Katharina Kohse-Hinghaus

List of Publications by Citations

75 papers	4,919 citations	37 h-index	70 g-index
80 ext. papers	5,621 ext. citations	6.5 avg, IF	5.85 L-index

#	Paper	IF	Citations
75	Alcohol combustion chemistry. *Progress in Energy and Combustion Science*, **2014**, 44, 40-102	33.6	534
74	Biofuel combustion chemistry: from ethanol to biodiesel. *Angewandte Chemie - International Edition* , **2010**, 49, 3572-97	16.4	506
73	A comprehensive chemical kinetic combustion model for the four butanol isomers. *Combustion and Flame*, **2012**, 159, 2028-2055	5.3	407
72	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	33.6	275
71	Combustion at the focus: laser diagnostics and control. *Proceedings of the Combustion Institute*, **2005**, 30, 89-123	5.9	223
70	Advanced Biofuels and Beyond: Chemistry Solutions for Propulsion and Production. *Angewandte Chemie - International Edition*, **2017**, 56, 5412-5452	16.4	175
69	Combustion of butanol isomers – A detailed molecular beam mass spectrometry investigation of their flame chemistry. *Combustion and Flame*, **2011**, 158, 2-15	5.3	173
68	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	3.1	128
67	Combustion chemistry and flame structure of furan group biofuels using molecular-beam mass spectrometry and gas chromatography - Part III: 2,5-Dimethylfuran. *Combustion and Flame*, **2014**, 161, 780-797	5.3	113
66	Detailed mass spectrometric and modeling study of isomeric butene flames. *Combustion and Flame*, **2013**, 160, 487-503	5.3	112
65	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, 7361-74	2.8	111
64	Combustion chemistry and flame structure of furan group biofuels using molecular-beam mass spectrometry and gas chromatography - Part I: Furan. *Combustion and Flame*, **2014**, 161, 748-765	5.3	105
63	Combustion chemistry and flame structure of furan group biofuels using molecular-beam mass spectrometry and gas chromatography - Part II: 2-Methylfuran. *Combustion and Flame*, **2014**, 161, 766-779	5.3	95
62	Experimental and kinetic modeling study of the low- and intermediate-temperature oxidation of dimethyl ether. *Combustion and Flame*, **2015**, 162, 1113-1125	5.3	89
61	Comprehensive kinetic modeling and experimental study of a fuel-rich, premixed n-heptane flame. *Combustion and Flame*, **2015**, 162, 2045-2058	5.3	84
60	Flame structure and kinetic studies of carbon dioxide-diluted dimethyl ether flames at reduced and elevated pressures. *Combustion and Flame*, **2013**, 160, 2654-2668	5.3	80
59	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	11.5	80

58	Investigating repetitive reaction pathways for the formation of polycyclic aromatic hydrocarbons in combustion processes. *Combustion and Flame*, **2017**, 180, 250-261	5.3	74
57	Additional chain-branching pathways in the low-temperature oxidation of branched alkanes. *Combustion and Flame*, **2016**, 164, 386-396	5.3	72
56	Photoionization mass spectrometry and modeling studies of the chemistry of fuel-rich dimethyl ether flames. *Proceedings of the Combustion Institute*, **2007**, 31, 285-293	5.9	69
55	Experimental and numerical low-temperature oxidation study of ethanol and dimethyl ether. *Combustion and Flame*, **2014**, 161, 384-397	5.3	67
54	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, 1328-39	3.6	61
53	Photoelectron-photoion coincidence spectroscopy for multiplexed detection of intermediate species in a flame. *Physical Chemistry Chemical Physics*, **2014**, 16, 22791-804	3.6	59
52	Imaging nanocarbon materials: soot particles in flames are not structurally homogeneous. *ChemPhysChem*, **2013**, 14, 3248-54	3.2	57
51	Influence of substituted furans on the formation of Polycyclic Aromatic Hydrocarbons in flames. *Proceedings of the Combustion Institute*, **2015**, 35, 1735-1743	5.9	55
50	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	5.3	51
49	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	5.3	48
48	n-Heptane cool flame chemistry: Unraveling intermediate species measured in a stirred reactor and motored engine. *Combustion and Flame*, **2018**, 187, 199-216	5.3	47
47	Investigation of the size of the incandescent incipient soot particles in premixed sooting and nucleation flames of n-butane using LII, HIM, and 1 nm-SMPS. *Aerosol Science and Technology*, **2017**, 51, 916-935	3.4	46
46	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	3.6	46
45	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	5.9	44
44	Clean combustion: Chemistry and diagnostics for a systems approach in transportation and energy conversion. *Progress in Energy and Combustion Science*, **2018**, 65, 1-5	33.6	43
43	Experimental and kinetic modeling study of diethyl ether flames. *Proceedings of the Combustion Institute*, **2017**, 36, 1165-1173	5.9	41
42	Nickel and Nickel-Based Nanoalloy Thin Films from Alcohol-Assisted Chemical Vapor Deposition. *Chemistry of Materials*, **2010**, 22, 92-100	9.6	41
41	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	5.9	40

40	Contributions to improving small ester combustion chemistry: Theory, model and experiments. *Proceedings of the Combustion Institute*, **2017**, 36, 543-551	5.9	38
39	Toward a better understanding of 2-butanone oxidation: Detailed species measurements and kinetic modeling. *Combustion and Flame*, **2017**, 184, 195-207	5.3	38
38	Selective synthesis of □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	13	37
37	Low-temperature gas-phase oxidation of diethyl ether: Fuel reactivity and fuel-specific products. *Proceedings of the Combustion Institute*, **2019**, 37, 511-519	5.9	36
36	Direct numerical simulations of probe effects in low-pressure flame sampling. *Proceedings of the Combustion Institute*, **2015**, 35, 821-829	5.9	36
35	Synthese, motorische Verbrennung, Emissionen: Chemische Aspekte des Kraftstoffdesigns. *Angewandte Chemie*, **2017**, 129, 5500-5544	3.6	35
34	Consumption and hydrocarbon growth processes in a 2-methyl-2-butene flame. *Combustion and Flame*, **2017**, 175, 34-46	5.3	34
33	Combustion in the future: The importance of chemistry. *Proceedings of the Combustion Institute*, **2020**,	5.9	31
32	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	5.3	28
31	Advances in the deposition chemistry of metal-containing thin films using gas phase processes. *Chemical Science*, **2012**, 3, 929-941	9.4	26
30	Controlled synthesis of Co3O4 spinel with Co(acac)3 as precursor. *RSC Advances*, **2012**, 2, 10809	3.7	25
29	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	5.3	23
28	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	5.3	23
27	A laminar flame study on di-n-butyl ether as a potential biofuel candidate. *Combustion and Flame*, **2018**, 190, 36-49	5.3	21
26	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	5.3	21
25	Intermediate species detection in a morpholine flame: contributions to fuel-bound nitrogen conversion from a model biofuel. *Experiments in Fluids*, **2010**, 49, 761-773	2.5	19
24	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	3.1	18
23	Formation of Oxygenated and Hydrocarbon Intermediates in Premixed Combustion of 2-Methylfuran. *Zeitschrift Fur Physikalische Chemie*, **2015**, 229, 507-528	3.1	17

22	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	5.9	17
21	Probing the low-temperature chemistry of di-n-butyl ether: Detection of previously unobserved intermediates. *Combustion and Flame*, **2019**, 210, 9-24	5.3	16
20	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	3.1	15
19	Combustion Chemistry Diagnostics for Cleaner Processes. *Chemistry - A European Journal*, **2016**, 22, 13390-13401	4.8	12
18	Experimental investigation of partially premixed, highly-diluted dimethyl ether flames at low temperatures. *Proceedings of the Combustion Institute*, **2013**, 34, 763-770	5.9	12
17	An experimental laminar flame investigation of dual-fuel mixtures of C4 methyl esters with C2-C4 hydrocarbon base fuels. *Proceedings of the Combustion Institute*, **2019**, 37, 1725-1732	5.9	12
16	A new era for combustion research. *Pure and Applied Chemistry*, **2019**, 91, 271-288	2.1	11
15	Chemical insights into the larger sooting tendency of 2-methyl-2-butene compared to n-pentane. *Combustion and Flame*, **2019**, 208, 182-197	5.3	11
14	Inhibiting and promoting effects of NO on dimethyl ether and dimethoxymethane oxidation in a plug-flow reactor. *Combustion and Flame*, **2021**, 224, 94-107	5.3	11
13	A numerical study of highly-diluted, burner-stabilised dimethyl ether flames. *Combustion Theory and Modelling*, **2015**, 19, 238-259	1.5	6
12	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	3.1	6
11	Low- and high-temperature study of n-heptane combustion chemistry. *Proceedings of the Combustion Institute*, **2021**, 38, 405-413	5.9	6
10	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	3.1	5
9	Homogeneous conversion of NOx and NH3 with CH4, CO, and C2H4 at the diluted conditions of exhaust-gases of lean operated natural gas engines. *International Journal of Chemical Kinetics*, **2021**, 53, 213-229	1.4	5
8	Unusual two-dimensional electrical charge transport at the surface of polycrystalline perovskite ultrathin films. *Journal of Applied Physics*, **2009**, 106, 073714	2.5	3
7	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	5.9	3
6	Detecting combustion intermediates via broadband chirped-pulse microwave spectroscopy. *Proceedings of the Combustion Institute*, **2021**, 38, 1761-1769	5.9	2
5	Exploring the interaction kinetics of butene isomers and NOx at low temperatures and diluted conditions. *Combustion and Flame*, **2021**, 233, 111557	5.3	2

4	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	5.3	1
3	Dimethyl ether oxidation analyzed in a given flow reactor: Experimental and modeling uncertainties. *Combustion and Flame*, **2022**, 240, 111998	5.3	0
2	Das Unbekannte erforschen – der Wert der Grundlagenforschung. *Angewandte Chemie*, **2019**, 131, 18048-18050	3.6	0
1	Titelbild: Synthese, motorische Verbrennung, Emissionen: Chemische Aspekte des Kraftstoffdesigns (Angew. Chem. 20/2017). *Angewandte Chemie*, **2017**, 129, 5457-5457	3.6	