Patrick Osswald

List of Publications by Year
in descending order

57 papers	4,494 citations	147801 31 h-index	133252 59 g-index
59 all docs	59 docs citations	59 times ranked	2309 citing authors

#	Article	IF	Citations
1	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
2	Oxidation of oxymethylene ether (OME0â˜5): An experimental systematic study by mass spectrometry and photoelectron photoion coincidence spectroscopy. Fuel, 2022, 313, 122650.	6.4	9
3	Investigation of the combustion chemistry in laminar, low-pressure oxymethylene ether flames (OME0â€“4). Combustion and Flame, 2022, 243, 112060.	5.2	10
4	On the diversity of fossil and alternative gasoline combustion chemistry: A comparative flow reactor study. Combustion and Flame, 2022, 243, 111961.	5.2	5
5	Aircraft engine particulate matter emissions from sustainable aviation fuels: Results from ground-based measurements during the NASA/DLR campaign ECLIF2/ND-MAX. Fuel, 2022, 325, 124764.	6.4	13
6	Technical application of a ternary alternative jet fuel blend â€“ Chemical characterization and impact on jet engine particle emission. Fuel, 2021, 288, 119606.	6.4	10
7	Observation of lowâ€temperature chemistry products in laminar premixed lowâ€pressure flames by molecularâ€beam mass spectrometry. International Journal of Chemical Kinetics, 2021, 53, 1063-1081.	1.6	12
8	Combustion kinetics of alternative jet fuels, Part-I: Experimental flow reactor study. Fuel, 2021, 302, 120735.	6.4	24
9	Combustion kinetics of alternative jet fuels, Part-II: Reaction model for fuel surrogate. Fuel, 2021, 302, 120736.	6.4	17
10	Combustion kinetics of alternative jet fuels, Part-III: Fuel modeling and surrogate strategy. Fuel, 2021, 302, 120737.	6.4	9
11	Greener aromatic antioxidants for aviation and beyond. Sustainable Energy and Fuels, 2020, 4, 2153-2163.	4.9	4
12	Flame structure of laminar premixed anisole flames investigated by photoionization mass spectrometry and photoelectron spectroscopy. Proceedings of the Combustion Institute, 2019, 37, 1579-1587.	3.9	25
13	The fate of the OH radical in molecular beam sampling experiments. Proceedings of the Combustion Institute, 2019, 37, 1563-1570.	3.9	19
14	Modeling of aromatics formation in fuel-rich methane oxy-combustion with an automatically generated pressure-dependent mechanism. Physical Chemistry Chemical Physics, 2019, 21, 813-832.	2.8	32
15	Assessment of combustion properties of non-hydroprocessed Fischer-Tropsch fuels for aviation. Fuel Processing Technology, 2019, 193, 232-243.	7.2	39
16	Experimental Investigation of Soot Oxidation under Well-Controlled Conditions in a High-Temperature Flow Reactor. Combustion Science and Technology, 2019, 191, 1499-1519.	2.3	3
17	Hydrogen abstraction ratios: A systematic iPEPICO spectroscopic investigation in laminar flames. Combustion and Flame, 2018, 191, 343-352.	5.2	27
18	Combustion Chemistry of Fuels: Quantitative Speciation Data Obtained from an Atmospheric High-temperature Flow Reactor with Coupled Molecular-beam Mass Spectrometer. Journal of Visualized Experiments, 2018, , .	0.3	5

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19	Impact of Alternative Jet Fuels on Engine Exhaust Composition During the 2015 ECLIF Ground-Based Measurements Campaign. Environmental Science & Technology, 2018, 52, 4969-4978.	10.0	46
20	Experimental and mechanistic investigation of benzene formation during atmospheric pressure flow reactor oxidation of n-hexane, n-nonane, and n-dodecane below 1200â€¯K. Combustion and Flame, 2018, 194, 426-438.	5.2	24
21	Insights in m-xylene decomposition under fuel-rich conditions by imaging photoelectron photoion coincidence spectroscopy. Proceedings of the Combustion Institute, 2017, 36, 1223-1232.	3.9	42
22	Kinetics of Ethylene Glycol: The first validated reaction scheme and first measurements of ignition delay times and speciation data. Combustion and Flame, 2017, 179, 172-184.	5.2	31
23	Synthetische flÃ¼ssige Kohlenwasserstoffe aus erneuerbaren Energien â€“ Ergebnisse der Helmholtz Energieallianz. Chemie-Ingenieur-Technik, 2017, 89, 274-288.	0.8	9
24	An experimental flow reactor study of the combustion kinetics of terpenoid jet fuel compounds: Farnesane, p-menthane and p-cymene. Fuel, 2017, 187, 43-50.	6.4	55
25	Speciation data for fuel-rich methane oxy-combustion and reforming under prototypical partial oxidation conditions. Chemical Engineering Science, 2016, 139, 249-260.	3.8	26
26	An atmospheric pressure high-temperature laminar flow reactor for investigation of combustion and related gas phase reaction systems. Review of Scientific Instruments, 2015, 86, 105109.	1.3	34
27	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
28	1-, 2- and 3-Pentanol combustion in laminar hydrogen flames â€“ A comparative experimental and modeling study. Combustion and Flame, 2015, 162, 3197-3209.	5.2	32
29	Alcohol combustion chemistry. Progress in Energy and Combustion Science, 2014, 44, 40-102.	31.2	687
30	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
31	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
32	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
33	Experimental and numerical low-temperature oxidation study of ethanol and dimethyl ether. Combustion and Flame, 2014, 161, 384-397.	5.2	76
34	Flame chemistry of tetrahydropyran as a model heteroatomic biofuel. Proceedings of the Combustion Institute, 2013, 34, 259-267.	3.9	20
35	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
36	Detailed mass spectrometric and modeling study of isomeric butene flames. Combustion and Flame, 2013, 160, 487-503.	5.2	130

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37	Mass spectrometric investigation of the low-temperature dimethyl ether oxidation in an atmospheric pressure laminar flow reactor. Proceedings of the Combustion Institute, 2013, 34, 771-778.	3.9	60
38	Shock tube measurements and model development for morpholine pyrolysis and oxidation at high pressures. Combustion and Flame, 2013, 160, 1559-1571.	5.2	12
39	A comprehensive chemical kinetic combustion model for the four butanol isomers. Combustion and Flame, 2012, 159, 2028-2055.	5.2	463
40	Detailed kinetic modeling of the combustion of the four butanol isomers in premixed low-pressure flames. Combustion and Flame, 2012, 159, 2295-2311.	5.2	100
41	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
42	Fuel-structure dependence of benzene formation processes in premixed flames fueled by C6H12 isomers. Proceedings of the Combustion Institute, 2011, 33, 585-592.	3.9	66
43	Combustion Chemistry of the Butane Isomers in Premixed Low-Pressure Flames. Zeitschrift Fur Physikalische Chemie, 2011, 225, 1029-1054.	2.8	52
44	Biofuel Combustion Chemistry: From Ethanol to Biodiesel. Angewandte Chemie - International Edition, 2010, 49, 3572-3597.	13.8	587
45	Cover Picture: Biofuel Combustion Chemistry: From Ethanol to Biodiesel (Angew. Chem. Int. Ed.) Tj ETQq1 1 0.784314 rgBT /Overlock 1	13.8	5
46	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
47	Structure of a stoichiometric propanal flame at low pressure. Proceedings of the Combustion Institute, 2009, 32, 1285-1292.	3.9	32
48	Species identification in a laminar premixed low-pressure flame of morpholine as a model substance for oxygenated nitrogen-containing fuels. Proceedings of the Combustion Institute, 2009, 32, 1269-1276.	3.9	32
49	Combustion chemistry of the propanol isomers â€” investigated by electron ionization and VUV-photoionization molecular-beam mass spectrometry. Combustion and Flame, 2009, 156, 1181-1201.	5.2	91
50	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
51	A detailed chemical kinetic reaction mechanism for oxidation of four small alkyl esters in laminar premixed flames. Proceedings of the Combustion Institute, 2009, 32, 221-228.	3.9	127
52	Isomer-Specific Influences on the Composition of Reaction Intermediates in Dimethyl Ether/Propene and Ethanol/Propene Flame. Journal of Physical Chemistry A, 2008, 112, 9255-9265.	2.5	71
53	Noncatalytic thermocouple coatings produced with chemical vapor deposition for flame temperature measurements. Review of Scientific Instruments, 2007, 78, 013905.	1.3	21
54	Isomer-Specific Fuel Destruction Pathways in Rich Flames of Methyl Acetate and Ethyl Formate and Consequences for the Combustion Chemistry of Estersâ€. Journal of Physical Chemistry A, 2007, 111, 4093-4101.	2.5	109

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55	The influence of ethanol addition on premixed fuel-rich propeneâ€“oxygenâ€“argon flames. Proceedings of the Combustion Institute, 2007, 31, 1119-1127.	3.9	64
56	Identification of combustion intermediates in isomeric fuel-rich premixed butanolâ€“oxygen flames at low pressure. Combustion and Flame, 2007, 148, 198-209.	5.2	189
57	Ethanol flame structure investigated by molecular beam mass spectrometry. Combustion and Flame, 2007, 150, 220-231.	5.2	77