Christoph Kern

List of Publications by Year
in descending order

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40	2,335	236925 25	276875 41
papers	citations	h-index	g-index

59	59	59	2355
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The 2018 rift eruption and summit collapse of KÄ«lauea Volcano. Science, 2019, 363, 367-374.	12.6	353
2	The effects of volcanic eruptions on atmospheric chemistry. Chemical Geology, 2009, 263, 131-142.	3.3	191
3	The Monte Carlo atmospheric radiative transfer model McArtim: Introduction and validation of Jacobians and 3D features. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1119-1137.	2.3	174
4	Intercomparison of four different in-situ techniques for ambient formaldehyde measurements in urban air. Atmospheric Chemistry and Physics, 2005, 5, 2881-2900.	4.9	148
5	Radiative transfer corrections for accurate spectroscopic measurements of volcanic gas emissions. Bulletin of Volcanology, 2010, 72, 233-247.	3.0	126
6	Short-period volcanic gas precursors to phreatic eruptions: Insights from PoÃ¡s Volcano, Costa Rica. Earth and Planetary Science Letters, 2016, 442, 218-227.	4.4	105
7	Estimating the volcanic emission rate and atmospheric lifetime of SO₂ from space: a case study for KÄ«lauea volcano, Hawaî`i. Atmospheric Chemistry and Physics, 2014, 14, 8309-8322.	4.9	87
8	MAX-DOAS detection of glyoxal during ICARTT 2004. Atmospheric Chemistry and Physics, 2007, 7, 1293-1303.	4.9	78
9	Theoretical description of functionality, applications, and limitations of SO₂ cameras for the remote sensing of volcanic plumes. Atmospheric Measurement Techniques, 2010, 3, 733-749.	3.1	78
10	Halogen oxide measurements at Masaya Volcano, Nicaragua using active long path differential optical absorption spectroscopy. Bulletin of Volcanology, 2009, 71, 659-670.	3.0	59
11	Rapid chemical evolution of tropospheric volcanic emissions from Redoubt Volcano, Alaska, based on observations of ozone and halogen-containing gases. Journal of Volcanology and Geothermal Research, 2013, 259, 317-333.	2.1	58
12	Applying UV cameras for SO2 detection to distant or optically thick volcanic plumes. Journal of Volcanology and Geothermal Research, 2013, 262, 80-89.	2.1	56
13	A New Sulfur and Carbon Degassing Inventory for the Southern Central American Volcanic Arc: The Importance of Accurate Timeâ€Series Data Sets and Possible Tectonic Processes Responsible for Temporal Variations in Arcâ€Scale Volatile Emissions. Geochemistry, Geophysics, Geosystems, 2017, 18, 4437-4468.	2.5	56
14	On the absolute calibration of SO₂ cameras. Atmospheric Measurement Techniques, 2013, 6, 677-696.	3.1	54
15	Improving the accuracy of SO₂column densities and emission rates obtained from upwardâ€looking UVâ€spectroscopic measurements of volcanic plumes by taking realistic radiative transfer into account. Journal of Geophysical Research, 2012, 117, .	3.3	51
16	Novel SO₂ spectral evaluation scheme using the 360â€“390 nm wavelength range. Atmospheric Measurement Techniques, 2010, 3, 879-891.	3.1	44
17	Intercomparison of SO 2 camera systems for imaging volcanic gas plumes. Journal of Volcanology and Geothermal Research, 2015, 300, 22-36.	2.1	42
18	An automated SO 2 camera system for continuous, real-time monitoring of gas emissions from KÄ«lauea Volcano's summit Overlook Crater. Journal of Volcanology and Geothermal Research, 2015, 300, 81-94.	2.1	41

#	Article	IF	Citations
19	Long-Term Measurements of NO₃ Radical at a Semiarid Urban Site: 1. Extreme Concentration Events and Their Oxidation Capacity. Environmental Science & Technology, 2009, 43, 9117-9123.	10.0	40
20	Magmatic degassing, lava dome extrusion, and explosions from Mount Cleveland volcano, Alaska, 2011â€“2015: Insight into the continuous nature of volcanic activity over multi-year timescales. Journal of Volcanology and Geothermal Research, 2017, 337, 98-110.	2.1	39
21	Decadal-scale variability of diffuse CO2 emissions and seismicity revealed from long-term monitoring (1995â€“2013) at Mammoth Mountain, California, USA. Journal of Volcanology and Geothermal Research, 2014, 289, 51-63.	2.1	37
22	Using SO 2 camera imagery and seismicity to examine degassing and gas accumulation at KÄ«lauea Volcano, May 2010. Journal of Volcanology and Geothermal Research, 2015, 300, 70-80.	2.1	35
23	Construction of probabilistic event trees for eruption forecasting at Sinabung volcano, Indonesia 2013â€“14. Journal of Volcanology and Geothermal Research, 2019, 382, 233-252.	2.1	34
24	Synoptic analysis of a decade of daily measurements of SO₂ emission in the troposphere from volcanoes of the global ground-based Network for Observation of Volcanic and Atmospheric Change. Earth System Science Data, 2021, 13, 1167-1188.	9.9	31
25	Remote measurement of high preeruptive water vapor emissions at Sabancaya volcano by passive differential optical absorption spectroscopy. Journal of Geophysical Research: Solid Earth, 2017, 122, 3540-3564.	3.4	30
26	Quantifying gas emissions associated with the 2018 rift eruption of KÄ«lauea Volcano using ground-based DOAS measurements. Bulletin of Volcanology, 2020, 82, 1.	3.0	29
27	Quantitative imaging of volcanic plumes â€” Results, needs, and future trends. Journal of Volcanology and Geothermal Research, 2015, 300, 7-21.	2.1	26
28	Long period seismicity and very long period infrasound driven by shallow magmatic degassing at Mount Pagan, Mariana Islands. Journal of Geophysical Research: Solid Earth, 2016, 121, 188-209.	3.4	26
29	Volatile metal emissions from volcanic degassing and lavaâ€“seawater interactions at KÄ«lauea Volcano, Hawaiâ€™i. Communications Earth & Environment, 2021, 2, .	6.8	25
30	New insights into Kawah Ijen's volcanic system from the wet volcano workshop experiment. Geological Society Special Publication, 2017, 437, 35-56.	1.3	24
31	Gas and ash emissions associated with the 2010â€“present activity of Sinabung Volcano, Indonesia. Journal of Volcanology and Geothermal Research, 2019, 382, 184-196.	2.1	20
32	Applying light-emitting diodes with narrowband emission features in differential spectroscopy. Optics Letters, 2009, 34, 3716.	3.3	18
33	Early in-flight detection of SO₂ via Differential Optical Absorption Spectroscopy: a feasible aviation safety measure to prevent potential encounters with volcanic plumes. Atmospheric Measurement Techniques, 2011, 4, 1785-1804.	3.1	18
34	Degassing at Sabancaya volcano measured by UV cameras and the NOVAC network. Volcanica, 2019, 2, 239-252.	1.8	18
35	Linking Subsurface to Surface Using Gas Emission and Melt Inclusion Data at Mount Cleveland Volcano, Alaska. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008882.	2.5	16
36	Rapid metal pollutant deposition from the volcanic plume of KÄ«lauea, Hawaiâ€™i. Communications Earth & Environment, 2021, 2, .	6.8	15

#	Article	IF	Citations
37	A golden era for volcanic gas geochemistry?. Bulletin of Volcanology, 2022, 84, 1.	3.0	14
38	Development of a portable active long-path differential optical absorption spectroscopy system for volcanic gas measurements. Journal of Sensors and Sensor Systems, 2014, 3, 355-367.	0.9	12
39	Spatial Distribution of Halogen Oxides in the Plume of Mount Pagan Volcano, Mariana Islands. Geophysical Research Letters, 2018, 45, 9588-9596.	4.0	11
40	The Difficulty of Measuring the Absorption of Scattered Sunlight by H2O and CO2 in Volcanic Plumes: A Comment on Pering et al. â€œA Novel and Inexpensive Method for Measuring Volcanic Plume Water Fluxes at High Temporal Resolution,â€•Remote Sens. 2017, 9, 146. Remote Sensing, 2017, 9, 534.	4.0	2