4</sub> O <sub>10</sub> ] <sup>.+</sup> (X=P, V) with C <sub>2</sub> H <sub>4</sub> . Chemistry - A European Journal, 2010, 16, 4452-4456.	1.7	43
6	Bonding in Cationic MCH <sub>2</sub> <sup>+</sup> (M=K–La, Hf–Rn): A Theoretical Study on Periodic Trends. Chemistry - A European Journal, 2010, 16, 5882-5888.	1.7	51
7	Conversion of Methane to Methanol: Nickel, Palladium, and Platinum (d <sup>9</sup> ) Cations as Catalysts for the Oxidation of Methane by Ozone at Room Temperature. Chemistry - A European Journal, 2010, 16, 11605-11610.	1.7	89
8	Hydrogenâ€Atom Abstraction from Methane by Stoichiometric Vanadium–Silicon Heteronuclear Oxide Cluster Cations. Chemistry - A European Journal, 2010, 16, 11463-11470.	1.7	83
10	Activation of Methane by Gaseous Metal Ions. Angewandte Chemie - International Edition, 2010, 49, 850-851.	7.2	34
11	Infrared spectra and density functional theory calculations for Mn+–(CH4)n (n=1–6) clusters. International Journal of Mass Spectrometry, 2010, 297, 46-54.	0.7	16
12	Unexpected μ-oxo five-member ring intermediates for oxygen atom transfer between osmium complexes. Journal of Coordination Chemistry, 2010, 63, 2846-2853.	0.8	0
13	Characterization of Mononuclear Oxygen-Centered Radical (O <sup>â^'</sup> <sup>•</sup> ) in Zr <sub>2</sub> O <sub>8</sub> <sup>â^'</sup> Cluster. Journal of Physical Chemistry A, 2010, 114, 10024-10027.	1.1	34
14	Experimental and Theoretical Study of the Reactions between Vanadiumâ^'Silicon Heteronuclear Oxide Cluster Anions with <i>n</i> -Butane. Journal of Physical Chemistry C, 2010, 114, 12271-12279.	1.5	83
15	Sulfur-Based Redox Reactions in Mo <sub>3</sub> S <sub>7</sub> <sup>4+</sup> and Mo <sub>3</sub> S <sub>4</sub> <sup>4+</sup> Clusters Bearing Halide and 1,2-Dithiolene Ligands: a Mass Spectrometric and Density Functional Theory Study. Inorganic Chemistry, 2010, 49, 8045-8055.	1.9	11
16	Carbonâ^'Carbon Coupling Reactions of Medium-Sized Nitrogen-Containing Dications. Journal of Physical Chemistry A, 2010, 114, 5989-5996.	1.1	15
17	Vibrational Spectroscopy and Theory of Fe <sup>+</sup> (CH <sub>4</sub> ) <sub><i>n</i></sub> ( <i>n</i> = 1â^'4). Journal of Physical Chemistry A, 2010, 114, 11322-11329.	1.1	30
18	Metal-dependent alternative activation of O–H and C–H bonds of methanol: on the formation and structure of "bare―[M,C,H3,O]+ complexes (M = Fe, Co, Ni) in the gas phase. Chemical Communications, 2010, 46, 1878-1880.	2.2	24
19	Activation of Methane by Zinc: Gas-Phase Synthesis, Structure, and Bonding of HZnCH <sub>3</sub> . Journal of the American Chemical Society, 2010, 132, 17186-17192.	6.6	35

#	Article	IF	CITATIONS
20	Selectivity enhancement in functionalization of C–H bonds: A review. Organic and Biomolecular Chemistry, 2010, 8, 4217.	1.5	198
21	Gas-phase reactions of doubly charged actinide cations with alkanes and alkenes—probing the chemical activity of 5f electrons from Th to Cm. Physical Chemistry Chemical Physics, 2011, 13, 18322.	1.3	12

Thermal Câ<sup>^</sup>H Bond Activation of Benzene, Toluene, and Methane with Cationic [M(X)(bipy)] + (M = Ni, Pd,) Tj ETQq0.0 0 rgBT/Overlock

23	Characterization and reactivity of oxygen-centred radicals over transition metal oxide clusters. Physical Chemistry Chemical Physics, 2011, 13, 1925.	1.3	157
24	Transmetalation of Methyl Groups Supported by Pt <sup>II</sup> –Au <sup>I</sup> Bonds in the Gas Phase, in Silico, and in Solution. Journal of the American Chemical Society, 2011, 133, 8914-8926.	6.6	54
25	Collision-Induced Dissociation and Density Functional Theory Studies of CO Adsorption over Zirconium Oxide Cluster Ions: Oxidative and Nonoxidative Adsorption. Journal of Physical Chemistry A, 2011, 115, 5238-5246.	1.1	51
26	Reactivity by Design—Metallaoxetanes as Centerpieces in Reaction Development. Chemical Reviews, 2011, 111, 2010-2047.	23.0	43
27	Comparative Study of Mono- and Dinuclear Complexes of Late 3d-Metal Chlorides with <i>N,N</i> -Dimethylformamide in the Gas phase. Inorganic Chemistry, 2011, 50, 771-782.	1.9	28
28	Gas-Phase Reactions of the Bare Th <sup>2+</sup> and U <sup>2+</sup> Ions with Small Alkanes, CH <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> , and C <sub>3</sub> H <sub>8</sub> : Experimental and Theoretical Study of Elementary Organoactinide Chemistry. Journal of the American Chemical Society, 2011, 133, 1955-1970.	6.6	49
29	Matrix Infrared Spectroscopic and Theoretical Investigations of Uranium Atom and Methanol Reaction Products. Inorganic Chemistry, 2011, 50, 7099-7105.	1.9	14
30	Temperature-Tunable Selective Methane Catalysis on Au <sub>2</sub> <sup>+</sup> : From Cryogenic Partial Oxidation Yielding Formaldehyde to Cold Ethylene Production. Journal of Physical Chemistry C, 2011, 115, 6788-6795.	1.5	57
31	DFT and CASPT2 Study on the Mechanism of Ethylene Dimerization over Cr(II)OH <sup>+</sup> Cation. Journal of Physical Chemistry A, 2011, 115, 8131-8141.	1.1	16
32	Gas-Phase Fragmentation of Deprotonated <i>p</i> -Hydroxyphenacyl Derivatives. Journal of Organic Chemistry, 2011, 76, 2180-2186.	1.7	16
33	Electronic structure and reactivity of a biradical cluster: Sc3O6â^'. Physical Chemistry Chemical Physics, 2011, 13, 10084.	1.3	32
34	Insight into Solution Chemistry from Gas-Phase Experimentsâ€. Organometallics, 2011, 30, 32-35.	1.1	60
35	Structure of the Oxygen-Rich Cluster Cation Al <sub>2</sub> O <sub>7</sub> <sup>+</sup> and its Reactivity toward Methane and Water. Journal of the American Chemical Society, 2011, 133, 16930-16937.	6.6	73
36	High Selectivity for Primary C–H Bond Cleavage of Propane σ-Complexes on the PdO(101) Surface. Journal of the American Chemical Society, 2011, 133, 16196-16200.	6.6	28
37	First Step in the Reaction of Zerovalent Iron with Water. Journal of Chemical Theory and Computation, 2011, 7, 2876-2885.	2.3	23

#	Article	IF	CITATIONS
38	Experimental and Theoretical Study of Hydrogen Atom Abstraction from <i>n</i> -Butane by Lanthanum Oxide Cluster Anions. Journal of Physical Chemistry A, 2011, 115, 10245-10250.	1.1	32
39	Experimental and Theoretical Study of the Reactions between Cerium Oxide Cluster Anions and Carbon Monoxide: Size-Dependent Reactivity of Ce <sub><i>n</i></sub> O <sub>2<i>n</i>+1</sub> <sup>–</sup> ( <i>n</i> = 1–21). Journal of Physical Chemistry C. 2011. 115. 13329-13337.	1.5	76
40	Manganese Alkane Complexes: An IR and NMR Spectroscopic Investigation. Journal of the American Chemical Society, 2011, 133, 2303-2310.	6.6	84
41	DFT studies for dehydrogenation of methane by gas-phase Ru+. Computational and Theoretical Chemistry, 2011, 977, 44-49.	1.1	11
42	Palladium-Catalyzed C–C Bond Formation of Arylhydrazines with Olefins via Carbon–Nitrogen Bond Cleavage. Organic Letters, 2011, 13, 6308-6311.	2.4	108
43	Investigation of Coordination of Mg(II) Cations to 2-Pyrimidinyloxy-N-Arylbenzylamines by Electrospray Mass Spectrometry: Insights for Mg(II) Catalyzed Smiles Rearrangement Reactions. European Journal of Mass Spectrometry, 2011, 17, 145-157.	0.5	5
44	Probing elementary steps of nickel-mediated bond activation in gas-phase reactions: Ligand- and cluster-size effects. Journal of Catalysis, 2011, 284, 126-137.	3.1	49
45	Theoretical study on the gas-phase reaction mechanism between rhodium monoxide cation and methane. Structural Chemistry, 2011, 22, 983-997.	1.0	6
46	Impurity Atoms on Small Transition Metal Clusters. Insights from Density Functional Model Studies. Topics in Catalysis, 2011, 54, 363-377.	1.3	8
47	Bonding in cationic MOH n + (MÂ=ÂKÂâ^'ÂLa, HfÂâr'ÂRn; nÂ=ÂO–2): DFT performances and periodic trends. Theoretical Chemistry Accounts, 2011, 129, 389-399.	0.5	40
48	Theoretical study of the gas-phase Fe+-mediated oxidation of ethane by N2O. Theoretical Chemistry Accounts, 2011, 128, 349-358.	0.5	8
49	Potential energy surfaces and mechanisms for activation of ethane by gas-phase Pt+: A density functional study. Chemical Physics Letters, 2011, 501, 554-561.	1.2	11
50	Studies of gasâ€phase reactions of cationic iron complexes of 2â€pyrimidinyloxyâ€ <i>N</i> â€arylbenzylamines by electrospray ionization tandem mass spectrometry. Rapid Communications in Mass Spectrometry, 2011, 25, 169-178.	0.7	8
51	Selective sp <sup>3</sup> C–H Bond Activation Based on a Carbocation Relay: Friedel–Crafts Reaction with Alkanes as the Alkylating Component. European Journal of Organic Chemistry, 2011, 2011, 264-270.	1.2	5
52	Theoretical study on the gasâ€phase reaction mechanism between palladium monoxide and methane. Journal of Computational Chemistry, 2011, 32, 3440-3455.	1.5	6
53	Darstellung, ReaktivitĤgegenļber Kohlenwasserstoffen und elektronische Struktur von heteronuclearen Vanadium-Phosphor-Sauerstoff-Clusterionen. Angewandte Chemie, 2011, 123, 1466-1470.	1.6	42
58	Generation, Reactivity Towards Hydrocarbons, and Electronic Structure of Heteronuclear Vanadium Phosphorous Oxygen Cluster Ions. Angewandte Chemie - International Edition, 2011, 50, 1430-1434.	7.2	73
59	Chemistry with Methane: Concepts Rather than Recipes. Angewandte Chemie - International Edition, 2011, 50, 10096-10115.	7.2	608

#	Article	IF	CITATIONS
60	Efficient and Selective Gasâ€Phase Monomethylation versus NH Bond Activation of Ammonia by "Bare― Zn(CH <sub>3</sub> ) <sup>+</sup> : Atomic Zinc as a Leaving Group in an S <sub>N</sub> 2 Reaction. Angewandte Chemie - International Edition, 2011, 50, 5387-5391.	7.2	25
61	Diatomic [CuO] <sup>+</sup> and Its Role in the Spinâ€Selective Hydrogen―and Oxygenâ€Atom Transfers in the Thermal Activation of Methane. Angewandte Chemie - International Edition, 2011, 50, 4966-4969.	7.2	156
62	Catalytic Redox Reactions in the CO/N <sub>2</sub> O System Mediated by the Bimetallic Oxideâ€Cluster Couple AlVO <sub>3</sub> <sup>+</sup> /AlVO <sub>4</sub> <sup>+</sup> . Angewandte Chemie - International Edition, 2011, 50, 12351-12354.	7.2	66
63	CH Activation on Aluminum–Vanadium Bimetallic Oxide Cluster Anions. Chemistry - A European Journal, 2011, 17, 3449-3457.	1.7	54
64	Directed, Remote Gasâ€Phase CH and CC Bond Activations by Metal Oxide Cations Anchored to a Nitrile Group. Chemistry - A European Journal, 2011, 17, 1783-1788.	1.7	18
65	Thermal Activation of Nັເ£ູiH Bonds by Transitionâ€metal Oxide Cations: Does a Hierarchy Exist in the First Row?. Chemistry - A European Journal, 2011, 17, 3886-3892.	1.7	15
66	Biomimetic Oxidation Reactions of a Naked Manganese(V)–Oxo Porphyrin Complex. Chemistry - A European Journal, 2011, 17, 12092-12100.	1.7	19
67	Thermal Activation of Methane and Ethene by Bare MO <sup>.+</sup> (M=Ge, Sn, and Pb): A Combined Theoretical/Experimental Study. Chemistry - A European Journal, 2011, 17, 9619-9625.	1.7	45
68	Theoretical investigation of thermal activation of methane by [Pd(H)(OH)]+. Computational and Theoretical Chemistry, 2011, 963, 470-474.	1.1	4
69	Neutralization–reionization study of the allyloxide anion. International Journal of Mass Spectrometry, 2011, 301, 84-89.	0.7	3
70	Electronic and vibrational spectroscopy of intermediates in methane-to-methanol conversion by CoO+. Journal of Chemical Physics, 2011, 135, 084311.	1.2	17
71	Theoretical investigations of the MgO <sup>+</sup> cation: spectroscopy, spin–orbit coupling and single ionization spectrum. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 225101.	0.6	11
72	Activation of Propane C-H and C-C Bonds by Gas-Phase Pt Atom: A Theoretical Study. International Journal of Molecular Sciences, 2012, 13, 9278-9297.	1.8	15
73	Reaction pathways of Sc <sup>+</sup> ( <sup>3</sup> D, <sup>1</sup> D) and Fe <sup>+</sup> ( <sup>6</sup> D, <sup>4</sup> F) with acetone in the gas phase: metal ion oxidation and acetone deethanization. Journal of Mass Spectrometry, 2012, 47, 1518-1525.	0.7	2
74	Experimental and theoretical studies of ammonia generation: Reactions of H2 with neutral cobalt nitride clusters. Journal of Chemical Physics, 2012, 137, 124304.	1.2	24
75	C–H Bond Activation by Oxygen-Centered Radicals over Atomic Clusters. Accounts of Chemical Research, 2012, 45, 382-390.	7.6	249
77	Effects of Ligands, Cluster Size, and Charge State in Gas-Phase Catalysis: A Happy Marriage of Experimental and Computational Studies. Catalysis Letters, 2012, 142, 1265-1278.	1.4	130
78	Ligand effects on single-electron transfer of isolated iron atoms in the gaseous complexes [(OC)mFe(OH2)n]+ (m, n=0–2, m+n=1, 2). International Journal of Mass Spectrometry, 2012, 330-332, 95.99	0.7	4

#	Article	IF	CITATIONS
79	Structure characterization of metal oxide clusters by vibrational spectroscopy: possibilities and prospects. Physical Chemistry Chemical Physics, 2012, 14, 9270.	1.3	119
80	On the role of thermal activation in selective photochemistry: mechanistic insight into the oxidation of propene on the V <sub>4</sub> O <sub>11</sub> <sup>â~</sup> cluster. Physical Chemistry Chemical Physics, 2012, 14, 148-156.	1.3	15
81	Mechanism of benzenehydroxylation by high-valent bare Fe <sup>iv</sup> î€O <sup>2+</sup> : explicit electronic structure analysis. Physical Chemistry Chemical Physics, 2012, 14, 246-256.	1.3	30
82	Investigation of spin-flip reactions of Nb + CH3CN by relativistic density functional theory. Physical Chemistry Chemical Physics, 2012, 14, 6833.	1.3	9
83	On the Gas-Phase Co+-Mediated Oxidation of Ethane by N2O: A Mechanistic Study. Journal of Physical Chemistry A, 2012, 116, 3282-3289.	1.1	9
84	State-Specific Reactions of Cu <sup>+</sup> ( <sup>1</sup> S, <sup>3</sup> D) with CH <sub>3</sub> X and CF <sub>3</sub> X (X = Cl, Br, I): Exploring the Influence of Dipole Orientation on Association and C–X Bond Activation. Journal of Physical Chemistry A, 2012, 116, 3979-3988.	1.1	7
85	Mechanistic Borderline of One-Step Hydrogen Atom Transfer versus Stepwise Sc <sup>3+</sup> -Coupled Electron Transfer from Benzyl Alcohol Derivatives to a Non-Heme Iron(IV)-Oxo Complex. Inorganic Chemistry, 2012, 51, 10025-10036.	1.9	76
86	Co+-Assisted Decomposition of h6-Acetone and d6-Acetone: Acquisition of Reaction Rate Constants and Dynamics of the Dissociative Mechanism. Journal of Physical Chemistry A, 2012, 116, 3081-3088.	1.1	4
87	Experimental and Theoretical Study of the Reactions between Vanadium Oxide Cluster Cations and Water. Journal of Physical Chemistry A, 2012, 116, 2049-2054.	1.1	36
88	Stable Subnanometer Cobalt Oxide Clusters on Ultrananocrystalline Diamond and Alumina Supports: Oxidation State and the Origin of Sintering Resistance. Journal of Physical Chemistry C, 2012, 116, 24027-24034.	1.5	24
89	Investigation of Spin–Flip Reactions of Zr + CH <sub>3</sub> CN by Relativistic Density Functional Theory. Journal of Physical Chemistry A, 2012, 116, 5019-5025.	1.1	8
90	Methane Activation by MH+ (M = Os, Ir, and Pt) and Comparisons to the Congeners of MH+ (M = Fe, Co,) Tj ETQ	q1_1_0.78	4314 rgBT /O
91	Near-Thermal Reactions of Au+(1S,3D) with CH3X (X = F,Cl). Journal of Physical Chemistry A, 2012, 116, 943-951.	1.1	18
92	Theoretical Investigation of the Reaction of Mn+ with Ethylene Oxide. Journal of Physical Chemistry A, 2012, 116, 512-519.	1.1	2
93	Methane to Methanol Conversion Induced by Thorium Oxide through the CH <sub>3</sub> Th(O)H Intermediate in Solid Argon. Inorganic Chemistry, 2012, 51, 11055-11060.	1.9	11
94	Gas phase chemistry of neutral metal clusters: Distribution, reactivity and catalysis. International Journal of Mass Spectrometry, 2012, 321-322, 49-65.	0.7	157
95	Density functional studies of thermal activation of methane by gas-phase [Pt(H)(OH)]+. Computational and Theoretical Chemistry, 2012, 980, 32-36.	1.1	8
96	Reaction mechanisms for C–N bond coupling from IrAg+, CH4 and NH3: A density functional theory study. Computational and Theoretical Chemistry, 2012, 988, 42-47.	1.1	1

#	Article	IF	CITATIONS
97	Activation of C–H and C–C bonds of ethane by gas-phase Pt atom: Potential energy surface and reaction mechanism. Computational and Theoretical Chemistry, 2012, 994, 112-120.	1.1	16
98	Mechanistic Studies on the Gasâ€Phase Dehydrogenation of Alkanes at Cyclometalated Platinum Complexes. Chemistry - A European Journal, 2012, 18, 14055-14062.	1.7	11
99	Characterization of reaction intermediates by ion spectroscopy. Chemical Society Reviews, 2012, 41, 547-559.	18.7	159
100	Density functional theory studies on the mechanism of activation of methane by homonuclear bimetallic Ni–Ni. Computational and Theoretical Chemistry, 2012, 996, 117-124.	1.1	6
101	Gas-Phase Neutral Binary Oxide Clusters: Distribution, Structure, and Reactivity toward CO. Journal of Physical Chemistry Letters, 2012, 3, 2415-2419.	2.1	32
102	Gas phase metal cluster model systems for heterogeneous catalysis. Physical Chemistry Chemical Physics, 2012, 14, 9255.	1.3	327
103	Experimental and Theoretical Study of the Reactions between Vanadium Oxide Cluster Cations and Hydrogen Sulfide. Journal of Physical Chemistry C, 2012, 116, 9043-9048.	1.5	17
104	Experimental and Theoretical Study of the Reactions between Manganese Oxide Cluster Anions and Hydrogen Sulfide. Journal of Physical Chemistry C, 2012, 116, 24184-24192.	1.5	26
106	Reaction pathways of Rh <sup>+</sup> ( <sup>3</sup> F and <sup>1</sup> D) with CH <sub>3</sub> OCH <sub>3</sub> in the gas phase. Rapid Communications in Mass Spectrometry, 2012, 26, 363-368.	0.7	3
107	Methane Activation in Gold Cation-Exchanged Zeolites: A DFT Study. ACS Catalysis, 2012, 2, 986-992.	5.5	54
108	Blended hydrogen atom abstraction and proton-coupled electron transfer mechanisms of closed-shell molecules. Chemical Science, 2012, 3, 1903.	3.7	46
109	Room temperature activation of methane over Zn modified H-ZSM-5 zeolites: Insight from solid-state NMR and theoretical calculations. Chemical Science, 2012, 3, 2932.	3.7	157
110	Aromatic C–H bond activation revealed by infrared multiphoton dissociation spectroscopy. Journal of Mass Spectrometry, 2012, 47, 460-465.	0.7	19
118	Thermal Hydrogenâ€Atom Transfer from Methane: The Role of Radicals and Spin States in Oxoâ€Cluster Chemistry. Angewandte Chemie - International Edition, 2012, 51, 5544-5555.	7.2	377
119	Hydrogenâ€Abstraction Reactivity Patterns from Aâ€toâ€Y: The Valence Bond Way. Angewandte Chemie - International Edition, 2012, 51, 5556-5578.	7.2	233
120	Goldâ€Mediated Cï£;l Bond Activation of Iodobenzene. Angewandte Chemie - International Edition, 2012, 51, 3812-3817.	7.2	90
121	Direct Conversion of Methane into Formaldehyde Mediated by [Al <sub>2</sub> O <sub>3</sub> ] <sup>.+</sup> at Room Temperature. Angewandte Chemie - International Edition, 2012, 51, 3703-3707.	7.2	98
122	Thermal Reactions of YAIO <sub>3</sub> <sup>+.</sup> with Methane: Increasing the Reactivity of Y <sub>2</sub> O <sub>3</sub> <sup>+.</sup> and the Selectivity of Al <sub>2</sub> O <sub>3</sub> <sup>+.</sup> by Doping. Angewandte Chemie - International Edition,	7.2	69

#	Article	IF	CITATIONS
123	Intramolecular CH Bond Activation through a Flexible Ester Linkage. Angewandte Chemie - International Edition, 2012, 51, 8097-8100.	7.2	28
124	Thermal Ammonia Activation by Cationic Transitionâ€Metal Hydrides of the First Row – Small but Mighty. Chemistry - an Asian Journal, 2012, 7, 1214-1220.	1.7	17
125	Structures and Reactivity of Oxygenâ€Rich Scandium Cluster Anions ScO <sub>3–5</sub> <sup>â''</sup> . ChemPhysChem, 2012, 13, 1282-1288.	1.0	29
126	Applications of Electrospray Ionization Mass Spectrometry in Mechanistic Studies and Catalysis Research. Accounts of Chemical Research, 2012, 45, 1521-1532.	7.6	175
127	C–H bond activation by nanosized scandium oxide clusters in gas-phase. International Journal of Mass Spectrometry, 2012, 310, 57-64.	0.7	112
128	Mechanistic Aspects and Elementary Steps of NH Bond Activation of Ammonia and CN Coupling Induced by Gasâ€Phase Ions: A Combined Experimental/Computational Exercise. Chemistry - A European Journal, 2012, 18, 40-49.	1.7	35
129	Linking Ion and Neutral Chemistry in CH Bond Electrophilic Activation: Generation and Detection of HO <sub>2</sub> <sup>.</sup> Reactive Radicals in the Gas Phase. Angewandte Chemie - International Edition, 2012, 51, 1455-1458.	7.2	6
130	Gas-Phase Synthesis of Singly and Multiply Charged Polyoxovanadate Anions Employing Electrospray Ionization and Collision Induced Dissociation. Journal of the American Society for Mass Spectrometry, 2013, 24, 1385-1395.	1.2	13
131	Reaction mechanism on the activation of ethane C–H and C–C bonds by a diplatinum cluster. Theoretical Chemistry Accounts, 2013, 132, 1.	0.5	10
132	Dissociation of CuH+ and ZnH+ complexes of ethylenediamine and their N-methylated homologues: Family and neighbours, but not the same. International Journal of Mass Spectrometry, 2013, 354-355, 144-151.	0.7	1
133	Computational Studies on the Mechanism of the Copperâ€Catalyzed sp <sup>3</sup> â€CH Crossâ€Dehydrogenative Coupling Reaction. ChemPlusChem, 2013, 78, 943-951.	1.3	42
134	DFT studies for activation of C–H bond in methane by gas-phase (n=1â^'3). Computational and Theoretical Chemistry, 2013, 1015, 52-63.	1.1	20
135	Experimental and Theoretical Study of the Reactions between MO2– (M = Fe, Co, Ni, Cu, and Zn) Cluster Anions and Hydrogen Sulfide. Journal of Physical Chemistry A, 2013, 117, 8377-8387.	1.1	16
136	Mechanistic Studies of CX Bond Activation at Transition-Metal Centers. , 2013, , 635-694.		7
137	Spin-flip reactions of Zr + C2H6 researched by relativistic density functional theory. Journal of Molecular Modeling, 2013, 19, 4003-4012.	0.8	2
138	Reactions of Sc2O4â^' and La2O4â^' Clusters with CO: A comparative study. International Journal of Mass Spectrometry, 2013, 334, 1-7.	0.7	13
139	Reactions of Fe <sup>+</sup> and FeO <sup>+</sup> with C <sub>2</sub> H <sub>2</sub> , C <sub>2</sub> H <sub>4</sub> , and C <sub>2</sub> H <sub>6</sub> : Temperature-Dependent Kinetics. Journal of Physical Chemistry A, 2013, 117, 10178-10185.	1.1	8
140	Reactivity of Stoichiometric Lanthanum Oxide Cluster Cations in C–H Bond Activation. Journal of Physical Chemistry C, 2013, 117, 17548-17556.	1.5	24

#	Article	IF	CITATIONS
141	Target-oriented analysis of gaseous, liquid and solid chemical systems by mass spectrometry, nuclear magnetic resonance spectroscopy and electron microscopy. Russian Chemical Reviews, 2013, 82, 648-685.	2.5	206
142	Activation of Methane by Os <sup>+</sup> : Guidedâ€lonâ€Beam and Theoretical Studies. ChemPlusChem, 2013, 78, 1157-1173.	1.3	42
143	Dehydrogenation and demethanation of 2-methylpropane and propane in the gas-phase by the 16-electron complex [Ru(bipy)2(CO)]2+* chemically activated by the association of [Ru(bipy)2]2+ and CO. Dalton Transactions, 2013, 42, 3979.	1.6	2
144	Iron-catalysed carbon–carbon single bond activation. Organic and Biomolecular Chemistry, 2013, 11, 1271.	1.5	30
145	C–N coupling in the gas-phase reactions of ammonia and [M(CH)]+ (M = Ni, Pd, Pt): a combined experimental/computational exercise. Dalton Transactions, 2013, 42, 4153.	1.6	16
148	Vacuum Ultraviolet Photoionization Studies of PtCH <sub>2</sub> and Hâ€Ptâ€CH <sub>3</sub> : A Potential Energy Surface for the Pt+CH <sub>4</sub> Reaction. Angewandte Chemie - International Edition, 2013, 52, 888-891.	7.2	23
149	Carbon–Carbon Bond Activation in Saturated Hydrocarbons by Fieldâ€Assisted Nitrogen Fixation. Angewandte Chemie - International Edition, 2013, 52, 1040-1043.	7.2	34
150	Composition and size dependent methane dehydrogenation on binary gold–palladium clusters. International Journal of Mass Spectrometry, 2013, 354-355, 365-371.	0.7	17
151	Reactions of V4O10+ cluster ions with simple inorganic and organic molecules. International Journal of Mass Spectrometry, 2013, 354-355, 105-112.	0.7	92
152	CH and CC bond activation reactions in silver alkynyl cluster cations, RCCAg2+. International Journal of Mass Spectrometry, 2013, 354-355, 229-234.	0.7	9
153	Computational Study of the Coordination of Methane to First Row Transition Metal Dication Complexes. Journal of Physical Chemistry A, 2013, 117, 3017-3024.	1.1	4
154	Reactivity of Atomic Oxygen Radical Anions Bound to Titania and Zirconia Nanoparticles in the Gas Phase: Low-Temperature Oxidation of Carbon Monoxide. Journal of the American Chemical Society, 2013, 135, 2991-2998.	6.6	73
155	Isomerâ€ <b>S</b> elective Thermal Activation of Methane in the Gas Phase by [HMO] <sup>+</sup> and [M(OH)] <sup>+</sup> (M=Ti and V). Angewandte Chemie - International Edition, 2013, 52, 6097-6101.	7.2	38
156	Structures of the Dehydrogenation Products of Methane Activation by 5d Transition Metal Cations. Journal of Physical Chemistry A, 2013, 117, 4115-4126.	1.1	89
157	Strong Spin–Orbit Coupling Facilitates C–H Activation in the Reactions of Os <sup>+</sup> with CH <sub>3</sub> F: Theoretical Investigations. Journal of Chemical Theory and Computation, 2013, 9, 1087-1092.	2.3	8
158	Single and Double NH Bond Activation of Ammonia by [Al <sub>2</sub> O <sub>3</sub> ] <sup>.+</sup> : Room Temperature Formation of the Aminyl Radical and Nitrene. Angewandte Chemie - International Edition, 2013, 52, 9513-9517.	7.2	7
159	Quantum Chemical Study of the Reactions between Pd <sup>+</sup> /Pt <sup>+</sup> and H <sub>2</sub> O/H <sub>2</sub> S. Chemistry - A European Journal, 2013, 19, 8832-8838.	1.7	3
160	Methane CH Activation by Palladium Complexes with Chelating Bis(NHC) Ligands: A DFT Study. Organometallics, 2013, 32, 3469-3480.	1.1	66

#	Article	IF	Citations
161	Coordination and Bond Activation in Complexes of Regioisomeric Phenylpyridines with the Nickel(II) Chloride Cation in the Gas Phase. Journal of Physical Chemistry A, 2013, 117, 1171-1180.	1.1	18
162	Methane Dehydrogenation by Niobium Ions: A First-Principles Study of the Gas-Phase Catalytic Reactions. Organometallics, 2013, 32, 989-999.	1.1	24
163	Gasâ€phase interactions of organotin compounds with glycine. Journal of Mass Spectrometry, 2013, 48, 795-806.	0.7	9
164	Structure and Chemistry of the Heteronuclear Oxo-Cluster [VPO <sub>4</sub> ] <sup>•+</sup> : A Model System for the Gas-Phase Oxidation of Small Hydrocarbons. Journal of the American Chemical Society, 2013, 135, 3711-3721.	6.6	66
166	Generation and reactivity of putative support systems, Ce-Al neutral binary oxide nanoclusters: CO oxidation and C–H bond activation. Journal of Chemical Physics, 2013, 139, 194313.	1.2	22
167	The Oxidative Mechanism in Electrophilic Cĩ£¿H Activation: The Case of CH <sub>2</sub> F <sub>2</sub> and CH <sub>2</sub> Cl <sub>2</sub> . Chemistry - an Asian Journal, 2013, 8, 588-595.	1.7	5
168	Gasâ€Phase Reactions of Cationic Vanadiumâ€Phosphorus Oxide Clusters with C <sub>2</sub> H <sub><i>x</i></sub> ( <i>x=</i> 4, 6): A DFTâ€Based Analysis of Reactivity Patterns. Chemistry - A European Journal, 2013, 19, 3017-3028.	1.7	24
169	Thermal Activation of Ammonia by Transitionâ€Metal Hydroxide Cations. ChemPlusChem, 2013, 78, 952-958.	1.3	3
170	Chemical Reactivity Assessment Using Reactive Paper Spray Ionization Mass Spectrometry: The Katritzky Reaction. ChemPlusChem, 2013, 78, 1142-1148.	1.3	84
171	Activation of Multiple Cĩ£¿H Bonds Promoted by Gold in AuNbO <sub>3</sub> <sup>+</sup> Clusters. Angewandte Chemie - International Edition, 2013, 52, 2444-2448.	7.2	54
172	Thermal Methane Activation by a Binary V–Nb Transitionâ€Metal Oxide Cluster Cation: A Further Example for the Crucial Role of Oxygenâ€Centered Radicals. Chemistry - A European Journal, 2013, 19, 11496-11501.	1.7	29
173	Selective Activation of Cĩ£¿Cl and Cĩ£¿F Bonds by SO <sup>.+</sup> Radical Cations: An Experimental and Computational Study. ChemPlusChem, 2013, 78, 1065-1072.	1.3	7
174	Mechanistic Aspects of Gasâ€Phase Hydrogenâ€Atom Transfer from Methane to [CO] <sup>.+</sup> and [SiO] <sup>.+</sup> : Why Do They Differ?. Chemistry - A European Journal, 2013, 19, 6662-6669.	1.7	23
177	Highly regioselective hydride transfer, oxidative dehydrogenation, and hydrogen-atom abstraction in the thermal gas-phase chemistry of [Zn(OH)] <sup>+</sup> /C <sub>3</sub> H <sub>8</sub> . Physical Chemistry Chemical Physics, 2014, 16, 26617-26623.	1.3	11
178	Astrochemistry of transition metals? The selected cases of [FeN] <sup>+</sup> , [FeNH] <sup>+</sup> and [(CO) <sub>2</sub> FeN] <sup>+</sup> : pathways toward CH <sub>3</sub> NH <sub>2</sub> and HNCO. Physical Chemistry Chemical Physics, 2014, 16, 24312-24322.	1.3	16
179	Radical Cation Intermediates in Propane Dehydrogenation and Propene Hydrogenation over H-[Fe] Zeolites. Journal of Physical Chemistry C, 2014, 118, 27292-27300.	1.5	26
180	Gas-Phase Fragmentation Reactions of Keggin-Type {PW11O39M} (M = Rh, Ir, and Ru) Polyoxometalates as Fingerprints of the Ligands Attached at the Noble Metal Site. European Journal of Inorganic Chemistry, 2014, 2014, 5618-5624.	1.0	15
181	Thermal Methane Activation by La <sub>6</sub> O <sub>10</sub> <sup>â^'</sup> Cluster Anions. Chemistry - A European Journal, 2014, 20, 5580-5583.	1.7	33

#	Article	IF	CITATIONS
183	How and Why Do Cluster Size, Charge State, and Ligands Affect the Course of Metalâ€Mediated Gasâ€Phase Activation of Methane?. Israel Journal of Chemistry, 2014, 54, 1413-1431.	1.0	180
184	Thermal Methane Conversion to Formaldehyde Promoted by Single Platinum Atoms in PtAl <sub>2</sub> O <sub>4</sub> <sup>â^`</sup> Cluster Anions. Angewandte Chemie - International Edition, 2014, 53, 9482-9486.	7.2	115
185	Methane Activation by Diatomic Molybdenum Carbide Cations. Chemistry - A European Journal, 2014, 20, 4163-4169.	1.7	33
186	Thermal Ethane Activation by Bare [V <sub>2</sub> O <sub>5</sub> ] <sup>+</sup> and [Nb <sub>2</sub> O <sub>5</sub> ] <sup>+</sup> Cluster Cations: on the Origin of Their Different Reactivities. Chemistry - A European Journal, 2014, 20, 6672-6677.	1.7	24
187	Beyond the flask: Reactions on the fly in ambient mass spectrometry. TrAC - Trends in Analytical Chemistry, 2014, 57, 135-146.	5.8	67
188	Novel single phase vanadium dioxide nanostructured films for methane sensing near room temperature. Sensors and Actuators B: Chemical, 2014, 191, 252-256.	4.0	89
189	Gasâ€Phase Reaction of CeV <sub>2</sub> O <sub>7</sub> <sup>+</sup> with C <sub>2</sub> H <sub>4</sub> : Activation of Cĩ£¿C and Cĩ£¿H Bonds. ChemPhysChem, 2014, 15, 4117-4125.	1.0	9
190	Thermal Dihydrogen Activation by a Closed-Shell AuCeO <sub>2</sub> <sup>+</sup> Cluster. Journal of Physical Chemistry Letters, 2014, 5, 3890-3894.	2.1	43
191	Higher Hydrocarbon Production through Oxidative Coupling of Methane Combined with Hydrogenation of Carbon Oxides. Chemie-Ingenieur-Technik, 2014, 86, 1894-1900.	0.4	8
192	Investigation on spin-flip reaction of Re + CH3CN by relativistic density functional theory. Dalton Transactions, 2014, 43, 9508-9517.	1.6	3
193	CO Oxidation Promoted by Gold Atoms Supported on Titanium Oxide Cluster Anions. Journal of the American Chemical Society, 2014, 136, 3617-3623.	6.6	121
194	Activation of Gas-Phase Uranyl: From an Oxo to a Nitrido Complex. Journal of Physical Chemistry A, 2014, 118, 325-330.	1.1	25
195	Vibrational Spectroscopy of Co <sup>+</sup> (CH <sub>4</sub> ) <sub><i>n</i></sub> and Ni <sup>+</sup> (CH <sub>4</sub> ) <sub><i>n</i></sub> ( <i>n</i> = 1–4). Journal of Physical Chemistry A, 2014, 118, 3253-3265.	1.1	21
196	Hydrogen Atom Abstraction from CH <sub>4</sub> by Nanosized Vanadium Oxide Cluster Cations. Journal of Physical Chemistry C, 2014, 118, 24062-24071.	1.5	26
197	Thermal Reactions of (V <sub>2</sub> O <sub>5</sub> ) <sub><i>n</i></sub> O <sup>–</sup> ( <i>n</i> =) Tj ET Association. Journal of Physical Chemistry C, 2014, 118, 14967-14976.	۲Qq0 0 0 r 1.5	gBT /Overloc 120
198	CO Oxidation Promoted by Cold Atoms Loosely Attached in AuFeO <sub>3</sub> <sup>–</sup> Cluster Anions. Journal of Physical Chemistry Letters, 2014, 5, 1585-1590.	2.1	58
201	Carnosine complexes and binding energies to some biologically relevant metals and platinum containing anticancer drugs. Inorganica Chimica Acta, 2014, 421, 123-135.	1.2	13
202	Gas-Phase Ion Chemistry of Rare Earths and Actinides. Fundamental Theories of Physics, 2014, 45, 1-110.	0.1	2

ARTICLE IF CITATIONS Reactivity of Oxygen Radical Anions Bound to Scandia Nanoparticles in the Gas Phase: Cï£; H Bond 203 1.7 22 Activation. Chemistry - A European Journal, 2014, 20, 1167-1175. Gas-Phase Reactions of the Rhenium Oxide Anions, [ReO<sub><i>x</i></sub>]<sup>â<sup>-</sup></sup> (<i>x</i> =) Tj ETQq1 1 0.784314 rgB<sup>-</sup> 206 0.5 9 Journal of Mass Spectrometry, 2015, 21, 557-567. Dehydrogenation of Alcohols and Hydrocarbons by Atomic Metal Anions. European Journal of Mass 207 0.5 2 Spectrometry, 2015, 21, 487-495. Interaction of Metal Cations with Alkylnitriles in the Gas Phase: Solvation of Metal Ions by the 208 0.5 Hydrocarbon Chain. European Journal of Mass Spectrometry, 2015, 21, 579-587. Distinct Mechanistic Differences in the Hydrogenâ€Atom Transfer from Methane and Water by the Heteronuclear Oxide Cluster [Ga<sub>2</sub>MgO<sub>4</sub>]<sup>.+</sup>. Angewandte Chemie -209 7.2 25 International Edition, 2015, 54, 12298-12302. Vibrational Spectroscopy Reveals Varying Structural Motifs in Cu<sup>+</sup>(CH<sub>4</sub>)<sub><i>n</i></sub> and Ag<sup>+</sup>(CH<sub>4</sub>)<sub><i>n</i></sub> (<i>n</i></sub> (<i>n</sub> (<i>n</sub> (<i>n</sub} (<i>n</sub> (<i>n</sub} ( 1.1 24 2015. 119. 9653-9665 Fragmentation of Cr(NO<sub>3</sub>)<sub>4</sub><sup>â€"</sup>: Metal Oxidation upon 211 1.1 8 O<sup>•–</sup> Abstraction. Journal of Physical Chemistry A, 2015, 119, 11471-11478. Deutlich unterschiedliche Mechanismen der Wasserstoffatomabstraktion aus Methan und Wasser durch den heteronuklearen Oxidcluster [Ga<sub>2</sub>MgO<sub>4</sub>]<sup>.+</sup>. 9 1.6 Angewandte Chemie, 2015, 127, 12472-12477. Thermal Conversion of Methane to Formaldehyde Promoted by Gold in 215 38 1.7 AuNbO<sub>3</sub><sup>+</sup> Cluster Cations. Chemistry - A European Journal, 2015, 21, 6957-6961. Linear Alkane Cï£; C Bond Chemistry Mediated by Metal Surfaces. ChemPhysChem, 2015, 16, 1356-1360. 1.0 CH Bond Activation by Early Transition Metal Carbide Cluster Anion MoC<sub>3</sub><sup>â<sup>~</sup></sup>. 217 1.7 18 Chemistry - A European Journal, 2015, 21, 17748-17756. Doping Effects in Clusterâ€Mediated Bond Activation. Angewandte Chemie - International Edition, 2015, 54, 10090-10100. A comprehensive test set of epoxidation rate constants for iron( $\langle scp \rangle iv \langle scp \rangle a \in 0$  ) and f(scp) = 0220 3.7 96 radical complexes. Chemical Science, 2015, 6, 1516-1529. Gas-phase studies of metal catalyzed decarboxylative cross-coupling reactions of esters. Pure and Applied Chemistry, 2015, 87, 391-404. Hydrogen abstraction reactions of the [FeO] 2+ moiety: The role of the electronic state. Chemical 222 1.2 2 Physics Letters, 2015, 622, 69-74. Activation of CH<sub>4</sub> by Th<sup>+</sup> as Studied by Guided Ion Beam Mass Spectrometry 34 and Quantum Chemistry. Inorganic Chemistry, 2015, 54, 3584-3599. Electron transfer and bond-forming reactions following collisions of I2+with CO and CS2. 224 0.8 5 Molecular Physics, 2015, 113, 2125-2137. Methane Activation by Iron-Carbide Cluster Anions FeC<sub>6</sub><sup>â€"</sup>. Journal of Physical 2.1 Chemistry Letters, 2015, 6, 2287-2291.

#	Article	IF	CITATIONS
226	Catalytic CO Oxidation on Single Pt-Atom Doped Aluminum Oxide Clusters: Electronegativity-Ladder Effect. Journal of Physical Chemistry C, 2015, 119, 15414-15420.	1.5	40
227	Carboxylate-assisted C–H activation of phenylpyridines with copper, palladium and ruthenium: a mass spectrometry and DFT study. Chemical Science, 2015, 6, 5544-5553.	3.7	42
228	Gas-phase reaction of CeVO <sub>5</sub> <sup>+</sup> cluster ions with C <sub>2</sub> H <sub>4</sub> : the reactivity of cluster bonded peroxides. Dalton Transactions, 2015, 44, 3128-3135.	1.6	9
229	Nitrosyl–heme and anion–arene complexes: structure, reactivity and spectroscopy. Pure and Applied Chemistry, 2015, 87, 379-390.	0.9	2
230	Vibrational spectroscopy and theory of Fe <sub>2</sub> <sup>+</sup> (CH <sub>4</sub> ) <sub>n</sub> (n = 1–3). Physical Chemistry Chemical Physics, 2015, 17, 25700-25704.	1.3	17
231	Theoretical insight into the C–H and C–C scission mechanism of ethane on a tetrahedral Pt <sub>4</sub> subnanocluster. RSC Advances, 2015, 5, 40978-40988.	1.7	4
232	Intermolecular CH Bond Activation by a Cationic Iridium(III) Dichloride Phenanthroline Complex. Angewandte Chemie - International Edition, 2015, 54, 6475-6478.	7.2	4
233	The BrÃ,nstedâ^'Evansâ^'Polanyi Correlations in Oxidation Catalysis. Catalysis Reviews - Science and Engineering, 2015, 57, 436-477.	5.7	23
234	The reactivity of stoichiometric tungsten oxide clusters towards carbon monoxide: the effects of cluster sizes and charge states. Physical Chemistry Chemical Physics, 2015, 17, 11499-11508.	1.3	7
235	Ambient ionization mass spectrometry. Russian Chemical Reviews, 2015, 84, 665-692.	2.5	32
236	Highlights of 50 years of ionic reaction mechanistic studies. International Journal of Mass Spectrometry, 2015, 377, 10-22.	0.7	11
237	Mass spectrometry based studies of gas phase metal catalyzed reactions. International Journal of Mass Spectrometry, 2015, 377, 121-129.	0.7	66
238	Fragmentation pathways analysis for the gas phase dissociation of protonated carnosine-oxaliplatin complexes. Dalton Transactions, 2015, 44, 4455-4467.	1.6	6
239	Theoretical Study on the Reaction Mechanism of Ti with CH <sub>3</sub> CN in the Gas Phase. Journal of Physical Chemistry A, 2016, 120, 5457-5463.	1.1	7
240	Activation of Methane Promoted by Adsorption of CO on Mo <sub>2</sub> C <sub>2</sub> <sup>â^'</sup> Cluster Anions. Angewandte Chemie - International Edition, 2016, 55, 5760-5764.	7.2	29
241	Activation and Transformation of Ethane by Au <sub>2</sub> VO <sub>3</sub> <sup>+</sup> Clusters with Closedâ€Shell Electronic Structures. Chemistry - A European Journal, 2016, 22, 1825-1830.	1.7	12
242	Oxidation of SO <sub>2</sub> to SO <sub>3</sub> by Cerium Oxide Cluster Cations Ce <sub>2</sub> O <sub>4</sub> <sup>+</sup> and Ce <sub>3</sub> O <sub>6</sub> <sup>+</sup> . Journal of Physical Chemistry A, 2016, 120, 3843-3848.	1.1	20
243	Submerged Barriers in the Ni <sup>+</sup> Assisted Decomposition of Propionaldehyde. Journal of Physical Chemistry A, 2016, 120, 2275-2284.	1.1	5

#	Article	IF	CITATIONS
244	Methane activation by gold-doped titanium oxide cluster anions with closed-shell electronic structures. Chemical Science, 2016, 7, 4730-4735.	3.7	47
245	Photo-Induced Reaction of Ethene Bound to Vanadia Nanoparticles [(V <sub>2</sub> O <sub>5</sub> ) <sub><i>n</i></sub> OC <sub>2</sub> H <sub>4</sub> <sup>–</sup> ( <i>n</i> = 2–20)] in the Gas Phase. Journal of Physical Chemistry C, 2016, 120, 17081-17086.	1.5	5
246	Origin of the Different Reactivity of the Triatomic Anions HMoN <sup>–</sup> and ZrNH <sup>–</sup> toward Alkane: Compositions of the Active Orbitals. Journal of Physical Chemistry A, 2016, 120, 7786-7791.	1.1	4
247	Mechanistic Variants in Gas-Phase Metal-Oxide Mediated Activation of Methane at Ambient Conditions. Journal of the American Chemical Society, 2016, 138, 11368-11377.	6.6	85
248	Copper atalyzed reactions: Research in the gas phase. Mass Spectrometry Reviews, 2016, 35, 85-110.	2.8	22
249	Efficient Roomâ€Temperature Methane Activation by the Closedâ€Shell, Metalâ€Free Cluster [OSiOH] <sup>+</sup> : A Novel Mechanistic Variant. Chemistry - A European Journal, 2016, 22, 14257-14263.	1.7	13
250	Reactivity of Metal Clusters. Chemical Reviews, 2016, 116, 14456-14492.	23.0	359
251	Thermal Methane Activation by [Si <sub>2</sub> O <sub>5</sub> ] <sup>.+</sup> and [Si <sub>2</sub> O <sub>5</sub> H <sub>2</sub> ] <sup>.+</sup> : Reactivity Enhancement by Hydrogenation. Angewandte Chemie - International Edition, 2016, 55, 13345-13348.	7.2	7
252	Gold(III) Mediated Activation and Transformation of Methane on Au <sub>1</sub> -Doped Vanadium Oxide Cluster Cations AuV <sub>2</sub> O <sub>6</sub> <sup>+</sup> . Journal of the American Chemical Society, 2016, 138, 9437-9443.	6.6	41
253	Oxidative amination of benzylic alkanes with nitrobenzene derivatives as nitrogen sources. Tetrahedron Letters, 2016, 57, 5872-5876.	0.7	6
254	Thermische Methanaktivierung durch [Si <sub>2</sub> O <sub>5</sub> ] <sup>.+</sup> und [Si <sub>2</sub> O <sub>5</sub> H <sub>2</sub> ] <sup>.+</sup> : ReaktivitA <b>u</b> steigerung durch Hydrierung. Angewandte Chemie, 2016, 128, 13540-13543.	1.6	2
255	Activation of Methane and Ethane as Mediated by the Triatomic Anion HNbN <sup>â^'</sup> : Electronic Structure Similarity with a Pt Atom. Angewandte Chemie, 2016, 128, 5031-5035.	1.6	11
256	Activation of Methane and Ethane as Mediated by the Triatomic Anion HNbN <sup>â^'</sup> : Electronic Structure Similarity with a Pt Atom. Angewandte Chemie - International Edition, 2016, 55, 4947-4951.	7.2	36
257	Gas-Phase Reactions of Atomic Gold Cations with Linear Alkanes (C2–C9). Journal of Physical Chemistry A, 2016, 120, 4285-4293.	1.1	16
258	Fragmentation of [Ni(NO <sub>3</sub> ) <sub>3</sub> ] <sup>â^'</sup> : A Study of Nickel–Oxygen Bonding and Oxidation States in Nickel Oxide Fragments. Inorganic Chemistry, 2016, 55, 6634-6642.	1.9	5
259	State-Specific Reactions of Cu <sup>+</sup> ( <sup>1</sup> S, <sup>3</sup> D) with SF <sub>6</sub> and SF <sub>5</sub> Cl. Journal of Physical Chemistry A, 2016, 120, 2295-2306.	1.1	0
260	Consecutive H <sub>2</sub> Oxidation Mediated by Au <sub>2</sub> VO <sub>4</sub> <sup>+</sup> Clusters. Journal of Physical Chemistry C, 2016, 120, 10452-10459.	1.5	11
261	Reactions of metal cluster anions with inorganic and organic molecules in the gas phase. Dalton Transactions, 2016, 45, 11471-11495.	1.6	38

#	Article	IF	CITATIONS
262	Activation of Methane Promoted by Adsorption of CO on Mo <sub>2</sub> C <sub>2</sub> <sup>â^'</sup> Cluster Anions. Angewandte Chemie, 2016, 128, 5854-5858.	1.6	6
263	Methane C–H bond activation by niobium oxides: Theoretical analyses of the bonding and reactivity properties of <mml:math altimg="si1.gif" overflow="scroll" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mins:mml="http: 1998="" altimg="si1.gif" math="" mathml"="" overflow="scroll" www.w3.org=""><mml:mins:mml="http: 1998="" altimg="si1.gif" math="" mathml"="" overflow="scroll" www.w3.org=""><mml:mins:mml="scroll"><mml:mins:mml="scroll"< mml:mins:mml:min<="" td=""><td>ml:mt&gt;m<!--</td--><td>mml:mi&gt;<mr< td=""></mr<></td></td></mml:mins:mml="scroll"<></mml:mins:mml="scroll"></mml:mins:mml="http:></mml:mins:mml="http:></mml:mins:mml="http:></mml:mins:mml="http:></mml:mins:mml="http:></mml:mins:mml="http:></mml:math>	ml:mt>m </td <td>mml:mi&gt;<mr< td=""></mr<></td>	mml:mi> <mr< td=""></mr<>
264	Dehydrogenation of propylene mediated by CeVO4+: An interesting example for the chemistry of binary Ce–V transition-metal oxide cluster cations. International Journal of Mass Spectrometry, 2016, 401, 39-45.	0.7	5
265	Bond Activation by Metal–Carbene Complexes in the Gas Phase. Accounts of Chemical Research, 2016, 49, 494-502.	7.6	68
266	Activation of methane by Ru + : Experimental and theoretical studies of the thermochemistry and mechanism. International Journal of Mass Spectrometry, 2017, 413, 135-149.	0.7	9
267	On the Origin of Reactivity Enhancement/Suppression upon Sequential Ligation: [Re(CO) <sub><i>x</i></sub> ] <sup>+</sup> /CH <sub>4</sub> ( <i>x=</i> O <b>–</b> 3) Couples. Angewandte Chemie - International Edition, 2017, 56, 2951-2954.	7.2	9
268	Theoretical structural and electronic analyses with emphasis on the reactivity of iron oxide prototypes in methane C–H bond activation. Reaction Kinetics, Mechanisms and Catalysis, 2017, 120, 195-208.	0.8	9
269	Methane Activation Mediated by Dual Gold Atoms Doped in Aluminium Oxide Cluster Cations Au <sub>2</sub> Al <sub>2</sub> O <sub>3</sub> <sup>+</sup> . ChemistrySelect, 2017, 2, 991-996.	0.7	9
270	Theoretical Investigation of the Gas-Phase Reaction of CrO+ with Propane. Journal of Physical Chemistry A, 2017, 121, 1715-1725.	1.1	2
271	Spectroscopic Characterization of Nonconcerted [4 + 2] Cycloaddition of 1,3-Butadiene with Lanthanacyclopropene To Form Lanthanum–Benzene in the Gas Phase. Journal of Physical Chemistry A, 2017, 121, 1233-1239.	1.1	12
272	Three Reaction Channels with Signature Proton Transfers in the Ni(I)-Catalyzed Decomposition of Ethyl Acetate. Organometallics, 2017, 36, 761-766.	1.1	2
273	DFT mechanistic study of the selective terminal C–H activation of n -pentane with a tungsten allyl nitrosyl complex. Journal of Saudi Chemical Society, 2017, 21, 558-562.	2.4	3
274	Laser Synthesis and Processing of Colloids: Fundamentals and Applications. Chemical Reviews, 2017, 117, 3990-4103.	23.0	965
275	H <sub>2</sub> Oxidation Mediated by Au <sub>1</sub> -Doped Vanadium Oxide Cluster Cation AuV <sub>2</sub> O <sub>5</sub> <sup>+</sup> : A Comparative Study with AuCe <sub>2</sub> O <sub>4</sub> <sup>+</sup> . Journal of Physical Chemistry A, 2017, 121, 4069-4075.	1.1	5
276	Direct and cluster-assisted dehydrogenation of methane by Nb <sup>+</sup> and Ta <sup>+</sup> : a theoretical investigation. Physical Chemistry Chemical Physics, 2017, 19, 16178-16188.	1.3	5
277	Spectroscopy and formation of lanthanum-hydrocarbon radicals formed by C—C bond cleavage and coupling of propene. Journal of Chemical Physics, 2017, 146, .	1.2	18
278	Theoretical study of Ni+ assisted C C and C H bond activations of propionaldehyde in the gas phase. Computational and Theoretical Chemistry, 2017, 1114, 140-145.	1.1	7
279	Palladium-Catalyzed C–H Activation: Mass Spectrometric Approach to Reaction Kinetics in Solution. Organometallics, 2017, 36, 2072-2080.	1.1	26

#	Article	IF	CITATIONS
280	A Theoretical Study on Methane C—H Bond Activation by Bare [FeO] <sup>+/0/–</sup> . Journal of Physical Chemistry A, 2017, 121, 3501-3514.	1.1	16
281	Mass-analyzed threshold ionization spectroscopy of lanthanum-hydrocarbon radicals formed by C <b>—</b> H bond activation of propene. Journal of Chemical Physics, 2017, 146, 074305.	1.2	16

Infrared Spectroscopy of Gas-Phase M<sup>+</sup>(CO<sub>2</sub>)<sub><i>n</i></sub> (M = Co, Rh,) Tj ETQq0.0 0 rgBT/Overlock  $\frac{1}{57}$ 

283	Thermal Methane Activation by the Metalâ€Free Cluster Cation [Si <sub>2</sub> O <sub>4</sub> ] <sup>.+</sup> . Chemistry - A European Journal, 2017, 23, 1498-1501.	1.7	10
284	Electrostatic and Charge-Induced Methane Activation by a Concerted Double C–H Bond Insertion. Journal of the American Chemical Society, 2017, 139, 1684-1689.	6.6	96
285	Does Each Atom Count in the Reactivity of Vanadia Nanoclusters?. Journal of the American Chemical Society, 2017, 139, 342-347.	6.6	25
286	Liberation of three dihydrogens from two ethene molecules as mediated by the tantalum nitride anion cluster Ta <sub>3</sub> N <sub>2</sub> <sup>â^'</sup> at room temperature. Physical Chemistry Chemical Physics, 2017, 19, 3136-3142.	1.3	9
287	Modeling Ïf-Bond Activations by Nickel(0) Beyond Common Approximations: How Accurately Can We Describe Closed-Shell Oxidative Addition Reactions Mediated by Low-Valent Late 3d Transition Metal?. Journal of Chemical Theory and Computation, 2017, 13, 4841-4853.	2.3	5
288	Effect of Sn on Isobutane Dehydrogenation Performance of Ni/SiO <sub>2</sub> Catalyst: Adsorption Modes and Adsorption Energies of Isobutane and Isobutene. ACS Applied Materials & Interfaces, 2017, 9, 30711-30721.	4.0	20
289	Computational Study on M <sub>1</sub> /POM Single-Atom Catalysts (M = Cu, Zn, Ag, and Au; POM =) Tj ETQq1 for Alkene Epoxidation. Inorganic Chemistry, 2017, 56, 10496-10504.	1 0.78431 1.9	.4 rgBT /O∨ 33
290	Chemical Ionization of Large Linear Alkanes and Small Oxidized Volatile Organic Compounds by the Reactions with Atomic Gold Cations. Analytical Chemistry, 2017, 89, 9083-9090.	3.2	8
291	On the Origin of Reactivity Enhancement/Suppression upon Sequential Ligation: [Re(CO) <sub><i>x</i></sub> ] <sup>+</sup> /CH <sub>4</sub> ( <i>x=</i> O <b>–</b> 3) Couples. Angewandte Chemie, 2017, 129, 2997-3000.	1.6	2
292	Evidence for Electron Transfer in the Reactions of Hydrated Monovalent First-Row Transition-Metal Ions M(H2O)n+, M = V, Cr, Mn, Fe, Co, Ni, Cu, and Zn, n < 40, toward 1-Iodopropane. Journal of Physical Chemistry A, 2017, 121, 9557-9566.	1.1	10
293	Imaging the dynamics of ion–molecule reactions. Chemical Society Reviews, 2017, 46, 7498-7516.	18.7	51
294	First principles prediction of CH <sub>4</sub> reactivities with Co <sub>3</sub> O <sub>4</sub> nanocatalysts of different morphologies. Physical Chemistry Chemical Physics, 2017, 19, 30874-30882.	1.3	12
295	Electronic Effects on Room-Temperature, Gas-Phase C–H Bond Activations by Cluster Oxides and Metal Carbides: The Methane Challenge. Journal of the American Chemical Society, 2017, 139, 17201-17212.	6.6	149
296	Density Functional Theory Study on the Nucleation and Growth of Pt <sub><i>n</i></sub> Clusters on γ-Al <sub>2</sub> O <sub>3</sub> (001) Surface. ACS Omega, 2017, 2, 3250-3259.	1.6	13
297	Direct and Efficient Dehydrogenation of Tetrahydroquinolines and Primary Amines Using Corona Discharge Generated on Ambient Hydrophobic Paper Substrate. Journal of the American Society for Mass Spectrometry, 2017, 28, 647-654.	1.2	11

#	Article	IF	CITATIONS
298	Methane Activation by 5 d Transition Metals: Energetics, Mechanisms, and Periodic Trends. Chemistry - A European Journal, 2017, 23, 10-18.	1.7	83
299	Striking Doping Effects on Thermal Methane Activation Mediated by the Heteronuclear Metal Oxides [ <i>X</i> AlO <sub>4</sub> ] <sup>.+</sup> ( <i>X</i> =V, Nb, and Ta). Chemistry - A European Journal, 2017, 23, 788-792.	1.7	21
300	What Factors Control the Reactivity of Cobalt–Imido Complexes in C–H Bond Activation via Hydrogen Abstraction?. ACS Catalysis, 2017, 7, 285-292.	5.5	14
301	Mechanistic Study of Copper-Catalyzed C-H Hydroxylation/C-S Coupling by ESI-HR MS and DFT Calculations. Molecules, 2017, 22, 1912.	1.7	0
302	Spectroscopic Identification of the Carbyne Hydride Structure of the Dehydrogenation Product of Methane Activation by Osmium Cations. Journal of the American Society for Mass Spectrometry, 2018, 29, 1781-1790.	1.2	19
303	Fe <sub>2</sub> O <sup>+</sup> Cation Mediated Propane Oxidation by Dioxygen in the Gas Phase. Chemistry - A European Journal, 2018, 24, 5920-5926.	1.7	5
304	Near-UV Water Splitting by Cu, Ni, and Co Complexes in the Gas Phase. Journal of Physical Chemistry A, 2018, 122, 2069-2078.	1.1	3
305	Synthetic Highâ€Valent M–O–X Oxidants. European Journal of Inorganic Chemistry, 2018, 2018, 547-560.	1.0	23
306	Thermal activation of methane by vanadium boride cluster cations VB <sub>n</sub> <sup>+</sup> ( <i>n</i> = 3–6). Physical Chemistry Chemical Physics, 2018, 20, 4641-4645.	1.3	17
307	How to tame a palladium terminal imido. Journal of Organometallic Chemistry, 2018, 864, 26-36.	0.8	14
308	Selective Conversion of Methane by Rh <sub>1</sub> -Doped Aluminum Oxide Cluster Anions RhAl <sub>2</sub> O <sub>4</sub> <sup>–</sup> : A Comparison with the Reactivity of PtAl <sub>2</sub> O <sub>4</sub> <sup>–</sup> . Journal of Physical Chemistry A, 2018, 122, 3950-3955.	1.1	20
309	How to tame a palladium terminal oxo. Chemical Science, 2018, 9, 1155-1167.	3.7	24
310	Infrared Spectroscopy of Au+(CH4) n Complexes and Vibrationally-Enhanced C–H Activation Reactions. Topics in Catalysis, 2018, 61, 81-91.	1.3	15
311	Cas-phase activation of methane with PtOH+. Computational and Theoretical Chemistry, 2018, 1145, 54-59.	1.1	0
312	Direct hydroxylation of benzene to phenol mediated by nanosized vanadium oxide cluster ions at room temperature. Journal of Chemical Physics, 2018, 149, 074308.	1.2	3
313	Coupling of Methane and Carbon Dioxide Mediated by Diatomic Copper Boride Cations. Angewandte Chemie, 2018, 130, 14330-14334.	1.6	10
314	Methane Activation by Gas Phase Atomic Clusters. Accounts of Chemical Research, 2018, 51, 2603-2610.	7.6	94
315	Linear Alkane Polymerization on Au-Covered Ag(110) Surfaces. Journal of Physical Chemistry C, 2018, 122, 24209-24214.	1.5	7

#	Article	IF	CITATIONS
316	Ta <sub>2</sub> <sup>+</sup> -mediated ammonia synthesis from N <sub>2</sub> and H <sub>2</sub> at ambient temperature. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11680-11687.	3.3	84
317	Photofragment Imaging, Spectroscopy, and Theory of MnO <sup>+</sup> . Journal of Physical Chemistry A, 2018, 122, 8047-8053.	1.1	12
318	Structure and bonding in NbX5 X = (F, Cl, Br and I) complexes: a molecular orbital perspective in the C–H bond activation. Theoretical Chemistry Accounts, 2018, 137, 1.	0.5	8
319	Mechanistic Variants in Methane Activation Mediated by Gold(I) Supported on Silicon Oxide Clusters. Chemistry - A European Journal, 2018, 24, 17506-17512.	1.7	10
320	Coupling of Methane and Carbon Dioxide Mediated by Diatomic Copper Boride Cations. Angewandte Chemie - International Edition, 2018, 57, 14134-14138.	7.2	27
321	Systematic Ligand Effects in the Reactions of Fe <sup>+</sup> ( <sup>6</sup> D) and FeX <sup>+</sup> ( <sup>5</sup> [") with CF <sub>3</sub> X (X = Cl, Br, I). Ion Mobility Measurements of FeX <sup>+</sup> ( <sup>5</sup> Δ) (X = F, Cl, Br, I) in He. Journal of Physical Chemistry A, 2018, 122, 6509-6523.	1.1	2
322	Spectroscopy and formation of lanthanum-hydrocarbon radicals formed by C—H and C—C bond activation of 1-pentene and 2-pentene. Journal of Chemical Physics, 2018, 149, 034303.	1.2	2
323	A molecular beam apparatus for performing single photon initiated dissociative rearrangement reactions (SPIDRR) with transition metal cation bound organic clusters. Review of Scientific Instruments, 2018, 89, 074101.	0.6	2
324	Dehydrogenation of Methane by Partially Oxidized Tungsten Cluster Cations: High Reactivity Comparable to That of Platinum Cluster Cations. Journal of Physical Chemistry A, 2019, 123, 6840-6847.	1.1	8
325	N-Substituted Auxiliaries for Aerobic Dehydrogenation of Tetrahydro-isoquinoline: A Theory-Guided Photo-Catalytic Design. Scientific Reports, 2019, 9, 11280.	1.6	9
326	Physical Chemistry of Cold Gas-Phase Functional Molecules and Clusters. , 2019, , .		5
327	Metal Cation Coordination and Solvation Studied with Infrared Spectroscopy in the Gas Phase. , 2019, , 157-194.		3
328	Dinitrogen Fixation and Reduction by Ta <sub>3</sub> N <sub>3</sub> H <sub>0,1</sub> <sup>–</sup> Cluster Anions at Room Temperature: Hydrogen-Assisted Enhancement of Reactivity. Journal of the American Chemical Society, 2019, 141, 12592-12600.	6.6	65
329	Monitoring the Formation and Reactivity of Organometallic Alkane and Fluoroalkane Complexes with Silanes and Xe Using Time-Resolved X-ray Absorption Fine Structure Spectroscopy. Journal of the American Chemical Society, 2019, 141, 11471-11480.	6.6	25
330	Methane Activation by (n=0, 1, 2; m= 1, 2): Reactivity Parameters, Electronic Properties and Binding Energy Analysis. ChemistrySelect, 2019, 4, 7912-7921.	0.7	0
331	Size-Dependent Reactivity of Rhodium Cluster Anions toward Methane. Journal of Physical Chemistry C, 2019, 123, 17035-17042.	1.5	16
332	Transferring Colorization with Smaller Samples. Journal of Physics: Conference Series, 2019, 1302, 032047.	0.3	0
333	Reduction of N <sub>2</sub> O by H <sub>2</sub> Catalyzed by Keggin–Type Phosphotungstic Acid Supported Single-Atom Catalysts: An Insight from Density Functional Theory Calculations.	4.6	21

#	Article	IF	CITATIONS
334	Oxidation of Isoprene by Neutral Iron Oxide Nanoclusters in the Gas Phase. Journal of Physical Chemistry C, 2019, 123, 25949-25956.	1.5	8
335	Theoretical study of methane adsorption and C─H bond activation over Feâ€embedded graphene: Effect of external electric field. Journal of Computational Chemistry, 2019, 40, 2819-2826.	1.5	8
336	Efficient Liberation of Ammonia from Thermal Reaction of ScNH <sup>+</sup> Cations and Water. Journal of Physical Chemistry A, 2019, 123, 7576-7581.	1.1	1
337	Spin-orbit coupling and vibronic transitions of two Ce(C4H6) isomers probed by mass-analyzed threshold ionization and relativistic quantum computation. Journal of Chemical Physics, 2019, 151, 124307.	1.2	6
338	Infrared Spectroscopy of Gold Carbene Cation (AuCH <sub>2</sub> <sup>+</sup> ): Covalent or Dative Bonding?. Journal of Physical Chemistry A, 2019, 123, 8932-8941.	1.1	11
339	Hydrogen- and oxygen-atom transfers in the thermal activation of benzene mediated by Cu2O2+ cations. Physical Chemistry Chemical Physics, 2019, 21, 1117-1122.	1.3	2
340	Thermal Activation of CH <sub>4</sub> and H <sub>2</sub> as Mediated by the Ruthenium Oxide Cluster Ions [RuO <sub><i>x</i></sub> ] <sup>+</sup> ( <i>x=</i> 1–3): On the Influence of Oxidation States. Chemistry - A European Journal, 2019, 25, 3550-3559.	1.7	11
341	Activity of Atomically Precise Titania Nanoparticles in CO Oxidation. Angewandte Chemie, 2019, 131, 8086-8090.	1.6	8
342	Metallacyclopropene structures identified by IRMPD spectroscopic investigation of the dehydrogenation reactions of Ta+ and TaO+ with ethene. International Journal of Mass Spectrometry, 2019, 442, 83-94.	0.7	5
343	Mâ^'O Bonding Beyond the Oxo Wall: Spectroscopy and Reactivity of Cobalt(III)â€Oxyl and Cobalt(III)â€Oxo Complexes. Angewandte Chemie, 2019, 131, 9721-9726.	1.6	13
344	Mâ^'O Bonding Beyond the Oxo Wall: Spectroscopy and Reactivity of Cobalt(III)â€Oxyl and Cobalt(III)â€Oxo Complexes. Angewandte Chemie - International Edition, 2019, 58, 9619-9624.	7.2	56
345	Activity of Atomically Precise Titania Nanoparticles in CO Oxidation. Angewandte Chemie - International Edition, 2019, 58, 8002-8006.	7.2	22
346	Alkane Cyclization: A DFT Study on the Effect of Chlorinated Î <sup>3</sup> -Alumina. Russian Journal of Physical Chemistry A, 2019, 93, 18-22.	0.1	2
347	Selective Generation of Free Hydrogen Atoms in the Reaction of Methane with Diatomic Gold Boride Cations. Zeitschrift Fur Physikalische Chemie, 2019, 233, 785-797.	1.4	5
348	Selective Activation of the Câ^'H Bond in Methane by Single Platinum Atomic Anions. Angewandte Chemie - International Edition, 2019, 58, 7773-7777.	7.2	27
349	Selective Activation of the Câ^'H Bond in Methane by Single Platinum Atomic Anions. Angewandte Chemie, 2019, 131, 7855-7859.	1.6	11
350	Reduction of N <sub>2</sub> O by CO via Mans–van Krevelen Mechanism over Phosphotungstic Acid Supported Single-Atom Catalysts: A Density Functional Theory Study. Inorganic Chemistry, 2019, 58, 5221-5229.	1.9	15
351	Formaldehyde Generation in Photooxidation of Isoprene on Iron Oxide Nanoclusters. Journal of Physical Chemistry C, 2019, 123, 5120-5127.	1.5	10

#	Article	IF	CITATIONS
352	Probing Reactivity of Gold Atoms with Acetylene and Ethylene with VUV Photoionization Mass Spectrometry and Ab Initio Studies. Journal of Physical Chemistry A, 2019, 123, 2194-2202.	1.1	10
353	Sequential activation of methane by Ir+: An IRMPD and theoretical investigation. International Journal of Mass Spectrometry, 2019, 435, 78-92.	0.7	18
354	Über die besondere Rolle des Stickstoffliganden in den durch [NbN] <sup>+</sup> katalysierten Redoxreaktionen von N <sub>2</sub> O/CO in der Gasphase. Angewandte Chemie, 2019, 131, 3674-3678.	1.6	2
355	On the Remarkable Role of the Nitrogen Ligand in the Gasâ€Phase Redox Reaction of the N <sub>2</sub> O/CO Couple Catalyzed by [NbN] <sup>+</sup> . Angewandte Chemie - International Edition, 2019, 58, 3635-3639.	7.2	16
356	Identification of Active Sites and Structural Characterization of Reactive Ionic Intermediates by Cryogenic Ion Trap Vibrational Spectroscopy. Chemistry - A European Journal, 2019, 25, 2112-2126.	1.7	80
357	Activation of hydroxylamine by single gold atomic anions. International Journal of Mass Spectrometry, 2019, 435, 114-117.	0.7	8
358	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.	6.6	39
359	Multiple strong field ionization of metallocenes: Applicability of ADK rates to the production of multiply charged transition metal (Cr, Fe, Ni, Ru, Os) cations. Journal of Photochemistry and Photobiology A: Chemistry, 2019, 369, 16-24.	2.0	9
360	Thermal benzene activation by 3d transition metal (Sc-Cu) oxide cations. Chinese Chemical Letters, 2020, 31, 779-782.	4.8	2
361	Recent research progress in the study of catalytic CO oxidation by gas phase atomic clusters. Science China Materials, 2020, 63, 892-902.	3.5	25
362	Vibrational Spectroscopy of Intermediates and C–H Activation Products of Sequential Zr <sup>+</sup> Reactions with CH <sub>4</sub> . Journal of Physical Chemistry A, 2020, 124, 8235-8245.	1.1	10
363	Oxidation of isoprene by titanium oxide cluster cations in the gas phase. Physical Chemistry Chemical Physics, 2020, 22, 27357-27363.	1.3	4
364	A Two-Step Catalytic Cycle for the Acceptorless Dehydrogenation of Ethane by Group 10 Metal Complexes: Role of the Metal in Reactivity and Selectivity. Organometallics, 2020, 39, 4027-4036.	1.1	5
365	Photoassisted Selective Steam and Dry Reforming of Methane to Syngas Catalyzed by Rhodium–Vanadium Bimetallic Oxide Cluster Anions at Room Temperature. Angewandte Chemie - International Edition, 2020, 59, 21216-21223.	7.2	28
366	What Makes a Good (Computed) Energy Profile?. Topics in Organometallic Chemistry, 2020, , 1-38.	0.7	15
367	ORGANOMETALLIC GASâ€PHASE ION CHEMISTRY AND CATALYSIS: INSIGHTS INTO THE USE OF METAL CATALYSTS TO PROMOTE SELECTIVITY IN THE REACTIONS OF CARBOXYLIC ACIDS AND THEIR DERIVATIVES. Mass Spectrometry Reviews, 2021, 40, 782-810.	2.8	12
368	Carbide Dihydrides: Carbonaceous Species Identified in Ta <sub>4</sub> <sup>+</sup> â€Mediated Methane Dehydrogenation. Angewandte Chemie - International Edition, 2020, 59, 23631-23635.	7.2	10
369	DFT study of α-Keggin, lacunary Keggin, and iron <sup>Il–VI</sup> substituted Keggin polyoxometalates: the effect of oxidation state and axial ligand on geometry, electronic structures and oxygen transfer. RSC Advances, 2020, 10, 33718-33730.	1.7	5

#	Article	IF	CITATIONS
370	Photoassisted Selective Steam and Dry Reforming of Methane to Syngas Catalyzed by Rhodium–Vanadium Bimetallic Oxide Cluster Anions at Room Temperature. Angewandte Chemie, 2020, 132, 21402-21409.	1.6	5
371	Closed Shell Iron(IV) Oxo Complex with an Fe–O Triple Bond: Computational Design, Synthesis, and Reactivity. Angewandte Chemie - International Edition, 2020, 59, 23137-23144.	7.2	10
372	Role of Spin in the Catalytic Oxidation of CO by N2O Enabled by Co+: New Insights from Temperature-Dependent Kinetics and Statistical Modeling. Journal of Physical Chemistry A, 2020, 124, 7966-7972.	1.1	4
373	Closed Shell Iron(IV) Oxo Complex with an Fe–O Triple Bond: Computational Design, Synthesis, and Reactivity. Angewandte Chemie, 2020, 132, 23337-23344.	1.6	4
374	Non-noble metal single-atom catalysts with phosphotungstic acid (PTA) support: A theoretical study of ethylene epoxidation. Science China Materials, 2020, 63, 1003-1014.	3.5	41
375	Phenyl-Group Exchange in Triphenylphosphine Mediated by Cationic Gold–Platinum Complexes—A Gas-Phase Mimetic Approach. Inorganic Chemistry, 2020, 59, 9496-9510.	1.9	4
376	Iron and manganese oxo complexes, oxo wall and beyond. Nature Reviews Chemistry, 2020, 4, 404-419.	13.8	167
377	Barrierless methane-to-methanol conversion: the unique mechanism of AlO <sup>+</sup> . Physical Chemistry Chemical Physics, 2020, 22, 14544-14550.	1.3	3
378	Theoretical study on the activation of C-H bond in ethane by PdX+ (X = F, Cl, Br, H, and CH3) in the gas phase. Journal of Molecular Modeling, 2020, 26, 91.	0.8	0
379	Spin–orbit coupling and vibronic transitions of Ce(C3H4) and Ce(C3H6) formed by the Ce reaction with propene: Mass-analyzed threshold ionization and relativistic quantum computation. Journal of Chemical Physics, 2020, 152, 144304.	1.2	7
380	Quantum electronic control on chemical activation of methane by collision with spin–orbit state selected vanadium cation. Physical Chemistry Chemical Physics, 2021, 23, 273-286.	1.3	7
381	Conversion of carbon dioxide to a novel molecule NCNBO <sup>â^'</sup> mediated by NbBN <sub>2</sub> <sup>â^'</sup> anions at room temperature. Physical Chemistry Chemical Physics, 2021, 23, 22613-22619.	1.3	2
382	Detection of intermediates for diatomic [TaO]+ catalyzed gas-phase reaction of methane coupling to ethane and ethylene by ICP-MS/MS. Microchemical Journal, 2021, 161, 105762.	2.3	5
383	Near-Thermal Reactions of Au <sup>+</sup> ( <sup>1</sup> S, <sup>3</sup> D) and AuX <sup>+</sup> with CH <sub>3</sub> X (X = Br, I): A Combined Experimental and Computational Analysis. Journal of Physical Chemistry A, 2021, 125, 1696-1710.	1.1	0
384	Modeling Metal-Catalyzed Polyethylene Depolymerization: [(Phen)Pd(X)]+ (X = H and CH3) Catalyze the Decomposition of Hexane into a Mixture of Alkenes via a Complex Reaction Network. Organometallics, 2021, 40, 857-868.	1.1	7
385	Photooxidation of Isoprene by Titanium Oxide Cluster Anions with Dimensions up to a Nanosize. Journal of the American Chemical Society, 2021, 143, 3951-3958.	6.6	15
386	Design and tailoring of advanced catalytic process for light alkanes upgrading. EcoMat, 2021, 3, e12095.	6.8	10
387	Structural characterization of [M,C,2H]+ products formed by reaction of 5d metal cations Pt+ and Ir+ with ethylene oxide and Ta+ with methane using messenger spectroscopy. Journal of Molecular Spectroscopy, 2021, 378, 111472.	0.4	8

	CITATION R	CITATION REPORT	
#	ARTICLE Structures of M <sup>+</sup> (CH <sub>4</sub> ) <sub><i>n</i></sub> (M = Ti, V) Based on Vibrational	IF 1.1	CITATIONS
389	Spectroscopy and Density Functional Theory. Journal of Physical Chemistry A, 2021, 125, 4143-4151. Ion spectroscopy in methane activation. Mass Spectrometry Reviews, 2022, 41, 513-528.	2.8	13
390	Charge frustration in ligand design and functional group transfer. Nature Reviews Chemistry, 2021, 5, 422-439.	13.8	25
391	High-Level ab Initio Predictions for the Ionization Energies, Bond Dissociation Energies, and Heats of Formation of Vanadium Methylidene, Vanadium Methyl Species, and Their Cations (VCH2/VCH2+,) Tj ETQq1 1 0	.78 <b>1</b> 314 rg	gBT /Overloc
392	The relativistic effects on the methane activation by gold(I) cations. Journal of Chemical Physics, 2021, 154, 244113.	1.2	1
393	Modular Ion Mobility Calibrants for Organometallic Anions Based on Tetraorganylborate Salts. Analytical Chemistry, 2021, 93, 9797-9807.	3.2	2
394	Terminal Imido Complexes of the Groups 9–11: Electronic Structure and Developments in the Last Decade. European Journal of Inorganic Chemistry, 2021, 2021, 4147-4166.	1.0	29
395	Extraterrestrial Organic Molecules from [SiX]+ Ions: A Coupled Cluster Theory Inquest for Plausible Reaction Pathways. ACS Earth and Space Chemistry, 2021, 5, 2086-2093.	1.2	0
396	Bonding, Thermodynamics, and Dissociation Dynamics of NiO <sup>+</sup> and NiS <sup>+</sup> Determined by Photofragment Imaging and Theory. Journal of Physical Chemistry A, 2021, 125, 7425-7436.	1.1	4
397	Quadruple C–H Bond Activations of Methane by Dinuclear Rhodium Carbide Cation [Rh <sub>2</sub> C <sub>3</sub> ] <sup>+</sup> . Jacs Au, 2021, 1, 1631-1638.	3.6	6
398	Reactivity of Copper(III)–Oxo Complexes in the Gas Phase. ChemPhysChem, 2017, 18, 2217-2224.	1.0	17
399	Vibrational Spectroscopy of Fe <sub>3</sub> <sup>+</sup> (CH <sub>4</sub> ) <sub><i>n</i></sub> ( <i>n</i> = 1–3) and Fe <sub>4</sub> <sup>+</sup> (CH <sub>4</sub> ) <sub>4</sub> . Journal of Physical Chemistry A, 2017, 121, 2132-2137.	1.1	15
400	Activation of dinitrogen by gas-phase species. Chinese Journal of Chemical Physics, 2020, 33, 507-520.	0.6	28
401	IR multiple photon dissociation spectroscopy of MO2+ (M = V, Nb, Ta). Journal of Chemical Physics, 2020, 153, 171101.	1.2	7
402	Density Functional Theory Study of Competitive Reaction Pathways of Ti <sup>+</sup> with Fluorinated Acetone in the Gas Phase. Journal of the Korean Chemical Society, 2012, 56, 14-19.	0.2	1
403	Methane Activation by (MoO <sub>3</sub> ) <sub>5</sub> O <sup>â^'</sup> Cluster Anions: The Importance of Orbital Orientation. Chemistry - A European Journal, 2022, 28, .	1.7	6
404	A ship-lock-type reactor for ion–molecule reactions of mass-selected ions under high-pressure conditions. Review of Scientific Instruments, 2021, 92, 104104.	0.6	7
405	Advancing Inorganic Coordination Chemistry by Spectroscopy of Isolated Molecules: Methods and Applications. Chemistry - A European Journal, 2021, 27, 15028-15043.	1.7	9

#	Article	IF	CITATIONS
406	Cyclotrimerization of Acetylene under Thermal Conditions: Gas-Phase Kinetics of V <sup>+</sup> and Fe <sup>+</sup> + C <sub>2</sub> H <sub>2</sub> . Journal of Physical Chemistry A, 2021, 125, 9327-9337.	1.1	8
407	Metal Cluster Catalysis. , 2020, , 215-239.		2
408	Carbidâ€Dihydride: kohlenstoffhaltige Spezies identifiziert in der Ta 4 + â€vermittelten Methandehydrierung. Angewandte Chemie, 2020, 132, 23838-23842.	1.6	2
409	Identification of a Two oordinate Iron(I)â€Oxalate Complex. Angewandte Chemie, 0, , .	1.6	0
410	Experiment and Theory Clarify: Sc + Receives One Oxygen Atom from SO 2 to Form ScO + , which Proves to be a Catalyst for the Hidden Oxygenâ€Exchange with SO 2. ChemPhysChem, 2021, , .	1.0	2
411	Identification of a Two oordinate Iron(I)–Oxalate Complex. Angewandte Chemie - International Edition, 2022, 61, .	7.2	2
412	Sulfonyl Nitrene and Amidyl Radical: Structure and Reactivity. Chemistry - A European Journal, 2022, , .	1.7	1
413	IR Spectroscopic Characterization of Methane Adsorption on Copper Clusters Cu <sub><i>n</i></sub> <sup>+</sup> ( <i>n</i> = 2–4). Journal of the American Society for Mass Spectrometry, 2022, 33, 1393-1400.	1.2	4
414	Conversion of CH <sub>4</sub> Catalyzed by Gas Phase Ions Containing Metals. Chemistry - A European Journal, 2022, 28, e202200062.	1.7	5
415	Dinitrogen Activation by Dihydrogen and Quaternary Cluster Anions AuNbBO <sup>–</sup> : Nb- and B-Mediated N <sub>2</sub> Activation and Au-Assisted Nitrogen Transfer. Journal of Physical Chemistry Letters, 2022, 13, 4058-4063.	2.1	10
416	ESI and tandem MS for mechanistic studies with high-valent transition metal species. Dalton Transactions, 2022, 51, 8625-8639.	1.6	0
417	The gas phase reaction of iridium and iridium carbide anions with 2-hydoxyethylhydrazine (HEH). International Journal of Mass Spectrometry, 2022, , 116875.	0.7	0
418	C–H Bond Activation and C–C Coupling of Methane on a Single Cationic Platinum Center: A Spectroscopic and Theoretical Study. Inorganic Chemistry, 2022, 61, 11252-11260.	1.9	7
419	Pyrolysis of mass-selected (V <sub>2</sub> O <sub>5</sub> ) <sub><i>N</i></sub> O <sup>â^'</sup> ( <i>N</i> = 1–6) clusters in a high-temperature linear ion trap reactor. Journal of Chemical Physics, 2022, 157, 114301.	1.2	5
420	Plasmaâ€Assisted Coupling Reactions of Dinitrogen and Carbon Dioxide Mediated by Monometallic YB <sub>1–4</sub> <sup>â^`</sup> â‹Anions: Carbonâ^`Nitrogen Bond Formation. Chemistry - A European Journal, 2022, 28, .	1.7	2
421	Unmasking the Iron–Oxo Bond of the [(Ligand)Fe-OIAr] <sup>2+/+</sup> Complexes. Journal of the American Society for Mass Spectrometry, 0, , .	1.2	1
422	Triplet-Quintet Spin-Crossover Efficiency InÂÎ'-Hydrogen Transfer between Fe(C2h5)+ÂAnd Hfe(C2h4)+. SSRN Electronic Journal, 0, , .	0.4	0
423	CH4 activation by PtX+ (X = F, Cl, Br, I). Frontiers in Chemistry, 0, 10, .	1.8	Ο

#	Article	IF	CITATIONS
425	Triplet-quintet spin-crossover efficiency in β-hydrogen transfer between Fe(C2H5)+ and HFe(C2H4)+. Computational and Theoretical Chemistry, 2022, 1217, 113888.	1.1	3
426	Photocatalytic Oxidative Dehydrogenation of Propane for Selective Propene Production with TiO <sub>2</sub> . Jacs Au, 2022, 2, 2607-2616.	3.6	3
427	Introducing Ion Mobility Mass Spectrometry to Identify Site-Selective C–H Bond Activation in N-Heterocyclic Carbene Metal Complexes. Journal of the American Society for Mass Spectrometry, 2022, 33, 2291-2300.	1.2	2
428	Dramatic Sizeâ€dependence of Rh <sub>n</sub> <sup>+</sup> Clusters in Reacting with Small Hydrocarbons: Rh <sub>3</sub> <sup>+</sup> Cluster Catalysis for Dehydrogenation. ChemistrySelect, 2022, 7, .	0.7	1
429	Weak Interactions Initiate Câ´'H and Câ´'C Bond Dissociation of Ethane on Nb <sub><i>n</i></sub> <sup>+</sup> Clusters. ChemPhysChem, 2023, 24, .	1.0	0
430	Two Carbon Dioxide Molecules Consecutively Reduced by Metal-Free B <sub>2</sub> O <sub>2</sub> <sup>–</sup> Anions. Journal of Physical Chemistry A, 2023, 127, 3082-3087.	1.1	0
431	Highâ€performance Mn2O3â€Na2WO4/SiO2â€TiO2 catalyst for the oxidative coupling of methane: TiO2â€modulated MnTiO3 formation for enhanced lowâ€ŧemperature performance. ChemCatChem, 0, , .	1.8	0
437	Methane activation by [LnO]+: the 4f orbital matters. Science China Chemistry, 0, , .	4.2	0