

Thomas Seeger

List of Publications by Year in descending order

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121
papers

2,398
citations

159525

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265120

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121
all docs

121
docs citations

121
times ranked

1085
citing authors

#	ARTICLE	IF	CITATIONS
1	Long-Term Behavior of Fuel Vapor Retaining Systems for Pure (E0) and Blended Fuels (E10) Part 2: Regeneration with Nitrogen of 70% Relative Humidity. Processes, 2022, 10, 397.	1.3	1
2	Optimizing the operational strategy of a solar-driven reactor for thermochemical hydrogen production. International Journal of Hydrogen Energy, 2022, 47, 14453-14468.	3.8	10
3	Holistic energy flow analysis of a solar driven thermo-chemical reactor set-up for sustainable hydrogen production. Renewable Energy, 2022, 189, 1358-1374.	4.3	8
4	Investigation on wall and gas temperatures inside a swirled oxy-fuel combustion chamber using thermographic phosphors, O ₂ rotational and vibrational CARS. Fuel, 2021, 289, 119787.	3.4	6
5	Improvement of the coherent model function for S-branch Raman linewidth determination in oxygen. Applied Optics, 2021, 60, C76.	0.9	6
6	Temperature dependent determination of the S-branch Raman linewidths of oxygen and carbon dioxide in an oxyfuel relevant mixture. Applied Optics, 2021, 60, 4410.	0.9	4
7	Laser applications to chemical, security, and environmental analysis: introduction to the feature issue. Applied Optics, 2021, 60, LAC1.	0.9	0
8	Characterization of temperature distributions in a swirled oxy-fuel coal combustor using tomographic absorption spectroscopy with fluctuation modelling. Applications in Energy and Combustion Science, 2021, 6, 100025.	0.9	4
9	CH and NO planar laser-induced fluorescence and Rayleigh-scattering in turbulent flames using a multimode optical parametric oscillator. Applied Optics, 2021, 60, 98.	0.9	7
10	Optics – Frontiers in Fundamental Research and Applications. Optics, 2020, 1, 173-173.	0.6	0
11	Sensor system for long-term analysis of fuel vapour restraint systems. TM Technisches Messen, 2020, 87, 304-311.	0.3	2
12	IEEE Workshop on Industrial and Medical Measurement and Sensor Technology – SENSORICA 2019. TM Technisches Messen, 2020, 87, 303-303.	0.3	0
13	Real time executable model for dynamic heat flow analysis of a solar hydrogen reactor. TM Technisches Messen, 2020, 87, 360-371.	0.3	5
14	Oxygen rotational Raman linewidth determination considering nonmonoexponential decoherence behavior. Journal of Raman Spectroscopy, 2019, 50, 1260-1267.	1.2	11
15	Determination of N ₂ – N ₂ and N ₂ – O ₂ S-branch Raman linewidths using time-resolved picosecond pure rotational coherent anti-Stokes Raman scattering. Applied Optics, 2019, 58, C47.	0.9	13
16	Laser applications to chemical, security, and environmental analysis: introduction to the feature issue. Applied Optics, 2019, 58, LAC1.	0.9	1
17	IEEE Workshop on Industrial and Medical Measurement and Sensor Technology – SENSORICA 2017. TM Technisches Messen, 2018, 85, 291-291.	0.3	1
18	Analysis of exhaled air for early-stage diagnosis of lung cancer: opportunities and challenges. Russian Chemical Reviews, 2018, 87, 904-921.	2.5	17

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19	Emission spectroscopy based sensor developed for engine testing. TM Technisches Messen, 2017, 84, 13-22.	0.3	1
20	Comparison of Raman-active crystals as a narrowband probe light source for picosecond three-color vibrational CARS thermometry. Journal of Raman Spectroscopy, 2017, 48, 1026-1032.	1.2	2
21	On the effect of ionic wind on structure and temperature of laminar premixed flames influenced by electric fields. Combustion and Flame, 2017, 176, 391-399.	2.8	37
22	Oscillometric-gravimetric measurements of pure gas adsorption equilibria without the non-adsorption of helium hypothesis. Adsorption, 2017, 23, 753-766.	1.4	5
23	Heat flux sensor based on ferroelectric. , 2017, , .		0
24	Flame temperature measurements in CI engines using an emission spectroscopy sensor system. , 2017, , .		0
25	Identification of pure rotational CARS spectra influenced by high temperature gradients. , 2017, , .		0
26	Laser applications to chemical, security, and environmental analysis: introduction to the feature issue. Applied Optics, 2017, 56, LAC1.	2.1	2
27	Studies of the human breathing. , 2017, , .		1
28	Demonstration of a signal enhanced fast Raman sensor for human breath analysis. , 2017, , .		0
29	IEEE Workshop on Industrial and Medical Measurement and Sensor Technology "SENSORICA 2016. TM Technisches Messen, 2017, 84, 1-1.	0.3	0
30	Three-color vibrational CARS thermometry of fuel-rich ethylene/air flames using a potassium gadolinium tungstate Raman-active crystal as a source of narrowband probe radiation. Applied Optics, 2017, 56, E77.	2.1	4
31	High temperature O ₂ vibrational CARS thermometry applied to a turbulent oxy-fuel combustion process. Journal of Raman Spectroscopy, 2016, 47, 1149-1156.	1.2	15
32	Atemzyklusgenaues Anästhesiegas-Monitoring mit einer laserbasierten Raman-Sonde unter klinischen Bedingungen. TM Technisches Messen, 2016, 83, 289-299.	0.3	5
33	Demonstration of a signal enhanced fast Raman sensor for multi-species gas analyses at a low pressure range for anesthesia monitoring. Journal of Raman Spectroscopy, 2015, 46, 708-715.	1.2	34
34	Development of temperature evaluation of pure Rotational Coherent Anti-Stokes Raman Scattering (RCARS) spectra influenced by spatial averaging effects. Proceedings of the Combustion Institute, 2015, 35, 3715-3722.	2.4	14
35	Temperature and water mole fraction measurements by time-domain-based supercontinuum absorption spectroscopy in a flame. Applied Physics B: Lasers and Optics, 2015, 118, 153-158.	1.1	27
36	Flame Temperature Measurements by Time-domain Based Supercontinuum Absorption Spectroscopy. Energy Procedia, 2015, 66, 129-132.	1.8	0

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37	Laserbasierte On-line-Analyse von Biogasen mit einer Raman-Sonde. TM Technisches Messen, 2014, 81, 546-553.	0.3	10
38	Simultaneous Measurement of Speed of Sound, Thermal Diffusivity, and Bulk Viscosity of 1-Ethyl-3-methylimidazolium-Based Ionic Liquids Using Laser-Induced Gratings. Journal of Physical Chemistry B, 2014, 118, 14493-14501.	1.2	19
39	Koadsorptionsgleichgewichte von Kraftstoffdämpfen an feuchten Aktivkohlefiltern. Chemie-Ingenieur-Technik, 2014, 86, 58-66.	0.4	3
40	Determination of gas composition in a biogas plant using a Raman-based sensor system. Measurement Science and Technology, 2014, 25, 075503.	1.4	49
41	Spatially resolved flame zone classification of a flame spray nanoparticle synthesis process by combining different optical techniques. Journal of Aerosol Science, 2014, 69, 82-97.	1.8	25
42	Quantitative measurement of the volatile anesthetic agents and respiratory gases during anesthesia by a compact, robust and mobile sensor based on linear Raman scattering. , 2014, , .		0
43	Simultaneous measurements of fuel vapor concentration and temperature in a flash-boiling propane jet using laser-induced gratings. Journal of Raman Spectroscopy, 2013, 44, 1356-1362.	1.2	22
44	Hybrid femtosecond/picosecond coherent anti-Stokes Raman scattering for high-speed CH_4/N_2 measurements in binary gas mixtures. Journal of Raman Spectroscopy, 2013, 44, 1336-1343.	1.2	26
45	In situ determination of N_2 broadening coefficients in flames for rotational CARS thermometry. Proceedings of the Combustion Institute, 2013, 34, 3637-3644.	2.4	17
46	Split-probe hybrid femtosecond/picosecond rotational CARS for time-domain measurement of S-branch Raman linewidths within a single laser shot. Optics Letters, 2013, 38, 4566.	1.7	26
47	Investigation of the chemical stability of the laser-induced fluorescence tracers acetone, diethylketone, and toluene under IC engine conditions using Raman spectroscopy. Applied Optics, 2013, 52, 6300.	0.9	18
48	Gas phase temperature measurements in the liquid and particle regime of a flame spray pyrolysis process using O_2 -based pure rotational coherent anti-Stokes Raman scattering. Applied Optics, 2012, 51, 6063.	0.9	33
49	Characterization of a CH planar laser-induced fluorescence imaging system using a kHz-rate multimode-pumped optical parametric oscillator. Applied Optics, 2012, 51, 2589.	0.9	19
50	Laser-induced breakdown flame thermometry. Combustion and Flame, 2012, 159, 3576-3582.	2.8	63
51	Gas Sensor for Volatile Anesthetic Agents Based on Raman Scattering. Physics Procedia, 2012, 39, 835-842.	1.2	5
52	Laser-induced Breakdown Spectroscopy: A Simple but Versatile Tool for Combustion Diagnostics. , 2012, , .		2
53	Characterization of gas phase temperatures in dependence of particle presence in the flame spray pyrolysis process. , 2012, , .		0
54	Determination of Physicochemical Parameters of Ionic Liquids and Their Mixtures with Solvents Using Laser-Induced Gratings. Journal of Physical Chemistry B, 2011, 115, 8528-8533.	1.2	19

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55	Quantitative one-dimensional imaging using picosecond dual-broadband pure-rotational coherent anti-Stokes Raman spectroscopy. <i>Applied Optics</i> , 2011, 50, 1770.	2.1	34
56	Application of linear Raman spectroscopy for the determination of acetone decomposition. <i>Optics Express</i> , 2011, 19, 11052.	1.7	11
57	High-speed CH planar laser-induced fluorescence imaging using a multimode-pumped optical parametric oscillator. <i>Optics Letters</i> , 2011, 36, 3927.	1.7	22
58	CH Fluorescence Imaging at High Repetition Rates. , 2011, , .		0
59	Gas-phase diagnostic by time-resolved rotational coherent anti-Stokes Raman spectroscopy. , 2011, , .		0
60	Local Composition and Temperature Determination in Laminar Flames by Laser-Induced Plasma Diagnostics. , 2011, , .		0
61	Entwicklung eines Echtzeitanalyse-Systems zur Charakterisierung von Brenngasgemischen in Gasturbinenkraftwerken. <i>Chemie-Ingenieur-Technik</i> , 2011, 83, 247-253.	0.4	13
62	Picosecond time-resolved pure-rotational coherent anti-Stokes Raman spectroscopy in sooting flames. <i>Proceedings of the Combustion Institute</i> , 2011, 33, 831-838.	2.4	62
63	Investigation of compression temperature in highly charged spark-ignition engines. <i>International Journal of Engine Research</i> , 2011, 12, 282-292.	1.4	22
64	Investigation of porous media combustion by coherent anti-Stokes Raman spectroscopy. <i>Experiments in Fluids</i> , 2010, 49, 775-781.	1.1	14
65	Multi-species detection with dual-pump-CARS: Possibilities and limitations. <i>Physics Procedia</i> , 2010, 5, 703-712.	1.2	1
66	Laser-induced breakdown spectroscopy in gases using ungated detection in combination with polarization filtering and online background correction. <i>Measurement Science and Technology</i> , 2010, 21, 065303.	1.4	29
67	Broadband time-domain absorption spectroscopy with a ns-pulse supercontinuum source. <i>Optics Express</i> , 2010, 18, 22762.	1.7	32
68	Suppression of Raman-resonant interferences in rotational coherent anti-Stokes Raman spectroscopy using time-delayed picosecond probe pulses. <i>Optics Letters</i> , 2010, 35, 2040.	1.7	35
69	Characterization of a fast gas analyzer based on Raman scattering for the analysis of synthesis gas. <i>Review of Scientific Instruments</i> , 2010, 81, 125104.	0.6	44
70	Time-Resolved Picosecond Pure Rotational Coherent Anti-Stokes Raman Spectroscopy for Flame Diagnostics (Invited). , 2010, , .		0
71	Time-Resolved Picosecond Pure-Rotational Coherent anti-Stokes Raman Spectroscopy for Thermometry and Species Concentration in Flames. , 2010, , .		0
72	Time-Resolved Picosecond Pure-Rotational Coherent anti-Stokes Raman Spectroscopy for Thermometry and Species Concentration in Combustion Environments. , 2010, , .		0

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73	OH-thermometry using laser polarization spectroscopy and laser-induced fluorescence spectroscopy in the OH $\tilde{X}(1,0)$ band. Journal of Raman Spectroscopy, 2009, 40, 828-835.	1.2	19
74	Evaluation of temperature and concentration in H_2 - N_2 dual-pump CARS spectra using the Keilson and Storer three-dimensional model for H_2 Q-branch. Journal of Raman Spectroscopy, 2009, 40, 781-787.	1.2	8
75	Planar laser-induced fluorescence of HCO for instantaneous flame front imaging in hydrocarbon flames. Proceedings of the Combustion Institute, 2009, 32, 921-928.	2.4	34
76	Non-intrusive gas-phase temperature measurements inside a porous burner using dual-pump CARS. Proceedings of the Combustion Institute, 2009, 32, 3123-3129.	2.4	45
77	Validation experiments for spatially resolved one-dimensional emission spectroscopy temperature measurements by dual-pump CARS in a sooting flame. Proceedings of the Combustion Institute, 2009, 32, 745-752.	2.4	17
78	Picosecond time-resolved pure-rotational coherent anti-Stokes Raman spectroscopy for N_2 thermometry. Optics Letters, 2009, 34, 3755.	1.7	61
79	Development of a simplified dual-pump dual-broadband coherent anti-Stokes Raman scattering system. Applied Optics, 2009, 48, B43.	2.1	19
80	Local fuel concentration measurements for mixture formation diagnostics using diffraction by laser-induced gratings in comparison to spontaneous Raman scattering. Journal of Raman Spectroscopy, 2008, 39, 711-721.	1.2	46
81	Quantitative Analysis of Alpha-D-glucose in an Ionic Liquid by Using Infrared Spectroscopy. ChemPhysChem, 2008, 9, 1317-1322.	1.0	51
82	Determination of probe volume dimensions in coherent measurement techniques. Applied Optics, 2008, 47, 6601.	2.1	18
83	Two-photon stimulated Raman excitation of thermal laser-induced gratings in molecular gases using broadband radiation of a single laser. Optics Express, 2008, 16, 18379.	1.7	6
84	Design and characterization of a Raman-scattering-based sensor system for temporally resolved gas analysis and its application in a gas turbine power plant. Measurement Science and Technology, 2008, 19, 085408.	1.4	120
85	Characterization of a Combined CARS and Interferometric Rayleigh Scattering System. , 2007, , .		7
86	Development of Supersonic Combustion Experiments for CFD Modeling. , 2007, , .		7
87	Dual-pump CARS measurements of N_2 , H_2 and CO in a partially premixed flame. Journal of Raman Spectroscopy, 2007, 38, 983-988.	1.2	27
88	Numerical and experimental study of the vaporization cooling in gasoline direct injection sprays. Proceedings of the Combustion Institute, 2007, 31, 3067-3073.	2.4	18
89	Combined coherent anti-Stokes Raman spectroscopy and linear Raman spectroscopy for simultaneous temperature and multiple species measurements. Optics Letters, 2006, 31, 1908.	1.7	39
90	Time-resolved measurement of the local equivalence ratio in a gaseous propane injection process using laser-induced gratings. Optics Express, 2006, 14, 12994.	1.7	22

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91	Investigation of the combustion process in an auxiliary heating system using dual-pump CARS. Journal of Raman Spectroscopy, 2006, 37, 633-640.	1.2	31
92	Linewidth modelling of C ₂ H ₂ /N ₂ mixtures tested by rotational CARS measurements. Journal of Raman Spectroscopy, 2006, 37, 647-654.	1.2	40
93	Identification of spatial averaging effects in vibrational CARS spectra. Journal of Raman Spectroscopy, 2006, 37, 641-646.	1.2	28
94	LOCALLY RESOLVED INVESTIGATION OF THE VAPORIZATION OF GDI SPRAYS APPLYING DIFFERENT LASER TECHNIQUES. , 2006, 16, 319-330.		20
95	Near-resonance enhanced O ₂ detection for dual-broadband pure rotational coherent anti-Stokes Raman scattering with an ultraviolet-visible setup at 266 nm. Applied Optics, 2005, 44, 4157.	2.1	5
96	Simultaneous and time-resolved temperature and relative CO ₂ and O ₂ concentration measurements with pure rotational coherent anti-Stokes Raman scattering for pressures as great as 5 MPa. Applied Optics, 2005, 44, 5582.	2.1	25
97	Time-resolved CO ₂ thermometry for pressures as great as 5 MPa by use of pure rotational coherent anti-Stokes Raman scattering. Applied Optics, 2005, 44, 6526.	2.1	26
98	Determination of the Gas-Phase Temperature in the Vaporizing Spray of a GDI-Injector Using Pure Rotational CARS. , 2004, , .		2
99	TEMPERATURE AND CO CONCENTRATION MEASUREMENTS IN A PARTIALLY PREMIXED CH ₄ /AIR COFLOWING JET FLAME USING COHERENT ANTI-STOKES RAMAN SCATTERING. Combustion Science and Technology, 2004, 176, 1965-1984.	1.2	25
100	Comprehensive Characterization of a Sooting Laminar Methane-Diffusion Flame Using Different Laser Techniques. Chemical Engineering and Technology, 2004, 27, 1150-1156.	0.9	9
101	A study of the Raman spectra of alkanes in the Fermi-resonance region. Journal of Molecular Structure, 2004, 708, 189-195.	1.8	35
102	Application of 266-nm and 355-nm Nd:YAG laser radiation for the investigation of fuel-rich sooting hydrocarbon flames by Raman scattering. Applied Optics, 2004, 43, 5564.	2.1	60
103	Gas-phase temperature measurement in the vaporizing spray of a gasoline direct-injection injector by use of pure rotational coherent anti-Stokes Raman scattering. Optics Letters, 2004, 29, 247.	1.7	66
104	Application of an optical pulse stretcher to coherent anti-Stokes Raman spectroscopy. Optics Letters, 2004, 29, 2381.	1.7	30
105	Determination of temperatures and fuel/air ratios in an ethene-air flame by dual-pump CARS. Journal of Raman Spectroscopy, 2003, 34, 946-951.	1.2	63
106	High-pressure pure rotational CARS: comparison of temperature measurements with O ₂ , N ₂ and synthetic air. Journal of Raman Spectroscopy, 2003, 34, 932-939.	1.2	46
107	Umfassende Charakterisierung einer ruÄŸenden laminaren Methan-Diffusionsflamme unter Nutzung verschiedener Lasermessverfahren. Chemie-Ingenieur-Technik, 2003, 75, 573-576.	0.4	1
108	Simultaneous temperature and relative oxygen and methane concentration measurements in a partially premixed sooting flame using a novel CARS-technique. Journal of Molecular Structure, 2003, 661-662, 515-524.	1.8	19

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109	Simultaneous vibrational and pure rotational coherent anti-Stokes Raman spectroscopy for temperature and multispecies concentration measurements demonstrated in sooting flames. Applied Optics, 2002, 41, 564.	2.1	46
110	Dual-pump CARS for the simultaneous detection of N ₂ , O ₂ and CO in CH ₄ flames. Journal of Raman Spectroscopy, 2002, 33, 919-924.	1.2	49
111	Untersuchung von diodenlaserbasierten Mehrkomponenten-Konzentrationsmesssystemen zur Gasanalyse (Investigation of Diode Laser-Based Multi-Species Gas Sensor Concepts). TM Technisches Messen, 2001, 68, 400.	0.3	11
112	Simultaneous temperature and relative O ₂ –N ₂ concentration measurements by single-shot pure rotational coherent anti-Stokes Raman scattering for pressures as great as 5 MPa. Applied Optics, 2000, 39, 6918.	2.1	23
113	Pure rotational coherent anti-Stokes Raman scattering: comparison of evaluation techniques for determining single-shot simultaneous temperature and relative N ₂ –O ₂ concentration. Applied Optics, 1998, 37, 5659.	2.1	26
114	Accuracy and precision of single-pulse one-dimensional vibrational coherent anti-Stokes Raman-scattering temperature measurements. Applied Optics, 1997, 36, 3253.	2.1	20
115	Simultaneous temperature and relative nitrogen–oxygen concentration measurements in air with pure rotational coherent anti-Stokes Raman scattering for temperatures to as high as 2050 K. Applied Optics, 1997, 36, 3500.	2.1	34
116	Experimental comparison of single-shot broadband vibrational and dual-broadband pure rotational coherent anti-Stokes Raman scattering in hot air. Applied Optics, 1996, 35, 2665.	2.1	93
117	One-dimensional vibrational coherent anti-Stokes Raman-scattering thermometry. Optics Letters, 1996, 21, 1532.	1.7	32
118	Simultaneous coherent anti-Stokes Raman scattering and two-dimensional laser Rayleigh thermometry in a contained technical swirl combustor. Applied Optics, 1995, 34, 2780.	2.1	31
119	Evaluation of two different gas temperatures and their volumetric fraction from broadband N ₂ coherent anti-Stokes Raman spectroscopy spectra. Applied Optics, 1995, 34, 3313.	2.1	14
120	Laser photoionization mass spectroscopy with picosecond resolution. Applied Physics Letters, 1988, 53, 816-818.	1.5	5
121	Long-Term Behavior of Fuel Vapor Retaining Systems for Biofuels (E0, E10) Part 1: Regeneration with Dry Flushing Nitrogen. Chemie-Ingenieur-Technik, 0, , .	0.4	1