

# Sebastian A Kaiser

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

70  
papers

1,218  
citations

20  
h-index

31  
g-index

77  
ext. papers

1,516  
ext. citations

3.7  
avg, IF

4.76  
L-index

#	Paper	IF	Citations
70	The oil film around a cylindrical micropore in a sliding contact visualized by fluorescence microscopy on a tribometer. <i>Tribology International</i> , <b>2022</b> , 165, 107309	4.9	2
69	Visualization and image analysis of droplet puffing and micro-explosion in spray-flame synthesis of iron oxide nanoparticles. <i>Experiments in Fluids</i> , <b>2022</b> , 63, 1	2.5	1
68	Comparison of damage mechanisms: Acoustic cavitation versus series of single laser-induced bubbles. <i>Wear</i> , <b>2021</b> , 476, 203641	3.5	1
67	Characterization of the fluorescence properties of selected organic compounds for measuring the thickness of evaporating liquid fuel films. <i>Applied Physics B: Lasers and Optics</i> , <b>2021</b> , 127, 1	1.9	0
66	Visualization of soot formation from evaporating fuel films by laser-induced fluorescence and incandescence. <i>Proceedings of the Combustion Institute</i> , <b>2021</b> , 38, 1089-1097	5.9	2
65	The kinetics of methane ignition in fuel-rich HCCI engines: DME replacement by ozone. <i>Proceedings of the Combustion Institute</i> , <b>2021</b> , 38, 5567-5574	5.9	7
64	Endoscopic fuel film, chemiluminescence, and soot incandescence imaging in a direct-injection spark-ignition engine. <i>Proceedings of the Combustion Institute</i> , <b>2021</b> , 38, 5869-5877	5.9	3
63	Flexible energy conversion and storage via high-temperature gas-phase reactions: The piston engine as a polygeneration reactor. <i>Renewable and Sustainable Energy Reviews</i> , <b>2020</b> , 133, 110264	16.2	10
62	Analysis of the interaction of Spray G and in-cylinder flow in two optical engines for late gasoline direct injection. <i>International Journal of Engine Research</i> , <b>2020</b> , 21, 169-184	2.7	14
61	High-resolution LIF-Imaging of the oil film thickness in the piston-ring / cylinder-liner contact in an optical tribometer. <i>Tribology International</i> , <b>2020</b> , 147, 106230	4.9	5
60	Analysis of high-speed broadband flame chemiluminescence imaging in a SI engine. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2020</b> , 788, 012060	0.4	
59	Power and syngas production from partial oxidation of fuel-rich methane/DME mixtures in an HCCI engine. <i>Fuel</i> , <b>2019</b> , 243, 97-103	7.1	27
58	LIF-based imaging of preferential evaporation of a multi-component gasoline surrogate in a direct-injection engine. <i>Proceedings of the Combustion Institute</i> , <b>2019</b> , 37, 1365-1372	5.9	13
57	Modeling study of reactive species formation from C <sub>1-3</sub> alkanes in an HCCI engine. <i>Combustion Theory and Modelling</i> , <b>2019</b> , 23, 1119-1133	1.5	3
56	High-speed film-thickness measurements between a collapsing cavitation bubble and a solid surface with total internal reflection shadowmetry. <i>Physics of Fluids</i> , <b>2019</b> , 31, 097108	4.4	22
55	Development of laser-induced fluorescence to quantify in-cylinder fuel wall films. <i>International Journal of Engine Research</i> , <b>2018</b> , 19, 134-147	2.7	19
54	In-Cylinder LIF Imaging, IR-Absorption Point Measurements, and a CFD Simulation to Evaluate Mixture Formation in a CNG-Fueled Engine. <i>SAE International Journal of Engines</i> , <b>2018</b> , 11, 1221-1238	2.4	3

53	Optical Diagnostics for Knock in Compression-Ignition Engines via High-Speed Imaging. <i>SAE International Journal of Engines</i> , <b>2018</b> , 11, 903-918	2.4	9
52	Development of a LIF-Imaging System for Simultaneous High-Speed Visualization of Liquid Fuel and Oil Films in an Optically Accessible DISI Engine <b>2018</b> ,		3
51	Experimental and Numerical Investigation of Damage on an Aluminum Surface by Single-Bubble Cavitation. <i>Materials Performance and Characterization</i> , <b>2018</b> , 7, 20180038	0.5	4
50	Visualization of Fuel Wall Wetting, Oil Dilution by Fuel, and Oil Transport Mechanisms in an Optically Accessible Engine by LIF Imaging <b>2018</b> , 189-202		2
49	Combined production of power and syngas in an internal combustion engine [Experiments and simulations in SI and HCCI mode. <i>Fuel</i> , <b>2018</b> , 215, 40-45	7.1	35
48	Multi-pulse shadowgraphic RGB illumination and detection for flow tracking. <i>Experiments in Fluids</i> , <b>2018</b> , 59, 1	2.5	8
47	Investigation of an IC Engine Intake Flow Based on Highly Resolved LES and PIV. <i>Oil and Gas Science and Technology</i> , <b>2017</b> , 72, 15	1.9	7
46	Self-quenching in toluene LIF. <i>Proceedings of the Combustion Institute</i> , <b>2017</b> , 36, 4505-4514	5.9	10
45	High-resolution LES of a starting jet. <i>Computers and Fluids</i> , <b>2016</b> , 140, 435-449	2.8	14
44	Quantitative two-dimensional measurement of oil-film thickness by laser-induced fluorescence in a piston-ring model experiment. <i>Applied Optics</i> , <b>2016</b> , 55, 269-79	0.2	18
43	Spatially Resolved Experimental and Numerical Investigation of the Flow through the Intake Port of an Internal Combustion Engine. <i>Oil and Gas Science and Technology</i> , <b>2016</b> , 71, 2	1.9	22
42	High-Speed Imaging of Early Flame Growth in Spark-Ignited Engines Using Different Imaging Systems via Endoscopic and Full Optical Access. <i>SAE International Journal of Engines</i> , <b>2016</b> , 9, 704-718	2.4	18
41	Numerical investigation of the process steps in a spray flame reactor for nanoparticle synthesis. <i>Proceedings of the Combustion Institute</i> , <b>2015</b> , 35, 2259-2266	5.9	18
40	Penetration of the Flame Into the Top-Land Crevice - Large-Eddy Simulation and Experimental High-Speed Visualization <b>2015</b> ,		7
39	A Computational Study of the Mixture Preparation in a Direct Injection Hydrogen Engine. <i>Journal of Engineering for Gas Turbines and Power</i> , <b>2015</b> , 137,	1.7	10
38	Endoscopic temperature imaging in a four-cylinder IC engine via two-color toluene fluorescence. <i>Proceedings of the Combustion Institute</i> , <b>2015</b> , 35, 3697-3705	5.9	18
37	Calibration-free, high-speed, in-cylinder laser absorption sensor for cycle-resolved, absolute H <sub>2</sub> O measurements in a production IC engine. <i>Proceedings of the Combustion Institute</i> , <b>2015</b> , 35, 3653-3661	5.9	16
36	A comparison of selected organic tracers for quantitative scalar imaging in the gas phase via laser-induced fluorescence. <i>Applied Physics B: Lasers and Optics</i> , <b>2014</b> , 117, 183-194	1.9	26

35	LES of Flow Processes in an SI Engine Using Two Approaches: OpenFoam and PsiPhi <b>2014</b> ,		9
34	Endoscopic Imaging of Early Flame Propagation in a Near-Production Engine. <i>SAE International Journal of Engines</i> , <b>2014</b> , 7, 351-365	2.4	16
33	Thermal stratification in an internal combustion engine due to wall heat transfer measured by laser-induced fluorescence. <i>Proceedings of the Combustion Institute</i> , <b>2013</b> , 34, 2911-2919	5.9	51
32	VCSEL-based, high-speed, in situ TDLAS for in-cylinder water vapor measurements in IC engines. <i>Optics Express</i> , <b>2013</b> , 21, 19951-65	3.3	89
31	Schlieren measurements in the round cylinder of an optically accessible internal combustion engine. <i>Applied Optics</i> , <b>2013</b> , 52, 3433-43	1.7	10
30	Two-dimensional cycle-resolved exhaust valve temperature measurements in an optically accessible internal combustion engine using thermographic phosphors. <i>Applied Physics B: Lasers and Optics</i> , <b>2012</b> , 106, 945-951	1.9	32
29	In-cylinder temperature measurements via time-correlated single-photon counting of toluene laser-induced fluorescence through a fiber-based sensor. <i>Optics Letters</i> , <b>2012</b> , 37, 5244-6	3	4
28	In-cylinder temperature measurements via fiber-based toluene-LIF time-correlated single-photon counting <b>2012</b> ,		1
27	Mixture Formation in Direct Injection Hydrogen Engines: CFD and Optical Analysis of Single- and Multi-Hole Nozzles. <i>SAE International Journal of Engines</i> , <b>2011</b> , 4, 2361-2375	2.4	38
26	Numerical and Optical Evolution of Gaseous Jets in Direct Injection Hydrogen Engines <b>2011</b> ,		18
25	Influence of the Flow Field on Flame Propagation in a Hydrogen-Fueled Internal Combustion Engine. <i>SAE International Journal of Engines</i> , <b>2011</b> , 4, 2376-2394	2.4	18
24	Interaction of Intake-Induced Flow and Injection Jet in a Direct-Injection Hydrogen-Fueled Engine Measured by PIV <b>2011</b> ,		13
23	The effects of laser-sheet thickness on dissipation measurements in turbulent non-reacting jets and jet flames. <i>Measurement Science and Technology</i> , <b>2011</b> , 22, 045403	2	13
22	Analysis of scalar mixing dynamics in LES using high-resolution imaging of laser Rayleigh scattering in turbulent non-reacting jets and non-premixed jet flames. <i>Proceedings of the Combustion Institute</i> , <b>2011</b> , 33, 1373-1381	5.9	18
21	Influence of the In-Cylinder Flow Field (Tumble) on the Fuel Distribution in a DI Hydrogen Engine Using a Single-Hole Injector. <i>SAE International Journal of Engines</i> , <b>2010</b> , 3, 309-325	2.4	11
20	CFD and Optical Investigations of Fluid Dynamics and Mixture Formation in a DI-H2ICE <b>2010</b> ,		16
19	High-resolution imaging of turbulence structures in jet flames and non-reacting jets with laser Rayleigh scattering. <i>Experiments in Fluids</i> , <b>2010</b> , 49, 823-837	2.5	23
18	Modeling and Experiments on Mixture Formation in a Hydrogen Direct-Injection Research Engine. <i>SAE International Journal of Engines</i> , <b>2009</b> , 2, 530-541	2.4	12

17	An Optical Study of Mixture Preparation in a Hydrogen-fueled Engine with Direct Injection Using Different Nozzle Designs. <i>SAE International Journal of Engines</i> , <b>2009</b> , 2, 119-131	2.4	24
16	Optimizing Precision and Accuracy of Quantitative PLIF of Acetone as a Tracer for Hydrogen Fuel. <i>SAE International Journal of Fuels and Lubricants</i> , <b>2009</b> , 2, 737-761	1.8	18
15	Application of reduced state spaces to laser-based measurements in combustion. <i>Proceedings of the Combustion Institute</i> , <b>2009</b> , 32, 887-894	5.9	5
14	Spatial scales of extinction and dissipation in the near field of non-premixed turbulent jet flames. <i>Proceedings of the Combustion Institute</i> , <b>2009</b> , 32, 1639-1646	5.9	29
13	An analysis of lower-dimensional approximations to the scalar dissipation rate using direct numerical simulations of plane jet flames. <i>Proceedings of the Combustion Institute</i> , <b>2009</b> , 32, 1455-1463	5.9	28
12	PIV and PLIF to Evaluate Mixture Formation in a Direct-Injection Hydrogen-Fuelled Engine. <i>SAE International Journal of Engines</i> , <b>2008</b> , 1, 657-668	2.4	16
11	High-resolution imaging of dissipative structures in a turbulent jet flame with laser Rayleigh scattering. <i>Experiments in Fluids</i> , <b>2008</b> , 44, 221-233	2.5	44
10	Imaging of dissipative structures in the near field of a turbulent non-premixed jet flame. <i>Proceedings of the Combustion Institute</i> , <b>2007</b> , 31, 1515-1523	5.9	37
9	Use of Rayleigh imaging and ray tracing to correct for beam-steering effects in turbulent flames. <i>Applied Optics</i> , <b>2005</b> , 44, 6557-64	1.7	19
8	Quantitative planar laser-induced fluorescence of naphthalenes as fuel tracers. <i>Proceedings of the Combustion Institute</i> , <b>2005</b> , 30, 1555-1563	5.9	48
7	Multiscalar imaging in partially premixed jet flames with argon dilution. <i>Combustion and Flame</i> , <b>2005</b> , 143, 507-523	5.3	47
6	The Electro spray and Combustion at the Mesoscale.. <i>Journal of the Mass Spectrometry Society of Japan</i> , <b>2003</b> , 51, 42-49	0.2	22
5	Polarized/depolarized rayleigh scattering for determining fuel concentrations in flames. <i>Proceedings of the Combustion Institute</i> , <b>2002</b> , 29, 2703-2709	5.9	41
4	Reaction-rate, mixture-fraction, and temperature imaging in turbulent methane/air jet flames. <i>Proceedings of the Combustion Institute</i> , <b>2002</b> , 29, 2687-2694	5.9	64
3	Imaging of Fuel-Film Evaporation and Combustion in a Direct-Injection Model Experiment		3
2	A Study of ECN Spray B in a Light-Duty Optically Accessible Diesel Engine Based on High-Speed Imaging with LED Retro-Reflection		1
1	Large Eddy Simulations and Tracer-LIF Diagnostics of Wall Film Dynamics in an Optically Accessible GDI Research Engine		2