Gernot Friedrichs

List of Publications by Year
in descending order

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65	1,462	331670	361022
papers	citations	21 h-index	35 g-index

68	68	68	1851
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Ocean's Vital Skin: Toward an Integrated Understanding of the Sea Surface Microlayer. Frontiers in Marine Science, 2017, 4, .	2.5	137
2	Quantitative detection of HCO behind shock waves: The thermal decomposition of HCO. Physical Chemistry Chemical Physics, 2002, 4, 5778-5788.	2.8	107
3	The Bunsen gas solubility coefficient of ethylene as a function of temperature and salinity and its importance for nitrogen fixation assays. Limnology and Oceanography: Methods, 2004, 2, 282-288.	2.0	94
4	Bismuth Triâ€•and Tetraarylcarboxylates: Crystal Structures, In Situ Xâ€•ray Diffraction, Intermediates and Luminescence. Chemistry - A European Journal, 2013, 19, 12537-12546.	3.3	70
5	Validation of a thermal decomposition mechanism of formaldehyde by detection of CH2 O and HCO behind shock waves. International Journal of Chemical Kinetics, 2004, 36, 157-169.	1.6	52
6	Direct measurements of the reaction H + CH2O ? H2 + HCO behind shock waves by means of Vis-UV detection of formaldehyde. International Journal of Chemical Kinetics, 2002, 34, 374-386.	1.6	45
7	Room Temperature and Shock Tube Study of the Reaction HCO + O2 Using the Photolysis of Glyoxal as an Efficient HCO Source. Journal of Physical Chemistry A, 2006, 110, 160-170.	2.5	43
8	Toward continuous monitoring of seawater13CO2/12CO2isotope ratio andpCO2: Performance of cavity ringdown spectroscopy and gas matrix effects. Limnology and Oceanography: Methods, 2010, 8, 539-551.	2.0	42
9	Dimerization of HNO in Aqueous Solution: An Interplay of Solvation Effects, Fast Acidâ€“Base Equilibria, and Intramolecular Hydrogen Bonding?. Journal of the American Chemical Society, 2011, 133, 17912-17922.	13.7	41
10	Design and field application of a UV-LED based optical fiber biofilm sensor. Biosensors and Bioelectronics, 2012, 33, 172-178.	10.1	41
11	Kinetics of the Reaction C2H5 + HO2 by Time-Resolved Mass Spectrometry. Journal of Physical Chemistry A, 2006, 110, 3330-3337.	2.5	37
12	Using cavity ringdown spectroscopy for continuous monitoring of Î´13C(CO2) and Æ'CO2in the surface ocean. Limnology and Oceanography: Methods, 2012, 10, 752-766.	2.0	32
13	Investigation of the Thermal Decay of Carbon Suboxide. Zeitschrift Fur Physikalische Chemie, 1998, 203, 1-14.	2.8	31
14	Kinetics of the a-C₃H₅+ O₂reaction, investigated by photoionization using synchrotron radiation. Physical Chemistry Chemical Physics, 2018, 20, 10721-10731.	2.8	28
15	Fluorescence-Based Quasicontinuous and In Situ Monitoring of Biofilm Formation Dynamics in Natural Marine Environments. Applied and Environmental Microbiology, 2014, 80, 3721-3728.	3.1	26
16	Thermal Decomposition of NCN3as a High-Temperature NCN Radical Source: Singletâ^'Triplet Relaxation and Absorption Cross Section of NCN(3Î£)â€. Journal of Physical Chemistry A, 2010, 114, 12963-12971.	2.5	25
17	A kinetic study of the reaction of NH2 with NO in the temperature range 1400â€“2800 K. Physical Chemistry Chemical Physics, 1999, 1, 427.	2.8	24
18	Revealing structural properties of the marine nanolayer from vibrational sum frequency generation spectra. Journal of Geophysical Research, 2011, 116, .	3.3	24

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19	Glyoxal Oxidation Mechanism: Implications for the Reactions HCO + O2and OCHCHO + HO2. Journal of Physical Chemistry A, 2015, 119, 7305-7315.	2.5	24
20	The first water-based synthesis of Ce(iv)-MOFs with saturated chiral and achiral C4-dicarboxylate linkers. Dalton Transactions, 2019, 48, 8433-8441.	3.3	24
21	The Thermal Decomposition of NH₂ and NH Radicals. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1998, 102, 1474-1485.	0.9	23
22	A shock tube study of the reaction NH2 + CH4 ? NH3 + CH3 and comparison with transition state theory. International Journal of Chemical Kinetics, 2003, 35, 304-309.	1.6	23
23	Sensitive Absorption Methods for Quantitative Gas Phase Kinetic Measurements. Part 1: Frequency Modulation Spectroscopy. Zeitschrift Fur Physikalische Chemie, 2008, 222, 1-30.	2.8	22
24	Direct measurements of the high temperature rate constants of the reactions NCN + O, NCN + NCN, and NCN + M. Physical Chemistry Chemical Physics, 2012, 14, 1030-1037.	2.8	22
25	Organic Matter in the Surface Microlayer: Insights From a Wind Wave Channel Experiment. Frontiers in Marine Science, 2018, 5, .	2.5	22
26	HCO formation in the thermal unimolecular decomposition of glyoxal: rotational and weak collision effects. Physical Chemistry Chemical Physics, 2008, 10, 6520.	2.8	20
27	The Products of the Reactions of o-Benzyne with Ethene, Propene, and Acetylene: A Combined Mass Spectrometric and Quantum Chemical Study. Zeitschrift Fur Physikalische Chemie, 2009, 223, 387-407.	2.8	19
28	Wide temperature range (T = 295 K and 770â€“1305 K) study of the kinetics of the reactions HCO + NO and HCO + NO2 using frequency modulation spectroscopy. Physical Chemistry Chemical Physics, 2007, 9, 4177.	2.8	18
29	Sensitive Absorption Methods for Quantitative Gas Phase Kinetic Measurements. Part 2: Cavity Ringdown Spectroscopy. Zeitschrift Fur Physikalische Chemie, 2008, 222, 31-61.	2.8	18
30	Vibrational sum-frequency generation as a probe for composition, chemical reactivity, and film formation dynamics of the sea surface nanolayer. Limnology and Oceanography: Methods, 2010, 8, 216-228.	2.0	18
31	Saturation dynamics and working limits of saturated absorption cavity ringdown spectroscopy. Physical Chemistry Chemical Physics, 2016, 18, 22978-22989.	2.8	18
32	Direct measurements of the total rate constant of the reaction NCN + H and implications for the product branching ratio and the enthalpy of formation of NCN. Physical Chemistry Chemical Physics, 2014, 16, 11647-11657.	2.8	17
33	Luminescence tuning and single-phase white light emitters based on rare earth ions doped into a bismuth coordination network. Journal of Materials Chemistry C, 2018, 6, 12668-12678.	5.5	17
34	Investigation of the Thermal Decomposition of Ketene and of the Reaction CH2 + H2 â‡” CH3 + H. Zeitschrift Fur Physikalische Chemie, 2001, 215, .	2.8	15
35	Validation of the Extended Simultaneous Kinetics and Ringdown Model by Measurements of the Reaction NH2+ NO. Journal of Physical Chemistry A, 2005, 109, 4785-4795.	2.5	15
36	Quantitative Time-Resolved Vibrational Sum Frequency Generation Spectroscopy as a Tool for Thin Film Kinetic Studies: New Insights into Oleic Acid Monolayer Oxidation. Journal of Physical Chemistry A, 2013, 117, 7863-7875.	2.5	15

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37	Seasonal signatures in SFG vibrational spectra of the sea surface nanolayer at Boknis Eck Time Series Station (SW Baltic Sea). Biogeosciences, 2013, 10, 5325-5334.	3.3	15
38	Direct Measurements of the Rate Constants of the Reactions NCN + NO and NCN + NO₂ Behind Shock Waves. Journal of Physical Chemistry A, 2011, 115, 14382-14390.	2.5	14
39	The story of NCN as a key species in prompt-NO formation. Progress in Energy and Combustion Science, 2021, 87, 100940.	31.2	14
40	An extended simultaneous kinetics and ringdown model: Determination of the rate constant for the reaction SiH2â€‰+â€‰O2. Physical Chemistry Chemical Physics, 2003, 5, 4622-4630.	2.8	13
41	The rate constant of the reaction NCN + H₂ and its role in NCN and NO modeling in low pressure CH₄/O₂/N₂-flames. Physical Chemistry Chemical Physics, 2015, 17, 15876-15886.	2.8	12
42	Direct Measurements of the Reaction NH2 + H2 â†' NH3 + H at Temperatures from 1360 to 2130 K. Zeitschrift Fur Physikalische Chemie, 2000, 214, .	2.8	11
43	Quantitative FM Spectroscopy at High Temperatures: The Detection of 1CH2 behind Shock Waves. Zeitschrift Fur Physikalische Chemie, 2000, 214, .	2.8	11
44	Quantitative Mid-Infrared Cavity Ringdown Detection of Methyl Iodide for Monitoring Applications. Analytical Chemistry, 2017, 89, 8445-8452.	6.5	11
45	Single-tone mid-infrared frequency modulation spectroscopy for sensitive detection of transient species. Optics Express, 2019, 27, 26499.	3.4	11
46	Câ^'H Bond Activation of Coordinated Pyridine: Ortho-Pyridyl-Ditechnetiumhydridocarbonyl Metal Cyclus. Crystal Structure and Dynamic Behavior in Solution. Inorganic Chemistry, 2008, 47, 10177-10182.	4.0	10
47	Time-Resolved Cavity Ringdown Measurements and Kinetic Modeling of the Pressure Dependences of the Recombination Reactions of SiH₂ with the Alkenes C₂H₄, C₃H₆, and t-C₄H₈. Journal of Physical Chemistry A, 2008, 112, 5636-5646.	2.5	9
48	Shock Tube Measurements of the Rate Constant of the Reaction NCN + O₂. International Journal of Chemical Kinetics, 2015, 47, 586-595.	1.6	9
49	Kinetics of 1- and 2-methylallyl + O₂ reaction, investigated by photoionisation using synchrotron radiation. Physical Chemistry Chemical Physics, 2021, 23, 1539-1549.	2.8	9
50	A consistent model for the thermal decomposition of NCN₃ and the singletâ€“ triplet relaxation of NCN. International Journal of Chemical Kinetics, 2013, 45, 30-40.	1.6	8
51	The Reaction NCN + H2: Quantum Chemical Calculations, Role of1NCN Chemistry, and3NCN Absorption Cross Section. Journal of Physical Chemistry A, 2020, 124, 4632-4645.	2.5	7
52	Quantitative and Sensitive Mid-Infrared Frequency Modulation Detection of HCN behind Shock Waves. Fuels, 2021, 2, 437-447.	2.7	7
53	Doppler-limited high-resolution spectrum and VPT2 assisted assignment of the C-H stretch of CH2Br2. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 181, 180-191.	3.9	6
54	Quantitative HNO detection behind shock waves. Proceedings of the Combustion Institute, 2017, 36, 607-615.	3.9	5

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55	Kinetics in the real world: linking molecules, processes, and systems. Physical Chemistry Chemical Physics, 2018, 20, 10561-10568.	2.8	5
56	Vibrational sum-frequency generation study of molecular structure, sterical constraints and nonlinear optical switching contrast of mixed alkyl-azobenzene self-assembled monolayers. Zeitschrift Fur Physikalische Chemie, 2020, 234, 1427-1452.	2.8	5
57	The Gas Phase Oxidation of Silyl Radicals by Molecular Oxygen: Kinetics and Mechanisms. , 0, , 44-57.		4
58	A precise high-resolution near infrared continuous wave cavity ringdown spectrometer using a Fourier transform based wavelength calibration. Review of Scientific Instruments, 2010, 81, 053109.	1.3	4
59	Nonequilibrium Excitation of C2 Radicals during the Thermal Decomposition of C3 O2 behind Shock Waves. Zeitschrift Fur Physikalische Chemie, 2001, 215, .	2.8	2
60	Chemie Ã¼ber denâ€‰Wolken â€¦ï¸â€‰undâ€‰darunter. Herausgegeben von Reinhard Zellner. Angewandte Chemie, 2011, 123, 10196-10197.	2.0	1
61	Ab Initio and RRKM/Master Equation Analysis of the Photolysis and Thermal Unimolecular Decomposition of Bromoacetaldehyde. Journal of Physical Chemistry A, 2021, 125, 8282-8293.	2.5	1
62	The Gas-Phase Oxidation of Silyl Radicals by Molecular Oxygen: Kinetics and Mechanisms. ChemInform, 2004, 35, no.	0.0	0
63	Marine Applications for a Promising New Spectroscopic Method. Eos, 2015, 96, .	0.1	0
64	Congratulations to Friedrich Temps: a multifaceted career in Physical Chemistry. Zeitschrift Fur Physikalische Chemie, 2020, 234, 1223-1232.	2.8	0
65	Towards a Transferable Standard for Nitrous Oxide Isotopomer Ratio. , 2020, , .		0