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	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	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
5	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
6	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
7	Detailed mass spectrometric and modeling study of isomeric butene flames. Combustion and Flame, 2013, 160, 487-503.	5.2	130
8	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
9	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
10	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
11	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
12	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
13	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
14	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
15	Ethanol flame structure investigated by molecular beam mass spectrometry. Combustion and Flame, 2007, 150, 220-231.	5.2	77
16	Experimental and numerical low-temperature oxidation study of ethanol and dimethyl ether. Combustion and Flame, 2014, 161, 384-397.	5.2	76
17	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
18	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

#	Article	IF	Citations
19	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
20	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
21	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
22	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
23	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
24	Combustion Chemistry of the Butane Isomers in Premixed Low-Pressure Flames. Zeitschrift Fur Physikalische Chemie, 2011, 225, 1029-1054.	2.8	52
25	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
26	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
27	Assessment of combustion properties of non-hydroprocessed Fischer-Tropsch fuels for aviation. Fuel Processing Technology, 2019, 193, 232-243.	7.2	39
28	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
29	Structure of a stoichiometric propanal flame at low pressure. Proceedings of the Combustion Institute, 2009, 32, 1285-1292.	3.9	32
30	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
31	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
32	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
33	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
34	Hydrogen abstraction ratios: A systematic iPEPICO spectroscopic investigation in laminar flames. Combustion and Flame, 2018, 191, 343-352.	5.2	27
35	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
36	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

#	Article	IF	Citations
37	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
38	Combustion kinetics of alternative jet fuels, Part-I: Experimental flow reactor study. Fuel, 2021, 302, 120735.	6.4	24
39	Noncatalytic thermocouple coatings produced with chemical vapor deposition for flame temperature measurements. Review of Scientific Instruments, 2007, 78, 013905.	1.3	21
40	Flame chemistry of tetrahydropyran as a model heteroatomic biofuel. Proceedings of the Combustion Institute, 2013, 34, 259-267.	3.9	20
41	The fate of the OH radical in molecular beam sampling experiments. Proceedings of the Combustion Institute, 2019, 37, 1563-1570.	3.9	19
42	Combustion kinetics of alternative jet fuels, Part-II: Reaction model for fuel surrogate. Fuel, 2021, 302, 120736.	6.4	17
43	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
44	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
45	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
46	Shock tube measurements and model development for morpholine pyrolysis and oxidation at high pressures. Combustion and Flame, 2013, 160, 1559-1571.	5.2	12
47	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
48	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
49	Investigation of the combustion chemistry in laminar, low-pressure oxymethylene ether flames (OME0â€"4). Combustion and Flame, 2022, 243, 112060.	5.2	10
50	Synthetische flÃ¼ssige Kohlenwasserstoffe aus erneuerbaren Energien â€" Ergebnisse der Helmholtz Energieallianz. Chemie-Ingenieur-Technik, 2017, 89, 274-288.	0.8	9
51	Combustion kinetics of alternative jet fuels, Part-III: Fuel modeling and surrogate strategy. Fuel, 2021, 302, 120737.	6.4	9
52	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
53	Cover Picture: Biofuel Combustion Chemistry: From Ethanol to Biodiesel (Angew. Chem. Int. Ed.) Tj ETQq1 1 0.784314 rgBT /Overlock	13.8	5
54	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

#	ARTICLE	IF	CITATIONS
55	On the diversity of fossil and alternative gasoline combustion chemistry: A comparative flow reactor study. Combustion and Flame, 2022, 243, 111961.	5.2	5
56	Greener aromatic antioxidants for aviation and beyond. Sustainable Energy and Fuels, 2020, 4, 2153-2163.	4.9	4
57	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