

Johan Zetterberg

List of Publications by Year in descending order

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54
papers

1,245
citations

279798

23
h-index

377865

34
g-index

56
all docs

56
docs citations

56
times ranked

953
citing authors

#	ARTICLE	IF	CITATIONS
1	Simultaneous PIV/OH-PLIF, Rayleigh thermometry/OH-PLIF and stereo PIV measurements in a low-swirl flame. <i>Applied Optics</i> , 2007, 46, 3928.	2.1	92
2	Investigation of local flame structures and statistics in partially premixed turbulent jet flames using simultaneous single-shot CH and OH planar laser-induced fluorescence imaging. <i>Combustion and Flame</i> , 2008, 154, 802-818.	5.2	78
3	Large eddy simulation and experiments of stratified lean premixed methane/air turbulent flames. <i>Proceedings of the Combustion Institute</i> , 2007, 31, 1467-1475.	3.9	61
4	Directly measuring reaction kinetics of $\dot{\text{E}}^{\text{TM}}\text{QOOH}$ a crucial but elusive intermediate in hydrocarbon autoignition. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 10753.	2.8	58
5	Development of improved PLIF CH detection using an Alexandrite laser for single-shot investigation of turbulent and lean flames. <i>Proceedings of the Combustion Institute</i> , 2007, 31, 727-735.	3.9	55
6	Determination of surface normal temperature gradients using thermographic phosphors and filtered Rayleigh scattering. <i>Applied Physics B: Lasers and Optics</i> , 2006, 84, 537-541.	2.2	44
7	Evidence for the Active Phase of Heterogeneous Catalysts through In Situ Reaction Product Imaging and Multiscale Modeling. <i>ACS Catalysis</i> , 2015, 5, 4514-4518.	11.2	41
8	Spatially and temporally resolved gas distributions around heterogeneous catalysts using infrared planar laser-induced fluorescence. <i>Nature Communications</i> , 2015, 6, 7076.	12.8	41
9	Novel in Situ Techniques for Studies of Model Catalysts. <i>Accounts of Chemical Research</i> , 2017, 50, 2326-2333.	15.6	39
10	Mid-infrared polarization spectroscopy of polyatomic molecules: Detection of nascent CO ₂ and H ₂ O in atmospheric pressure flames. <i>Chemical Physics Letters</i> , 2005, 407, 243-248.	2.6	37
11	Strategy for PLIF single-shot HCO imaging in turbulent methane/air flames. <i>Combustion and Flame</i> , 2014, 161, 1566-1574.	5.2	37
12	Strain Dependent Light-off Temperature in Catalysis Revealed by Planar Laser-Induced Fluorescence. <i>ACS Catalysis</i> , 2017, 7, 110-114.	11.2	36
13	An in situ set up for the detection of CO ₂ from catalytic CO oxidation by using planar laser-induced fluorescence. <i>Review of Scientific Instruments</i> , 2012, 83, 053104.	1.3	35
14	Detection of methane with mid-infrared polarization spectroscopy. <i>Applied Physics B: Lasers and Optics</i> , 2004, 79, 135-138.	2.2	33
15	Applications of a single-longitudinal-mode alexandrite laser for diagnostics of parameters of combustion interest. <i>Review of Scientific Instruments</i> , 2004, 75, 3208-3215.	1.3	30
16	Midinfrared polarization spectroscopy of OH and hot water in low pressure lean premixed flames. <i>Journal of Chemical Physics</i> , 2007, 127, 084310.	3.0	30
17	Mid-infrared polarization spectroscopy of C ₂ H ₂ : Non-intrusive spatial-resolved measurements of polyatomic hydrocarbon molecules for combustion diagnostics. <i>Proceedings of the Combustion Institute</i> , 2007, 31, 817-824.	3.9	30
18	2D and 3D imaging of the gas phase close to an operating model catalyst by planar laser induced fluorescence. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 453002.	1.8	30

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19	Mid-infrared PS and LIF detection of CH ₄ and C ₂ H ₆ in cold flows and flames at atmospheric pressure. Proceedings of the Combustion Institute, 2005, 30, 1629-1636.	3.9	28
20	Simultaneous laser-induced fluorescence and sub-Doppler polarization spectroscopy of the CH radical. Optics Communications, 2007, 270, 347-352.	2.1	28
21	Two-Dimensional Temperature Measurements in Flames Using Filtered Rayleigh Scattering at 254 nm. Applied Spectroscopy, 2008, 62, 778-783.	2.2	26
22	Real-Time Gas-Phase Imaging over a Pd(110) Catalyst during CO Oxidation by Means of Planar Laser-Induced Fluorescence. ACS Catalysis, 2015, 5, 2028-2034.	11.2	26
23	Infrared polarization spectroscopy of CO ₂ at atmospheric pressure. Optics Communications, 2004, 233, 373-381.	2.1	25
24	Visualization of Gas Distribution in a Model AP-XPS Reactor by PLIF: CO Oxidation over a Pd(100) Catalyst. Catalysts, 2017, 7, 29.	3.5	23
25	Thermal Stability of Single-Crystalline IrO ₂ (110) Layers: Spectroscopic and Adsorption Studies. Journal of Physical Chemistry C, 2020, 124, 15324-15336.	3.1	22
26	Comparison of AP-XPS and PLIF Measurements During CO Oxidation Over Pd Single Crystals. Topics in Catalysis, 2016, 59, 478-486.	2.8	21
27	High resolution polarization spectroscopy and laser induced fluorescence of CO ₂ around 2¼m. European Physical Journal D, 2007, 42, 41-47.	1.3	20
28	Simultaneous Imaging of Gas Phase over and Surface Reflectance of a Pd(100) Single Crystal during CO Oxidation. Journal of Physical Chemistry C, 2017, 121, 23511-23519.	3.1	20
29	Combining high-energy X-ray diffraction with Surface Optical Reflectance and Planar Laser Induced Fluorescence for <i>operando</i> catalyst surface characterization. Review of Scientific Instruments, 2019, 90, 033703.	1.3	20
30	A convenient setup for laser-induced fluorescence imaging of both CO and CO ₂ during catalytic CO oxidation. Applied Physics B: Lasers and Optics, 2017, 123, 1.	2.2	19
31	An electrochemical cell for 2-dimensional surface optical reflectance during anodization and cyclic voltammetry. Review of Scientific Instruments, 2020, 91, 044101.	1.3	17
32	Near-Surface Imaging of the Multicomponent Gas Phase above a Silver Catalyst during Partial Oxidation of Methanol. ACS Catalysis, 2021, 11, 155-168.	11.2	16
33	Surface optical reflectance combined with x-ray techniques during gas-surface interactions. Journal Physics D: Applied Physics, 2020, 53, 224001.	2.8	15
34	<i>Operando</i> Reflectance Microscopy on Polycrystalline Surfaces in Thermal Catalysis, Electrocatalysis, and Corrosion. ACS Applied Materials & Interfaces, 2021, 13, 19530-19540.	8.0	14
35	Catalytic Oxidation of CO on a Curved Pt(111) Surface: Simultaneous Ignition at All Facets through a Transient CO€ Complex**. Angewandte Chemie - International Edition, 2020, 59, 20037-20043.	13.8	13
36	Single-shot imaging of ground-state hydrogen atoms with a nonlinear laser spectroscopic technique. Optics Letters, 2007, 32, 1569.	3.3	10

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37	Temperature characterization of an operando flow reactor for heterogeneous catalysis. Journal Physics D: Applied Physics, 2019, 52, 324003.	2.8	10
38	Revisiting Optical Reflectance from Au(111) Electrode Surfaces with Combined High-Energy Surface X-ray Diffraction. Journal of the Electrochemical Society, 2021, 168, 096511.	2.9	9
39	Combining synchrotron light with laser technology in catalysis research. Journal of Synchrotron Radiation, 2018, 25, 1389-1394.	2.4	9
40	In Situ H ₂ Reduction of Al ₂ O ₃ -Supported Ni- and Mo-Based Catalysts. Catalysts, 2022, 12, 755.	3.5	7
41	Visualizing the Gas Diffusion Induced Ignition of a Catalytic Reaction. ACS Catalysis, 2022, 12, 6589-6595.	11.2	6
42	Combining Planar Laser-Induced Fluorescence with Stagnation Point Flows for Small Single-Crystal Model Catalysts: CO Oxidation on a Pd(100). Catalysts, 2019, 9, 484.	3.5	5
43	Measurements of Collisional Broadening Coefficients by Infrared Polarization Spectroscopy. Applied Spectroscopy, 2007, 61, 424-427.	2.2	4
44	Single-shot, planar infrared imaging in flames using polarization spectroscopy. Optics Express, 2015, 23, 30414.	3.4	4
45	Planar Laser Induced Fluorescence Applied to Catalysis. Springer Series in Chemical Physics, 2017, , 131-149.	0.2	4
46	Infrared surface spectroscopy and surface optical reflectance for operando catalyst surface characterization. Applied Surface Science, 2022, 578, 152048.	6.1	4
47	Vibrational relaxation of CO ₂ (1201) by argon. Chemical Physics, 2009, 359, 71-76.	1.9	3
48	Non-intrusive detection of methanol in gas phase using infrared degenerate four-wave mixing. Applied Physics B: Lasers and Optics, 2015, 121, 123-130.	2.2	3
49	Reduced Carbon Monoxide Saturation Coverage on Vicinal Palladium Surfaces: the Importance of the Adsorption Site. Journal of Physical Chemistry Letters, 2021, 12, 9508-9515.	4.6	3
50	Laser-Induced Fluorescence Detection of Hot Molecular Oxygen in Flames Using an Alexandrite Laser. Applied Spectroscopy, 2014, 68, 1266-1273.	2.2	2
51	Infrared Spectroscopy as Molecular Probe of the Macroscopic Metal-Liquid Interface. Applied Sciences (Switzerland), 2017, 7, 1229.	2.5	1
52	Catalytic Oxidation of CO on a Curved Pt(111) Surface: Simultaneous Ignition at All Facets through a Transient CO \rightarrow Complex**. Angewandte Chemie, 2020, 132, 20212-20218.	2.0	1
53	Combining PM-IRRAS with optical imaging techniques for operando studies of CO oxidation. , 2021, , .		0
54	Laser Diagnostics for the Study of Heterogeneous Catalysis. , 2016, , .		0