Andrew John Samuel McGonigle

List of Publications by Year
in descending order

79	3,645	117625 34	138484 58
papers	citations	h-index	g-index

82	82	82	2755
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A miniaturised ultraviolet spectrometer for remote sensing of SO2 fluxes: a new tool for volcano surveillance. Journal of Volcanology and Geothermal Research, 2003, 119, 241-254.	2.1	334
2	Hyperspectral Imaging in Environmental Monitoring: A Review of Recent Developments and Technological Advances in Compact Field Deployable Systems. Sensors, 2019, 19, 3071.	3.8	158
3	Unmanned aerial vehicle measurements of volcanic carbon dioxide fluxes. Geophysical Research Letters, 2008, 35, .	4.0	142
4	H2S fluxes from Mt. Etna, Stromboli, and Vulcano (Italy) and implications for the sulfur budget at volcanoes. Geochimica Et Cosmochimica Acta, 2005, 69, 1861-1871.	3.9	139
5	BrO formation in volcanic plumes. Geochimica Et Cosmochimica Acta, 2006, 70, 2935-2941.	3.9	122
6	Emission of bromine and iodine from Mount Etna volcano. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	2.5	116
7	Total volatile flux from Mount Etna. Geophysical Research Letters, 2008, 35, .	4.0	112
8	Smartphone Spectrometers. Sensors, 2018, 18, 223.	3.8	107
9	Degassing of gaseous (elemental and reactive) and particulate mercury from Mount Etna volcano (Southern Italy). Atmospheric Environment, 2007, 41, 7377-7388.	4.1	97
10	Characterization and evolution of tropospheric plumes from Lascar and Villarrica volcanoes, Chile. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	94
11	Title is missing!. Journal of Atmospheric Chemistry, 2003, 46, 207-237.	3.2	93
12	Primary sulfate aerosol and associated emissions from Masaya Volcano, Nicaragua. Journal of Geophysical Research, 2002, 107, ACH 5-1-ACH 5-8.	3.3	91
13	Changes in gas composition prior to a minor explosive eruption at Masaya volcano, Nicaragua. Journal of Volcanology and Geothermal Research, 2003, 126, 327-339.	2.1	91
14	A reassessment of current volcanic emissions from the Central American arc with specific examples from Nicaragua. Journal of Volcanology and Geothermal Research, 2006, 149, 297-311.	2.1	85
15	Protocols for UV camera volcanic SO2 measurements. Journal of Volcanology and Geothermal Research, 2010, 194, 55-60.	2.1	83
16	Passive vs. active degassing modes at an open-vent volcano (Stromboli, Italy). Earth and Planetary Science Letters, 2012, 359-360, 106-116.	4.4	80
17	Glacier algae accelerate melt rates on the south-western Greenland Ice Sheet. Cryosphere, 2020, 14, 309-330.	3.9	78
18	Nitric acid from volcanoes. Earth and Planetary Science Letters, 2004, 218, 17-30.	4.4	77

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19	Sulfur, heat, and magma budget of Erta â€˜Ale lava lake, Ethiopia. Geology, 2004, 32, 509.	4.4	74
20	SO2depletion in tropospheric volcanic plumes. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	68
21	Ultraviolet Imaging with Low Cost Smartphone Sensors: Development and Application of a Raspberry Pi-Based UV Camera. Sensors, 2016, 16, 1649.	3.8	67
22	Cerium-doped fluoride lasers. IEEE Journal of Quantum Electronics, 2004, 40, 1430-1440.	1.9	58
23	Periodic volcanic degassing behavior: The Mount Etna example. Geophysical Research Letters, 2013, 40, 4818-4822.	4.0	53
24	First volatile inventory for Gorely volcano, Kamchatka. Geophysical Research Letters, 2012, 39, .	4.0	52
25	Low-cost 3D printed 1â€‰â€‰nm resolution smartphone sensor-based spectrometer: instrument design and application in ultraviolet spectroscopy. Optics Letters, 2017, 42, 4323.	3.3	51
26	Plume velocity determination for volcanic SO2flux measurements. Geophysical Research Letters, 2005, 32, .	4.0	49
27	Mt. Erebus, the largest point source of NO2 in Antarctica. Atmospheric Environment, 2005, 39, 6000-6006.	4.1	48
28	Comparison of COSPEC and two miniature ultraviolet spectrometer systems for SO2 measurements using scattered sunlight. Bulletin of Volcanology, 2006, 68, 313-322.	3.0	45
29	Sources, size distribution, and downwind grounding of aerosols from Mount Etna. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	41
30	UV camera measurements of fumarole field degassing (La Fossa crater, Vulcano Island). Journal of Volcanology and Geothermal Research, 2011, 199, 47-52.	2.1	41
31	A Low-Cost Smartphone Sensor-Based UV Camera for Volcanic SO2 Emission Measurements. Remote Sensing, 2017, 9, 27.	4.0	41
32	Dynamics of Outgassing and Plume Transport Revealed by Proximal Unmanned Aerial System (UAS) Measurements at VolcÃ¡n Villarrica, Chile. Geochemistry, Geophysics, Geosystems, 2019, 20, 730-750.	2.5	41
33	High time resolution fluctuations in volcanic carbon dioxide degassing from Mount Etna. Journal of Volcanology and Geothermal Research, 2014, 270, 115-121.	2.1	40
34	Aerosol chemistry of emissions from three contrasting volcanoes in Italy. Atmospheric Environment, 2004, 38, 5637-5649.	4.1	37
35	Ozone depletion in tropospheric volcanic plumes. Geophysical Research Letters, 2010, 37, .	4.0	37
36	A simple technique for measuring power station SO2 and NO2 emissions. Atmospheric Environment, 2004, 38, 21-25.	4.1	36

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37	Ultraviolet Imaging of Volcanic Plumes: A New Paradigm in Volcanology. Geosciences (Switzerland), 2017, 7, 68.	2.2	34
38	Sulphur dioxide fluxes from Papua New Guinea's volcanoes. Geophysical Research Letters, 2004, 31, .	4.0	32
39	Volcano remote sensing with ground-based spectroscopy. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2005, 363, 2915-2929.	3.4	30
40	Accurate measurement of volcanic SO2flux: Determination of plume transport speed and integrated SO2concentration with a single device. Geochemistry, Geophysics, Geosystems, 2005, 6, .	2.5	30
41	Measurement of volcanic SO2 fluxes with differential optical absorption spectroscopy. Journal of Volcanology and Geothermal Research, 2007, 162, 111-122.	2.1	30
42	NO2Emissions from Agricultural Burning in SÃ£o Paulo, Brazil. Environmental Science & Technology, 2004, 38, 4557-4561.	10.0	29
43	10 kHz continuously tunable Ce:LiLuF4 laser. Electronics Letters, 1999, 35, 1640.	1.0	27
44	Spectroscopic capture of 1 Hz volcanic SO₂ fluxes and integration with volcano geophysical data. Geophysical Research Letters, 2009, 36, .	4.0	26
45	Dynamics of mild strombolian activity on Mt. Etna. Journal of Volcanology and Geothermal Research, 2015, 300, 103-111.	2.1	26
46	Low-Cost Hyperspectral Imaging System: Design and Testing for Laboratory-Based Environmental Applications. Sensors, 2020, 20, 3293.	3.8	26
47	Volatile metal emissions from volcanic degassing and lavaâ€“seawater interactions at KÄ«lauea Volcano, Hawaiâ€™i. Communications Earth & Environment, 2021, 2, .	6.8	25
48	Combining Spherical-Cap and Taylor Bubble Fluid Dynamics with Plume Measurements to Characterize Basaltic Degassing. Geosciences (Switzerland), 2018, 8, 42.	2.2	23
49	Correlation of oscillatory behaviour in Matlab using wavelets. Computers and Geosciences, 2014, 70, 206-212.	4.2	22
50	Conduit dynamics and post explosion degassing on Stromboli: A combined UV camera and numerical modeling treatment. Geophysical Research Letters, 2016, 43, 5009-5016.	4.0	21
51	Optical sensing of volcanic gas and aerosol emissions. Geological Society Special Publication, 2003, 213, 149-168.	1.3	20
52	Comparison of Low Cost Miniature Spectrometers for Volcanic SO2 Emission Measurements. Sensors, 2009, 9, 3256-3268.	3.8	19
53	A Rapidly Convecting Lava Lake at Masaya Volcano, Nicaragua. Frontiers in Earth Science, 2019, 6, .	1.8	19
54	Sulfur dioxide fluxes from the volcanoes of Hokkaido, Japan. Journal of Volcanology and Geothermal Research, 2006, 158, 235-243.	2.1	18

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55	Degassing at Sabancaya volcano measured by UV cameras and the NOVAC network. Volcanica, 2019, 2, 239-252.	1.8	18
56	Low-Cost Hyperspectral Imaging with A Smartphone. Journal of Imaging, 2021, 7, 136.	3.0	17
57	High-Resolution Hyperspectral Imaging Using Low-Cost Components: Application within Environmental Monitoring Scenarios. Sensors, 2022, 22, 4652.	3.8	17
58	The Development of a Low-Cost, Near Infrared, High-Temperature Thermal Imaging System and Its Application to the Retrieval of Accurate Lava Lake Temperatures at Masaya Volcano, Nicaragua. Remote Sensing, 2018, 10, 450.	4.0	15
59	Variable SO₂ emission rates for Anatahan volcano, the Commonwealth of the Northern Mariana Islands: Implications for deriving arcâ€wide volatile fluxes from erupting volcanoes. Geophysical Research Letters, 2007, 34, .	4.0	13
60	The PiSpec: A Low-Cost, 3D-Printed Spectrometer for Measuring Volcanic SO2 Emission Rates. Frontiers in Earth Science, 2019, 7, .	1.8	12
61	A 10 kHz Ce:LiSAF laser pumped by the sum-frequency-mixed output of a copper vapour laser. Optics Communications, 2001, 193, 233-236.	2.1	11
62	Ground Based Ultraviolet Remote Sensing of Volcanic Gas Plumes. Sensors, 2008, 8, 1559-1574.	3.8	11
63	A 380-mW 7-MHz cerium LiLuF laser pumped by the frequency doubled yellow output of a copper-vapor-laser. IEEE Journal of Selected Topics in Quantum Electronics, 1999, 5, 1526-1531.	2.9	10
64	Temperature-dependent polarization effects in Ce:LiLuF. Applied Optics, 2001, 40, 4326.	2.1	10
65	Vulcamera: a program for measuring volcanic SO2 using UV cameras. Annals of Geophysics, 2011, 54, .	1.0	9
66	Thermal Imaging Metrology with a Smartphone Sensor. Sensors, 2018, 18, 2169.	3.8	8
67	Influence of sources and meteorology on surface concentrations of gases and aerosols in a coastal industrial complex. Journal of the Brazilian Chemical Society, 2009, 20, 214-221.	0.6	7
68	A Novel and Inexpensive Method for Measuring Volcanic Plume Water Fluxes at High Temporal Resolution. Remote Sensing, 2017, 9, 146.	4.0	7
69	Recent advances in ground-based ultraviolet remote sensing of volcanic SO2 fluxes. Annals of Geophysics, 2011, 54, .	1.0	7
70	Image Correction and In Situ Spectral Calibration for Low-Cost, Smartphone Hyperspectral Imaging. Remote Sensing, 2022, 14, 1152.	4.0	7
71	Compact 25-W 10-kHz Nd:YLF-pumped dye laser. Applied Optics, 2002, 41, 1714.	2.1	6
72	A compact frequency-doubled 10-kHz PRF copper-vapour-laser-pumped dye laser. Applied Physics B: Lasers and Optics, 2003, 76, 307-311.	2.2	6

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73	Ultraviolet Camera Measurements of Passive and Explosive (Strombolian) Sulphur Dioxide Emissions at Yasur Volcano, Vanuatu. Remote Sensing, 2020, 12, 2703.	4.0	5
74	First Measurements of Gas Flux with a Low-Cost Smartphone Sensor-Based UV Camera on the Volcanoes of Northern Chile. Remote Sensing, 2020, 12, 2122.	4.0	5
75	UVolc: A software platform for measuring volcanic SO2 fluxes. Computers and Geosciences, 2012, 40, 194-199.	4.2	3
76	Measuring and Visualizing Solar UV for a Wide Range of Atmospheric Conditions on Hawaiâ€™i Island. International Journal of Environmental Research and Public Health, 2019, 16, 997.	2.6	3
77	A Ti:sapphire laser end-pumped by a fibre-coupled copper vapour laser. Optics Communications, 2002, 209, 217-221.	2.1	1
78	Reply to Kern, C. 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 Resolutionâ€, Remote Sens. 2017, 9, 146. Remote Sensing, 2017, 9, 1040.	4.0	0
79	Volcanic Plumes: Impacts on the Atmosphere and Insights into Volcanic Processes. Geosciences (Switzerland), 2018, 8, 158.	2.2	0