

Michael McElroy

List of Publications by Year in descending order

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57
papers

4,086
citations

126907

33
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149698

56
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58
all docs

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docs citations

58
times ranked

4362
citing authors

#	ARTICLE	IF	CITATIONS
1	SoC threshold optimization for battery storage in frequency regulation considering uncertainty of SoC measurement and automatic generation control fatigue loss of thermal power system. International Journal of Electrical Power and Energy Systems, 2022, 137, 107771.	5.5	3
2	Projected global demand for air conditioning associated with extreme heat and implications for electricity grids in poorer countries. Energy and Buildings, 2022, 268, 112198.	6.7	16
3	A Reinforcement Learning-Based Decision System for Electricity Pricing Plan Selection by Smart Grid End Users. IEEE Transactions on Smart Grid, 2021, 12, 2176-2187.	9.0	30
4	Prospective contributions of biomass pyrolysis to China's 2050 carbon reduction and renewable energy goals. Nature Communications, 2021, 12, 1698.	12.8	146
5	Sensitivity of modeled Indian monsoon to Chinese and Indian aerosol emissions. Atmospheric Chemistry and Physics, 2021, 21, 3593-3605.	4.9	13
6	Data visualization in smart grid and low-carbon energy systems: A review. International Transactions on Electrical Energy Systems, 2021, 31, e12889.	1.9	9
7	Opportunities for household energy on the Qinghai-Tibet Plateau in line with United Nations' Sustainable Development Goals. Renewable and Sustainable Energy Reviews, 2021, 144, 110982.	16.4	14
8	Projected changes in seasonal and extreme summertime temperature and precipitation in India in response to COVID-19 recovery emissions scenarios. Environmental Research Letters, 2021, 16, 114025.	5.2	9
9	Combined solar power and storage as cost-competitive and grid-compatible supply for China's future carbon-neutral electricity system. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	70
10	Production of hydrogen from offshore wind in China and cost-competitive supply to Japan. Nature Communications, 2021, 12, 6953.	12.8	47
11	Historical and Future Roles of Internal Atmospheric Variability in Modulating Summertime Greenland Ice Sheet Melt. Geophysical Research Letters, 2020, 47, e2019GL086913.	4.0	2
12	China's emission control strategies have suppressed unfavorable influences of climate on wintertime PM _{2.5} concentrations in Beijing since 2002. Atmospheric Chemistry and Physics, 2020, 20, 1497-1505.	4.9	47
13	Offshore wind: An opportunity for cost-competitive decarbonization of China's energy economy. Science Advances, 2020, 6, eaax9571.	10.3	62
14	Contribution of Particulate Nitrate Photolysis to Heterogeneous Sulfate Formation for Winter Haze in China. Environmental Science and Technology Letters, 2020, 7, 632-638.	8.7	43
15	India's potential for integrating solar and on- and offshore wind power into its energy system. Nature Communications, 2020, 11, 4750.	12.8	63
16	Seasonal prediction of Indian wintertime aerosol pollution using the ocean memory effect. Science Advances, 2019, 5, eaav4157.	10.3	26
17	Economic and Climate Benefits of Electric Vehicles in China, the United States, and Germany. Environmental Science & Technology, 2019, 53, 11013-11022.	10.0	38
18	China's CO ₂ peak before 2030 implied from characteristics and growth of cities. Nature Sustainability, 2019, 2, 748-754.	23.7	210

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19	The Potential of Photovoltaics to Power the Belt and Road Initiative. <i>Joule</i> , 2019, 3, 1895-1912.	24.0	66
20	Thermodynamic Modeling Suggests Declines in Water Uptake and Acidity of Inorganic Aerosols in Beijing Winter Haze Events during 2014/2015â€“2018/2019. <i>Environmental Science and Technology Letters</i> , 2019, 6, 752-760.	8.7	56
21	Gasification of coal and biomass as a net carbon-negative power source for environment-friendly electricity generation in China. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 8206-8213.	7.1	78
22	Modeling formulation and validation for accelerated simulation and flexibility assessment on large scale power systems under higher renewable penetrations. <i>Applied Energy</i> , 2019, 237, 145-154.	10.1	28
23	Transition towards higher penetration of renewables: an overview of interlinked technical, environmental and socio-economic challenges. <i>Journal of Modern Power Systems and Clean Energy</i> , 2019, 7, 1-8.	5.4	60
24	Impacts of fleet types and charging modes for electric vehicles on emissions under different penetrations of wind power. <i>Nature Energy</i> , 2018, 3, 413-421.	39.5	102
25	Power System Capacity Expansion Under Higher Penetration of Renewables Considering Flexibility Constraints and Low Carbon Policies. <i>IEEE Transactions on Power Systems</i> , 2018, 33, 6240-6253.	6.5	127
26	Secular decrease of wind power potential in India associated with warming in the Indian Ocean. <i>Science Advances</i> , 2018, 4, eaat5256.	10.3	28
27	The impact of power generation emissions on ambient PM2.5 pollution and human health in China and India. <i>Environment International</i> , 2018, 121, 250-259.	10.0	111
28	Trade-driven relocation of air pollution and health impacts in China. <i>Nature Communications</i> , 2017, 8, 738.	12.8	129
29	Integrated Energy Systems for Higher Wind Penetration in China: Formulation, Implementation and Impacts. <i>IEEE Transactions on Power Systems</i> , 2017, , 1-1.	6.5	38
30	Wind-generated Electricity in China: Decreasing Potential, Inter-annual Variability and Association with Changing Climate. <i>Scientific Reports</i> , 2017, 7, 16294.	3.3	34
31	Grid integration of solar power in northwest China. , 2016, , .		3
32	Prospects for shale gas production in China: Implications for water demand. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 66, 742-750.	16.4	75
33	Challenges faced by China compared with the US in developing wind power. <i>Nature Energy</i> , 2016, 1, .	39.5	153
34	Reducing curtailment of wind electricity in China by employing electric boilers for heat and pumped hydro for energy storage. <i>Applied Energy</i> , 2016, 184, 987-994.	10.1	186
35	Thermodynamic disequilibrium of the atmosphere in the context of global warming. <i>Climate Dynamics</i> , 2015, 45, 3513-3525.	3.8	5
36	Contributions of the Hadley and Ferrel Circulations to the Energetics of the Atmosphere over the Past 32 Years*. <i>Journal of Climate</i> , 2014, 27, 2656-2666.	3.2	16

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37	Opportunity for Offshore Wind to Reduce Future Demand for Coal-Fired Power Plants in China with Consequent Savings in Emissions of CO ₂ . Environmental Science & Technology, 2014, 48, 14764-14771.	10.0	16
38	Source apportionment of atmospheric mercury pollution in China using the GEOS-Chem model. Environmental Pollution, 2014, 190, 166-175.	7.5	78
39	Synergies of Wind Power and Electrified Space Heating: Case Study for Beijing. Environmental Science & Technology, 2014, 48, 2016-2024.	10.0	27
40	The contemporary and historical budget of atmospheric CO ₂ This article is part of a Special Issue that honours the work of Dr. Donald M. Hunten FRSC who passed away in December 2010 after a very illustrious career.. Canadian Journal of Physics, 2012, 90, 707-716.	1.1	6
41	Costs for Integrating Wind into the Future ERCOT System with Related Costs for Savings in CO ₂ Emissions. Environmental Science & Technology, 2011, 45, 3160-3166.	10.0	18
42	Challenge of global climate change: Prospects for a new energy paradigm. Frontiers of Environmental Science and Engineering in China, 2010, 4, 2-11.	0.8	5
43	Year round measurements of O ₃ and CO at a rural site near Beijing: variations in their correlations. Tellus, Series B: Chemical and Physical Meteorology, 2010, 62, 228-241.	1.6	11
44	Potential for Wind-Generated Electricity in China. Science, 2009, 325, 1378-1380.	12.6	163
45	Global potential for wind-generated electricity. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10933-10938.	7.1	410
46	A quantitative assessment of uncertainties affecting estimates of global mean OH derived from methyl chloroform observations. Journal of Geophysical Research, 2008, 113, .	3.3	30
47	Seasonal variability of NO _x emissions over east China constrained by satellite observations: Implications for combustion and microbial sources. Journal of Geophysical Research, 2007, 112, .	3.3	97
48	Traffic restrictions associated with the Sino-African summit: Reductions of NO _x detected from space. Geophysical Research Letters, 2007, 34, .	4.0	63
49	Human and animal wastes: Implications for atmospheric N ₂ O and NO _x . Global Biogeochemical Cycles, 2005, 19, n/a-n/a.	4.9	18
50	A 3-D model analysis of the slowdown and interannual variability in the methane growth rate from 1988 to 1997. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	4.9	147
51	On the contribution of anthropogenic Cl to the increase in δ ¹³ C of atmospheric methane. Global Biogeochemical Cycles, 2002, 16, 20-1-20-11.	4.9	16
52	Glacial-to-interglacial variations in the carbon isotopic composition of atmospheric CO ₂ . Nature, 1992, 357, 461-466.	27.8	207
53	Isotopic composition of atmospheric CO ₂ inferred from carbon in C ₄ plant cellulose. Nature, 1991, 349, 127-131.	27.8	395
54	Effects of atmospheric transport on column abundances of nitrogen and chlorine compounds in the Arctic stratosphere. Geophysical Research Letters, 1990, 17, 533-536.	4.0	9

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55	Loss of ozone in the Arctic vortex for the winter of 1989. Geophysical Research Letters, 1990, 17, 561-564.	4.0	65
56	Influence of polar stratospheric clouds on the depletion of Antarctic ozone. Geophysical Research Letters, 1988, 15, 871-874.	4.0	35
57	Antarctic O ₃ : Chemical mechanisms for the spring decrease. Geophysical Research Letters, 1986, 13, 1296-1299.	4.0	127