Katharina Kohse-HÃ¶inghaus

List of Publications by Year
in descending order

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77 papers	6,041 citations	71102 41 h-index	69250 77 g-index
80 all docs	80 docs citations	80 times ranked	3392 citing authors

#	Article	IF	Citations
1	Alcohol combustion chemistry. Progress in Energy and Combustion Science, 2014, 44, 40-102.	31.2	687
2	Biofuel Combustion Chemistry: From Ethanol to Biodiesel. Angewandte Chemie - International Edition, 2010, 49, 3572-3597.	13.8	587
3	A comprehensive chemical kinetic combustion model for the four butanol isomers. Combustion and Flame, 2012, 159, 2028-2055.	5.2	463
4	Recent contributions of flame-sampling molecular-beam mass spectrometry to a fundamental understanding of combustion chemistry. Progress in Energy and Combustion Science, 2009, 35, 168-191.	31.2	316
5	Combustion at the focus: laser diagnostics and control. Proceedings of the Combustion Institute, 2005, 30, 89-123.	3.9	275
6	Advanced Biofuels and Beyond: Chemistry Solutions for Propulsion and Production. Angewandte Chemie - International Edition, 2017, 56, 5412-5452.	13.8	224
7	Combustion of butanol isomers â€“ A detailed molecular beam mass spectrometry investigation of their flame chemistry. Combustion and Flame, 2011, 158, 2-15.	5.2	196
8	Detection and Identification of the Keto-Hydroperoxide (HOOCH₂OCHO) and Other Intermediates during Low-Temperature Oxidation of Dimethyl Ether. Journal of Physical Chemistry A, 2015, 119, 7361-7374.	2.5	143
9	Sampling Probe Influences on Temperature and Species Concentrations in Molecular Beam Mass Spectroscopic Investigations of Flat Premixed Low-pressure Flames. Zeitschrift Fur Physikalische Chemie, 2009, 223, 503-537.	2.8	134
10	Detailed mass spectrometric and modeling study of isomeric butene flames. Combustion and Flame, 2013, 160, 487-503.	5.2	130
11	Combustion chemistry and flame structure of furan group biofuels using molecular-beam mass spectrometry and gas chromatography â€“ Part III: 2,5-Dimethylfuran. Combustion and Flame, 2014, 161, 780-797.	5.2	127
12	Experimental and kinetic modeling study of the low- and intermediate-temperature oxidation of dimethyl ether. Combustion and Flame, 2015, 162, 1113-1125.	5.2	120
13	Combustion chemistry and flame structure of furan group biofuels using molecular-beam mass spectrometry and gas chromatography â€“ Part I: Furan. Combustion and Flame, 2014, 161, 748-765.	5.2	117
14	Unraveling the structure and chemical mechanisms of highly oxygenated intermediates in oxidation of organic compounds. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13102-13107.	7.1	117
15	Combustion chemistry and flame structure of furan group biofuels using molecular-beam mass spectrometry and gas chromatography â€“ Part II: 2-Methylfuran. Combustion and Flame, 2014, 161, 766-779.	5.2	110
16	Comprehensive kinetic modeling and experimental study of a fuel-rich, premixed n-heptane flame. Combustion and Flame, 2015, 162, 2045-2058.	5.2	107
17	Flame structure and kinetic studies of carbon dioxide-diluted dimethyl ether flames at reduced and elevated pressures. Combustion and Flame, 2013, 160, 2654-2668.	5.2	95
18	Additional chain-branching pathways in the low-temperature oxidation of branched alkanes. Combustion and Flame, 2016, 164, 386-396.	5.2	94

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19	Investigating repetitive reaction pathways for the formation of polycyclic aromatic hydrocarbons in combustion processes. Combustion and Flame, 2017, 180, 250-261.	5.2	88
20	Experimental and numerical low-temperature oxidation study of ethanol and dimethyl ether. Combustion and Flame, 2014, 161, 384-397.	5.2	76
21	Fuel-nitrogen conversion in the combustion of small amines using dimethylamine and ethylamine as biomass-related model fuels. Combustion and Flame, 2012, 159, 2254-2279.	5.2	74
22	Photoelectronâ€“photoion coincidence spectroscopy for multiplexed detection of intermediate species in a flame. Physical Chemistry Chemical Physics, 2014, 16, 22791-22804.	2.8	74
23	Photoionization mass spectrometry and modeling studies of the chemistry of fuel-rich dimethyl ether flames. Proceedings of the Combustion Institute, 2007, 31, 285-293.	3.9	71
24	Composition of reaction intermediates for stoichiometric and fuel-rich dimethyl ether flames: flame-sampling mass spectrometry and modeling studies. Physical Chemistry Chemical Physics, 2009, 11, 1328.	2.8	68
25	n-Heptane cool flame chemistry: Unraveling intermediate species measured in a stirred reactor and motored engine. Combustion and Flame, 2018, 187, 199-216.	5.2	68
26	Imaging Nanocarbon Materials: Soot Particles in Flames are Not Structurally Homogeneous. ChemPhysChem, 2013, 14, 3248-3254.	2.1	66
27	Combustion in the future: The importance of chemistry. Proceedings of the Combustion Institute, 2021, 38, 1-56.	3.9	66
28	Comparative experimental and modeling study of the low- to moderate-temperature oxidation chemistry of 2,5-dimethylfuran, 2-methylfuran, and furan. Combustion and Flame, 2017, 181, 251-269.	5.2	61
29	Clean combustion: Chemistry and diagnostics for a systems approach in transportation and energy conversion. Progress in Energy and Combustion Science, 2018, 65, 1-5.	31.2	60
30	Influence of substituted furans on the formation of Polycyclic Aromatic Hydrocarbons in flames. Proceedings of the Combustion Institute, 2015, 35, 1735-1743.	3.9	59
31	Electron ionization, photoionization and photoelectron/photoion coincidence spectroscopy in mass-spectrometric investigations of a low-pressure ethylene/oxygen flame. Proceedings of the Combustion Institute, 2015, 35, 779-786.	3.9	58
32	Influences of the molecular fuel structure on combustion reactions towards soot precursors in selected alkane and alkene flames. Physical Chemistry Chemical Physics, 2018, 20, 10780-10795.	2.8	57
33	Investigation of the size of the incandescent incipient soot particles in premixed sooting and nucleation flames of <i>n</i>-butane using LII, HIM, and 1 nm-SMPS. Aerosol Science and Technology, 2017, 51, 916-935.	3.1	56
34	Toward a better understanding of 2-butanone oxidation: Detailed species measurements and kinetic modeling. Combustion and Flame, 2017, 184, 195-207.	5.2	53
35	Low-temperature gas-phase oxidation of diethyl ether: Fuel reactivity and fuel-specific products. Proceedings of the Combustion Institute, 2019, 37, 511-519.	3.9	52
36	Experimental and kinetic modeling study of diethyl ether flames. Proceedings of the Combustion Institute, 2017, 36, 1165-1173.	3.9	50

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37	Kinetic studies of methyl acetate pyrolysis and oxidation in a flow reactor and a low-pressure flat flame using molecular-beam mass spectrometry. Proceedings of the Combustion Institute, 2015, 35, 491-498.	3.9	45
38	Nickel and Nickel-Based Nanoalloy Thin Films from Alcohol-Assisted Chemical Vapor Deposition. Chemistry of Materials, 2010, 22, 92-100.	6.7	44
39	Synthese, motorische Verbrennung, Emissionen: Chemische Aspekte des Kraftstoffdesigns. Angewandte Chemie, 2017, 129, 5500-5544.	2.0	43
40	Contributions to improving small ester combustion chemistry: Theory, model and experiments. Proceedings of the Combustion Institute, 2017, 36, 543-551.	3.9	42
41	Consumption and hydrocarbon growth processes in a 2-methyl-2-butene flame. Combustion and Flame, 2017, 175, 34-46.	5.2	42
42	Selective synthesis of Î±-Fe2O3 thin films and effect of the deposition temperature and lattice oxygen on the catalytic combustion of propene. Journal of Materials Chemistry A, 2013, 1, 10495.	10.3	41
43	Direct numerical simulations of probe effects in low-pressure flame sampling. Proceedings of the Combustion Institute, 2015, 35, 821-829.	3.9	40
44	Influence of the biofuel isomers diethyl ether and n-butanol on flame structure and pollutant formation in premixed n-butane flames. Combustion and Flame, 2017, 175, 47-59.	5.2	36
45	Chemical interaction of dual-fuel mixtures in low-temperature oxidation, comparing n-pentane/dimethyl ether and n-pentane/ethanol. Combustion and Flame, 2018, 193, 36-53.	5.2	33
46	Controlled synthesis of Co3O4 spinel with Co(acac)3 as precursor. RSC Advances, 2012, 2, 10809.	3.6	32
47	Advances in the deposition chemistry of metal-containing thin films using gas phase processes. Chemical Science, 2012, 3, 929-941.	7.4	29
48	Laminar premixed and non-premixed flame investigation on the influence of dimethyl ether addition on n-heptane combustion. Combustion and Flame, 2020, 212, 323-336.	5.2	28
49	A laminar flame study on di-n-butyl ether as a potential biofuel candidate. Combustion and Flame, 2018, 190, 36-49.	5.2	27
50	Influence of dimethyl ether and diethyl ether addition on the flame structure and pollutant formation in premixed iso-octane flames. Combustion and Flame, 2017, 184, 41-54.	5.2	26
51	Probing the low-temperature chemistry of di-n-butyl ether: Detection of previously unobserved intermediates. Combustion and Flame, 2019, 210, 9-24.	5.2	26
52	A laminar flame investigation of 2-butanone, and the combustion-related intermediates formed through its oxidation. Proceedings of the Combustion Institute, 2017, 36, 1175-1183.	3.9	23
53	Isomer Identification in Flames with Double-Imaging Photoelectron/Photoion Coincidence Spectroscopy (i²PEPICO) using Measured and Calculated Reference Photoelectron Spectra. Zeitschrift Fur Physikalische Chemie, 2018, 232, 153-187.	2.8	23
54	Intermediate species detection in a morpholine flame: contributions to fuel-bound nitrogen conversion from a model biofuel. Experiments in Fluids, 2010, 49, 761-773.	2.4	20

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55	A new era for combustion research. Pure and Applied Chemistry, 2019, 91, 271-288.	1.9	20
56	Formation of Oxygenated and Hydrocarbon Intermediates in Premixed Combustion of 2-Methylfuran. Zeitschrift Fur Physikalische Chemie, 2015, 229, 507-528.	2.8	19
57	Combustion Chemistry Diagnostics for Cleaner Processes. Chemistry - A European Journal, 2016, 22, 13390-13401.	3.3	17
58	Inhibiting and promoting effects of NO on dimethyl ether and dimethoxymethane oxidation in a plug-flow reactor. Combustion and Flame, 2021, 224, 94-107.	5.2	17
59	Progress in Fixed-Photon-Energy Time-Efficient Double Imaging Photoelectron/Photoion Coincidence Measurements in Quantitative Flame Analysis. Zeitschrift Fur Physikalische Chemie, 2016, 230, 1067-1097.	2.8	16
60	Insights into the interaction kinetics between propene and NOx at moderate temperatures with experimental and modeling methods. Proceedings of the Combustion Institute, 2021, 38, 795-803.	3.9	15
61	Dimethyl ether (DME) and dimethoxymethane (DMM) as reaction enhancers for methane: Combining flame experiments with model-assisted exploration of a polygeneration process. Combustion and Flame, 2022, 237, 111863.	5.2	15
62	Chemical insights into the larger sooting tendency of 2-methyl-2-butene compared to n-pentane. Combustion and Flame, 2019, 208, 182-197.	5.2	13
63	An experimental laminar flame investigation of dual-fuel mixtures of C4 methyl esters with C2â€“C4 hydrocarbon base fuels. Proceedings of the Combustion Institute, 2019, 37, 1725-1732.	3.9	13
64	Dimethyl ether oxidation analyzed in a given flow reactor: Experimental and modeling uncertainties. Combustion and Flame, 2022, 240, 111998.	5.2	13
65	Experimental investigation of partially premixed, highly-diluted dimethyl ether flames at low temperatures. Proceedings of the Combustion Institute, 2013, 34, 763-770.	3.9	12
66	Homogeneous conversion of NO_x and NH₃ with CH₄, CO, and C₂H₄ at the diluted conditions of exhaustâ€gases of lean operated natural gas engines. International Journal of Chemical Kinetics, 2021, 53, 213-229.	1.6	12
67	Elevated pressure low-temperature oxidation of linear five-heavy-atom fuels: diethyl ether, n-pentane, and their mixture. Zeitschrift Fur Physikalische Chemie, 2020, 234, 1269-1293.	2.8	11
68	Low- and high-temperature study of n-heptane combustion chemistry. Proceedings of the Combustion Institute, 2021, 38, 405-413.	3.9	9
69	Exploring the interaction kinetics of butene isomers and NOx at low temperatures and diluted conditions. Combustion and Flame, 2021, 233, 111557.	5.2	8
70	Investigation of the Growth Behaviour of Cobalt Thin Films from Chemical Vapour Deposition, Using Directly Coupled X-ray Photoelectron Spectroscopy. Zeitschrift Fur Physikalische Chemie, 2015, 229, 1887-1905.	2.8	7
71	A numerical study of highly-diluted, burner-stabilised dimethyl etherÂflames. Combustion Theory and Modelling, 2015, 19, 238-259.	1.9	6
72	Kinetics in the real world: linking molecules, processes, and systems. Physical Chemistry Chemical Physics, 2018, 20, 10561-10568.	2.8	5

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73	Detecting combustion intermediates via broadband chirped-pulse microwave spectroscopy. Proceedings of the Combustion Institute, 2021, 38, 1761-1769.	3.9	4
74	Unusual two-dimensional electrical charge transport at the surface of polycrystalline perovskite ultrathin films. Journal of Applied Physics, 2009, 106, 073714.	2.5	3
75	Explore the Unknownâ€"The Value of Basic Research. Angewandte Chemie - International Edition, 2019, 58, 17882-17884.	13.8	2
76	Das Unbekannte erforschen â€" der Wert der Grundlagenforschung. Angewandte Chemie, 2019, 131, 18048-18050.	2.0	2
77	Titelbild: Synthese, motorische Verbrennung, Emissionen: Chemische Aspekte des Kraftstoffdesigns (Angew. Chem. 20/2017). Angewandte Chemie, 2017, 129, 5457-5457.	2.0	0