Matthew A Oehlschlaeger

List of Publications by Year
in descending order

86 papers	5,696 citations	81900 39 h-index	76900 74 g-index
87 all docs	87 docs citations	87 times ranked	2591 citing authors

#	Article	IF	Citations
1	Gas sensing for industrial relevant nitrogen-containing compounds using a microelectronics-based absorption spectrometer in the 220â€“330ÂGHz frequency range. Sensors and Actuators B: Chemical, 2022, 367, 132030.	7.8	5
2	Terahertz-Wave Absorption Gas Sensing for Dimethyl Sulfoxide. Applied Sciences (Switzerland), 2022, 12, 5729.	2.5	3
3	A 220â€“300 GHz Twin-FET Detector for Rotational Spectroscopy of Gas Mixtures. IEEE Sensors Journal, 2021, 21, 4553-4562.	4.7	9
4	Evaluation of machine learning methods for classification of rotational absorption spectra for gases in the 220â€“330ÂGHz range. Applied Physics B: Lasers and Optics, 2021, 127, 1.	2.2	9
5	VOC Gas Sensing Via Microelectronics-Based Absorption Spectroscopy at 220â€“330ÂGHz. Applied Physics B: Lasers and Optics, 2020, 126, 1.	2.2	14
6	Shock tube ignition delay time measurements for methyl propanoate and methyl acrylate: Influence of saturation on small methyl ester highâ€temperature reactivity. International Journal of Chemical Kinetics, 2020, 52, 712-722.	1.6	5
7	Sound generation by water drop impact on surfaces. Experimental Thermal and Fluid Science, 2020, 117, 110138.	2.7	8
8	All Electronic THz Wave Absorption Spectroscopy of Volatile Organic Compounds Between 220â€“330 GHz. , 2020, , .		1
9	Detection of Volatile Organic Compounds using a Single Transistor Terahertz Detector Implemented in Standard BiCMOS Technology. , 2019, , .		4
10	Towards Industrial THz Wave Electronic Gas Sensing and Spectroscopy. , 2019, , .		1
11	Lateral jetting during off-center drop collisions on substrates. International Journal of Heat and Mass Transfer, 2018, 122, 740-748.	4.8	1
12	Ignition delay times for jet and diesel fuels: Constant volume spray and gas-phase shock tube measurements. Fuel, 2018, 219, 312-319.	6.4	29
13	Constant volume spray ignition of C9-C10 biodiesel surrogates: Methyl decanoate, ethyl nonanoate, and methyl decenoates. Fuel, 2018, 224, 219-225.	6.4	10
14	Impact of non-ideal behavior on ignition delay and chemical kinetics in high-pressure shock tube reactors. Combustion and Flame, 2018, 189, 1-11.	5.2	37
15	Towards realization of quantitative atmospheric and industrial gas sensing using THz wave electronics. Applied Physics B: Lasers and Optics, 2018, 124, 1.	2.2	16
16	Spray ignition experiments for alkylbenzenes and alkylbenzene/n-alkane blends. Fuel, 2017, 195, 49-58.	6.4	10
17	Modeling nanofluid sessile drop evaporation. Heat and Mass Transfer, 2017, 53, 2341-2349.	2.1	6
18	Ignition characterization of F-76 and algae-derived HRD-76 at elevated temperatures and pressures. Combustion and Flame, 2017, 181, 157-163.	5.2	12

#	Article	IF	Citations
19	Comparative Study of the Ignition of 1-Decene, <i>trans</i>-5-Decene, and <i>n</i>-Decane: Constant-Volume Spray and Shock-Tube Experiments. Energy & Fuels, 2017, 31, 6493-6500.	5.1	17
20	Highâ€Fidelity Microstructural Characterization and Performance Modeling of Aluminized Composite Propellant. Propellants, Explosives, Pyrotechnics, 2017, 42, 1387-1395.	1.6	11
21	Diesel engine CFD simulations: Influence of fuel variability on ignition delay. Fuel, 2016, 181, 170-177.	6.4	28
22	Compositional effects on the ignition of FACE gasolines. Combustion and Flame, 2016, 169, 171-193.	5.2	174
23	Time-resolved carbon monoxide measurements during the low- to intermediate-temperature oxidation of n-heptane, n-decane, and n-dodecane. Combustion and Flame, 2016, 173, 402-410.	5.2	16
24	An experimental study of the spray ignition of alkanes. Fuel, 2016, 185, 381-393.	6.4	23
25	The interaction of falling and sessile drops on a hydrophobic surface. Experimental Thermal and Fluid Science, 2016, 79, 36-43.	2.7	32
26	A comprehensive experimental and modeling study of isobutene oxidation. Combustion and Flame, 2016, 167, 353-379.	5.2	282
27	Combustion characteristics of C4 iso-alkane oligomers: Experimental characterization of iso-dodecane as a jet fuel surrogate component. Combustion and Flame, 2016, 165, 137-143.	5.2	48
28	Passivation and Stabilization of Aluminum Nanoparticles for Energetic Materials. Journal of Nanomaterials, 2015, 2015, 1-12.	2.7	15
29	Ignition of alkane-rich FACE gasoline fuels and their surrogate mixtures. Proceedings of the Combustion Institute, 2015, 35, 249-257.	3.9	138
30	An experimental and modeling study of propene oxidation. Part 2: Ignition delay time and flame speed measurements. Combustion and Flame, 2015, 162, 296-314.	5.2	270
31	Iron Nanoparticle Additives as Burning Rate Enhancers in AP/HTPB Composite Propellants. Propellants, Explosives, Pyrotechnics, 2015, 40, 253-259.	1.6	22
32	A surrogate mixture and kinetic mechanism for emulating the evaporation and autoignition characteristics of gasoline fuel. Combustion and Flame, 2015, 162, 3773-3784.	5.2	31
33	Autoignition behavior of synthetic alternative jet fuels: An examination of chemical composition effects on ignition delays at low to intermediate temperatures. Proceedings of the Combustion Institute, 2015, 35, 2983-2991.	3.9	39
34	A shock tube ignition delay study of conventional diesel fuel and hydroprocessed renewable diesel fuel from algal oil. Fuel, 2014, 128, 21-29.	6.4	76
35	The combustion properties of 2,6,10-trimethyl dodecane and a chemical functional group analysis. Combustion and Flame, 2014, 161, 826-834.	5.2	100
36	Nanofluid pendant droplet evaporation: Experiments and modeling. International Journal of Heat and Mass Transfer, 2014, 74, 263-268.	4.8	43

#	Article	IF	Citations
37	Global Reduced Model for Conventional and Alternative Jet and Diesel Fuel Autoignition. Energy & Fuels, 2014, 28, 2795-2801.	5.1	14
38	The high-temperature autoignition of biodiesels and biodiesel components. Combustion and Flame, 2014, 161, 3014-3021.	5.2	51
39	A diesel engine study of conventional and alternative diesel and jet fuels: Ignition and emissions characteristics. Fuel, 2014, 136, 253-260.	6.4	51
40	A comprehensive combustion chemistry study of 2,5-dimethylhexane. Combustion and Flame, 2014, 161, 1444-1459.	5.2	88
41	Diesel Engine Simulations and Experiments: Fuel Variability Effects on Ignition. , 2014, , .		0
42	Experimental Study of the High-Temperature Autoignition of Tetralin. Energy & Fuels, 2013, 27, 5483-5487.	5.1	11
43	A comprehensive experimental and modeling study of iso-pentanol combustion. Combustion and Flame, 2013, 160, 2712-2728.	5.2	95
44	Shock Tube and Chemical Kinetic Modeling Study of the Oxidation of 2,5-Dimethylfuran. Journal of Physical Chemistry A, 2013, 117, 1371-1392.	2.5	108
45	An experimental and modeling study of the autoignition of 3-methylheptane. Proceedings of the Combustion Institute, 2013, 34, 335-343.	3.9	33
46	The combustion properties of 1,3,5-trimethylbenzene and a kinetic model. Fuel, 2013, 109, 125-136.	6.4	41
47	Comparative Study of the Autoignition of Methyl Decenoates, Unsaturated Biodiesel Fuel Surrogates. Energy & Fuels, 2013, 27, 5527-5532.	5.1	46
48	Dimethyl Ether Autoignition at Engine-Relevant Conditions. Energy & Fuels, 2013, 27, 2811-2817.	5.1	53
49	Prospects for Biofuels: A Review. Journal of Thermal Science and Engineering Applications, 2013, 5, .	1.5	14
50	The Shock Tube Autoignition of Biodiesels and Biodiesel Components. , 2013, , .		0
51	Nanofluid Pendant Droplet Evaporation. , 2013, , .		1
52	Autoignition Variation of Biodiesel Surrogates: Influence of Saturation. , 2013, , .		0
53	Autoignition of Methyl Decanoate, a Biodiesel Surrogate, under High-Pressure Exhaust Gas Recirculation Conditions. Energy & Fuels, 2012, 26, 4887-4895.	5.1	30
54	Autoignition studies of conventional and Fischerâ€"Tropsch jet fuels. Fuel, 2012, 98, 249-258.	6.4	147

#	Article	IF	Citations
55	The combustion kinetics of a synthetic paraffinic jet aviation fuel and a fundamentally formulated, experimentally validated surrogate fuel. Combustion and Flame, 2012, 159, 3014-3020.	5.2	124
56	An Experimentally Validated Surrogate Fuel for the Combustion Kinetics of S-8, a Synthetic Paraffinic Jet Aviation Fuel. , 2012, , .		3
57	A shock tube study of methyl decanoate autoignition at elevated pressures. Combustion and Flame, 2012, 159, 476-481.	5.2	89
58	Deflagration-to-detonation transition via the distributed photo ignition of carbon nanotubes suspended in fuel/oxidizer mixtures. Combustion and Flame, 2012, 159, 1314-1320.	5.2	27
59	The experimental evaluation of a methodology for surrogate fuel formulation to emulate gas phase combustion kinetic phenomena. Combustion and Flame, 2012, 159, 1444-1466.	5.2	355
60	Shock Tube Autoignition Studies for Conventional and Alternative Transportation Fuel Components. , 2012, , .		0
61	Comprehensive chemical kinetic modeling of the oxidation of 2-methylalkanes from C7 to C20. Combustion and Flame, 2011, 158, 2338-2357.	5.2	466
62	A carbon monoxide and thermometry sensor based on mid-IR quantum-cascade laser wavelength-modulation absorption spectroscopy. Applied Physics B: Lasers and Optics, 2011, 103, 959-966.	2.2	31
63	The photo-induced ignition of quiescent ethylene/air mixtures containing suspended carbon nanotubes. Proceedings of the Combustion Institute, 2011, 33, 3359-3366.	3.9	30
64	A mid-infrared scanned-wavelength laser absorption sensor forÂcarbon monoxide and temperature measurements fromÂ900ÂtoÂ4000ÂK. Applied Physics B: Lasers and Optics, 2010, 99, 353-362.	2.2	42
65	An experimental and kinetic modeling study of the autoignition of Î±-methylnaphthalene/air and Î±-methylnaphthalene/n-decane/air mixtures at elevated pressures. Combustion and Flame, 2010, 157, 1976-1988.	5.2	67
66	A jet fuel surrogate formulated by real fuel properties. Combustion and Flame, 2010, 157, 2333-2339.	5.2	484
67	Ignition time measurements for methylcylcohexaneâ€•and ethylcyclohexaneâ€air mixtures at elevated pressures. International Journal of Chemical Kinetics, 2009, 41, 82-91.	1.6	69
68	The autoignition of iso-cetane at high to moderate temperatures and elevated pressures: Shock tube experiments and kinetic modeling. Combustion and Flame, 2009, 156, 2165-2172.	5.2	122
69	A shock tube study of the auto-ignition of toluene/air mixtures at high pressures. Proceedings of the Combustion Institute, 2009, 32, 165-172.	3.9	102
70	The autoignition of C8H10 aromatics at moderate temperatures and elevated pressures. Combustion and Flame, 2009, 156, 1053-1062.	5.2	109
71	Experimental and Kinetic Modeling Study of the Pyrolysis and Oxidation of Decalin. Energy & Fuels, 2009, 23, 1464-1472.	5.1	48
72	A Shock Tube Study of the Ignition of n-Heptane, n-Decane, n-Dodecane, and n-Tetradecane at Elevated Pressures. Energy & Fuels, 2009, 23, 2482-2489.	5.1	247

#	Article	IF	Citations
73	A shock tube study of cyclopentane and cyclohexane ignition at elevated pressures. International Journal of Chemical Kinetics, 2008, 40, 624-634.	1.6	84
74	A shock tube study of iso-octane ignition at elevated pressures: The influence of diluent gases. Combustion and Flame, 2008, 155, 739-755.	5.2	91
75	An Experimental and Kinetic Modeling Study of the Oxidation of the Four Isomers of Butanol. Journal of Physical Chemistry A, 2008, 112, 10843-10855.	2.5	257
76	Thermal decomposition of toluene: Overall rate and branching ratio. Proceedings of the Combustion Institute, 2007, 31, 211-219.	3.9	73
77	Methyl concentration time-histories during iso-octane and n-heptane oxidation and pyrolysis. Proceedings of the Combustion Institute, 2007, 31, 321-328.	3.9	46
78	Experimental Investigation of Toluene + H â†' Benzyl + H2at High Temperatures. Journal of Physical Chemistry A, 2006, 110, 9867-9873.	2.5	40
79	High-Temperature Thermal Decomposition of Benzyl Radicalsâ€. Journal of Physical Chemistry A, 2006, 110, 6649-6653.	2.5	46
80	Investigation of the reaction of toluene with molecular oxygen in shock-heated gases. Combustion and Flame, 2006, 147, 195-208.	5.2	56
81	High-temperature UV absorption of methyl radicals behind shock waves. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 92, 393-402.	2.3	27
82	High-temperature ethane and propane decomposition. Proceedings of the Combustion Institute, 2005, 30, 1119-1127.	3.9	79
83	Temperature measurement using ultraviolet laser absorption of carbon dioxide behind shock waves. Applied Optics, 2005, 44, 6599.	2.1	24
84	Carbon Dioxide Thermal Decomposition: Observation of Incubation. Zeitschrift Fur Physikalische Chemie, 2005, 219, 555-567.	2.8	18
85	Ultraviolet absorption cross-sections of hot carbon dioxide. Chemical Physics Letters, 2004, 399, 490-495.	2.6	18
86	High-Temperature Thermal Decomposition of Isobutane and n-Butane Behind Shock Waves. Journal of Physical Chemistry A, 2004, 108, 4247-4253.	2.5	94