Zhu Liu

List of Publications by Year
in descending order

121 papers	20,588 citations	14655 66 h-index	18130 120 g-index
146 all docs	146 docs citations	146 times ranked	14652 citing authors

#	Article	IF	Citations
1	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	9.9	1,477
2	Reduced carbon emission estimates from fossil fuel combustion and cement production in China. Nature, 2015, 524, 335-338.	27.8	1,185
3	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	9.9	1,167
4	China CO2 emission accounts 1997â€“2015. Scientific Data, 2018, 5, 170201.	5.3	824
5	Transboundary health impacts of transported global air pollution and international trade. Nature, 2017, 543, 705-709.	27.8	737
6	Chinese CO2 emission flows have reversed since the global financial crisis. Nature Communications, 2017, 8, 1712.	12.8	678
7	Challenges and opportunities for carbon neutrality in China. Nature Reviews Earth & Environment, 2022, 3, 141-155.	29.7	587
8	Outsourcing CO ₂ within China. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11654-11659.	7.1	533
9	Consumption-based emission accounting for Chinese cities. Applied Energy, 2016, 184, 1073-1081.	10.1	519
10	The gigatonne gap in Chinaâ€™s carbon dioxide inventories. Nature Climate Change, 2012, 2, 672-675.	18.8	477
11	Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic. Nature Communications, 2020, 11, 5172.	12.8	420
12	Buildings as a global carbon sink. Nature Sustainability, 2020, 3, 269-276.	23.7	419
13	New provincial CO2 emission inventories in China based on apparent energy consumption data and updated emission factors. Applied Energy, 2016, 184, 742-750.	10.1	394
14	A low-carbon road map for China. Nature, 2013, 500, 143-145.	27.8	357
15	Substantial global carbon uptake by cement carbonation. Nature Geoscience, 2016, 9, 880-883.	12.9	355
16	Methodology and applications of city level CO2 emission accounts in China. Journal of Cleaner Production, 2017, 161, 1215-1225.	9.3	351
17	The socioeconomic drivers of Chinaâ€™s primary PM _{2.5} emissions. Environmental Research Letters, 2014, 9, 024010.	5.2	350
18	Socioeconomic impact assessment of China's CO2 emissions peak prior to 2030. Journal of Cleaner Production, 2017, 142, 2227-2236.	9.3	346

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19	Unequal household carbon footprints in China. Nature Climate Change, 2017, 7, 75-80.	18.8	345
20	Structural decline in Chinaâ€™s CO2 emissions through transitions in industry and energy systems. Nature Geoscience, 2018, 11, 551-555.	12.9	340
21	The rise of Southâ€“South trade and its effect on global CO2 emissions. Nature Communications, 2018, 9, 1871.	12.8	328
22	City-level climate change mitigation in China. Science Advances, 2018, 4, eaaq0390.	10.3	287
23	Climate policy: Steps to China's carbon peak. Nature, 2015, 522, 279-281.	27.8	255
24	Consumption-based CO2 accounting of China's megacities: The case of Beijing, Tianjin, Shanghai and Chongqing. Ecological Indicators, 2014, 47, 26-31.	6.3	236
25	Energy saving potential of natural ventilation in China: The impact of ambient air pollution. Applied Energy, 2016, 179, 660-668.	10.1	225
26	Economic development and converging household carbon footprints in China. Nature Sustainability, 2020, 3, 529-537.	23.7	224
27	Impacts of climate change on future air quality and human health in China. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17193-17200.	7.1	219
28	Pattern changes in determinants of Chinese emissions. Environmental Research Letters, 2017, 12, 074003.	5.2	217
29	Monitoring global carbon emissions in 2021. Nature Reviews Earth & Environment, 2022, 3, 217-219.	29.7	215
30	Targeted opportunities to address the climateâ€“trade dilemma in China. Nature Climate Change, 2016, 6, 201-206.	18.8	206
31	Global urban expansion offsets climate-driven increases in terrestrial net primary productivity. Nature Communications, 2019, 10, 5558.	12.8	198
32	Exploring the trade-offs between electric heating policy and carbon mitigation in China. Nature Communications, 2020, 11, 6054.	12.8	198
33	Uncovering Chinaâ€™s greenhouse gas emission from regional and sectoral perspectives. Energy, 2012, 45, 1059-1068.	8.8	196
34	Cities: The core of climate change mitigation. Journal of Cleaner Production, 2019, 207, 582-589.	9.3	193
35	Global energy growth is outpacing decarbonization. Environmental Research Letters, 2018, 13, 120401.	5.2	188
36	Features, trajectories and driving forces for energy-related GHG emissions from Chinese mega cites: The case of Beijing, Tianjin, Shanghai and Chongqing. Energy, 2012, 37, 245-254.	8.8	185

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37	Embodied energy use in China's industrial sectors. Energy Policy, 2012, 49, 751-758.	8.8	173
38	Carbon dioxide emission drivers for a typical metropolis using inputâ€“output structural decomposition analysis. Energy Policy, 2013, 58, 312-318.	8.8	170
39	Driving forces of Chinese primary air pollution emissions: an index decomposition analysis. Journal of Cleaner Production, 2016, 133, 136-144.	9.3	168
40	Determinants of stagnating carbon intensity in China. Nature Climate Change, 2014, 4, 1017-1023.	18.8	157
41	Carbon emissions dynamics, efficiency gains, and technological innovation in China's industrial sectors. Energy, 2016, 99, 10-19.	8.8	152
42	Rapid improvement of PM2.5 pollution and associated health benefits in China during 2013â€“2017. Science China Earth Sciences, 2019, 62, 1847-1856.	5.2	146
43	Assessment of China's virtual air pollution transport embodied in trade by using a consumption-based emission inventory. Atmospheric Chemistry and Physics, 2015, 15, 5443-5456.	4.9	137
44	Carbon footprint of China's belt and road. Science, 2017, 357, 1107-1107.	12.6	134
45	Decoupling Analysis and Socioeconomic Drivers of Environmental Pressure in China. Environmental Science & Technology, 2014, 48, 1103-1113.	10.0	122
46	Exploring driving factors of energy-related CO2 emissions in Chinese provinces: A case of Liaoning. Energy Policy, 2013, 60, 820-826.	8.8	120
47	CO2 emissions from Chinaâ€™s power sector at the provincial level: Consumption versus production perspectives. Renewable and Sustainable Energy Reviews, 2013, 19, 164-172.	16.4	118
48	CO2 emissions from Chinaâ€™s lime industry. Applied Energy, 2016, 166, 245-252.	10.1	115
49	Carbon Monitor, a near-real-time daily dataset of global CO2 emission from fossil fuel and cement production. Scientific Data, 2020, 7, 392.	5.3	115
50	Inequality of household consumption and air pollution-related deaths in China. Nature Communications, 2019, 10, 4337.	12.8	114
51	An emissions-socioeconomic inventory of Chinese cities. Scientific Data, 2019, 6, 190027.	5.3	107
52	The 2020 China report of the Lancet Countdown on health and climate change. Lancet Public Health, The, 2021, 6, e64-e81.	10.0	106
53	Contributing to local policy making on GHG emission reduction through inventorying and attribution: A case study of Shenyang, China. Energy Policy, 2011, 39, 5999-6010.	8.8	105
54	Lifting Chinaâ€™s Water Spell. Environmental Science & Technology, 2014, 48, 11048-11056.	10.0	105

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55	Socioeconomic Drivers of Mercury Emissions in China from 1992 to 2007. Environmental Science & Technology, 2013, 47, 3234-3240.	10.0	101
56	Global COVID-19 lockdown highlights humans as both threats and custodians of the environment. Biological Conservation, 2021, 263, 109175.	4.1	96
57	Promoting low-carbon city through industrial symbiosis: A case in China by applying HPIMO model. Energy Policy, 2013, 61, 864-873.	8.8	91
58	The Slowdown in Global Air-Pollutant Emission Growth and Driving Factors. One Earth, 2019, 1, 138-148.	6.8	91
59	Interregional carbon flows of China. Applied Energy, 2018, 227, 342-352.	10.1	87
60	Consumption-based greenhouse gas emissions accounting with capital stock change highlights dynamics of fast-developing countries. Nature Communications, 2018, 9, 3581.	12.8	87
61	Waterâ^'Carbon Trade-off in Chinaâ€™s Coal Power Industry. Environmental Science & Technology, 2014, 48, 11082-11089.	10.0	81
62	Direct and embodied energy-water-carbon nexus at an inter-regional scale. Applied Energy, 2019, 251, 113401.	10.1	80
63	Global climate forcing of aerosols embodied in international trade. Nature Geoscience, 2016, 9, 790-794.	12.9	79
64	Globalization and pollution: tele-connecting local primary PM _{2.5} emissions to global consumption. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160380.	2.1	77
65	Evaluating the water footprint of the energy supply of Liaoning Province, China: A regional inputâ€“output analysis approach. Energy Policy, 2015, 78, 148-157.	8.8	68
66	Population ageing and deaths attributable to ambient PM2Â·5 pollution: a global analysis of economic cost. Lancet Planetary Health, The, 2021, 5, e356-e367.	11.4	63
67	Four system boundaries for carbon accounts. Ecological Modelling, 2015, 318, 118-125.	2.5	62
68	Physical and virtual carbon metabolism of global cities. Nature Communications, 2020, 11, 182.	12.8	62
69	Exploring the impacts of regional unbalanced carbon tax on CO2 emissions and industrial competitiveness in Liaoning province of China. Energy Policy, 2018, 113, 9-19.	8.8	61
70	Rapid growth of petroleum coke consumption and its related emissions in China. Applied Energy, 2018, 226, 494-502.	10.1	60
71	National carbon emissions from the industry process: Production of glass, soda ash, ammonia, calcium carbide and alumina. Applied Energy, 2016, 166, 239-244.	10.1	59
72	Environment-economy tradeoff for Beijingâ€“Tianjinâ€“Hebeiâ€™s exports. Applied Energy, 2016, 184, 926-935.	10.1	58

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73	Comparing national greenhouse gas budgets reported in UNFCCC inventories against atmospheric inversions. Earth System Science Data, 2022, 14, 1639-1675.	9.9	58
74	Waste oil derived biofuels in China bring brightness for global GHG mitigation. Bioresource Technology, 2013, 131, 139-145.	9.6	55
75	Transition in air pollution, disease burden and health cost in China: A comparative study of long-term and short-term exposure. Environmental Pollution, 2021, 277, 116770.	7.5	52
76	Global monthly gridded atmospheric carbon dioxide concentrations under the historical and future scenarios. Scientific Data, 2022, 9, 83.	5.3	46
77	Global patterns of daily CO2 emissions reductions in the first year of COVID-19. Nature Geoscience, 2022, 15, 615-620.	12.9	46
78	Chinaâ€™s non-fossil fuel CO2 emissions from industrial processes. Applied Energy, 2019, 254, 113537.	10.1	43
79	Societal shifts due to COVID-19 reveal large-scale complexities and feedbacks between atmospheric chemistry and climate change. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	42
80	Global fossil carbon emissions rebound near pre-COVID-19 levels. Environmental Research Letters, 2022, 17, 031001.	5.2	42
81	Emissions rebound from the COVID-19 pandemic. Nature Climate Change, 2022, 12, 412-414.	18.8	41
82	Near-Real-Time Carbon Emission Accounting Technology Toward Carbon Neutrality. Engineering, 2022, 14, 44-51.	6.7	38
83	The spatiotemporal features of greenhouse gases emissions from biomass burning in China from 2000 to 2012. Journal of Cleaner Production, 2018, 181, 801-808.	9.3	36
84	Evaluating China's fossil-fuel CO₂ emissions from a comprehensive dataset of nine inventories. Atmospheric Chemistry and Physics, 2020, 20, 11371-11385.	4.9	36
85	Industry-wide corporate fraud: The truth behind the Volkswagen scandal. Journal of Cleaner Production, 2018, 172, 3167-3175.	9.3	35
86	Global CO₂ uptake by cement from 1930 to 2019. Earth System Science Data, 2021, 13, 1791-1805.	9.9	35
87	Origin and Radiative Forcing of Black Carbon Aerosol: Production and Consumption Perspectives. Environmental Science & Technology, 2018, 52, 6380-6389.	10.0	34
88	Regional impacts of COVID-19 on carbon dioxide detected worldwide from space. Science Advances, 2021, 7, eabf9415.	10.3	33
89	Weakening aerosol direct radiative effects mitigate climate penalty on Chinese air quality. Nature Climate Change, 2020, 10, 845-850.	18.8	32
90	Embodied carbon emissions in China-US trade. Science China Earth Sciences, 2020, 63, 1577-1586.	5.2	32

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91	Local Anomalies in the Columnâ€Averaged Dry Air Mole Fractions of Carbon Dioxide Across the Globe During the First Months of the Coronavirus Recession. Geophysical Research Letters, 2020, 47, e2020GL090244.	4.0	31
92	Dynamic Carbon Emission Linkages Across Boundaries. Earth's Future, 2019, 7, 197-209.	6.3	29
93	The cascade of global trade to large climate forcing over the Tibetan Plateau glaciers. Nature Communications, 2019, 10, 3281.	12.8	28
94	The efficient, the intensive, and the productive: Insights from urban Kaya scaling. Applied Energy, 2019, 236, 155-162.	10.1	27
95	Near-real-time global gridded daily CO2 emissions. Innovation(China), 2022, 3, 100182.	9.1	24
96	Performance Assessment and Outlook of Chinaâ€™s Emission-Trading Scheme. Engineering, 2016, 2, 398-401.	6.7	21
97	Alpha-1-antitrypsin interacts with gp41 to block HIV-1 entry into CD4+ T lymphocytes. BMC Microbiology, 2016, 16, 172.	3.3	21
98	Lower Cambrian phosphatized Punctatus from southern Shaanxi and their ontogeny sequence. Science Bulletin, 2007, 52, 2820-2828.	1.7	20
99	Global and local carbon footprints of city of Hong Kong and Macao from 2000 to 2015. Resources, Conservation and Recycling, 2021, 164, 105167.	10.8	20
100	Estimates of daily ground-level NO2 concentrations in China based on Random Forest model integrated K-means. Advances in Applied Energy, 2021, 2, 100017.	13.2	19
101	Spatiotemporal Changes of China's Carbon Emissions. Geophysical Research Letters, 2018, 45, 8536-8546.	4.0	15
102	Key challenges for China's carbon emissions trading program. Wiley Interdisciplinary Reviews: Climate Change, 2019, 10, e599.	8.1	15
103	Enlarging Regional Disparities in Energy Intensity within China. Earth's Future, 2020, 8, e2020EF001572.	6.3	14
104	Carbon Emissions in China. Springer Theses, 2016, , .	0.1	13
105	Five tips for China to realize its co-targets of climate mitigation and Sustainable Development Goals (SDGs). Geography and Sustainability, 2020, 1, 245-249.	4.3	12
106	Corrigendum to "Assessment of China's virtual air pollution transport embodied in trade by using a consumption-based emission inventory" published in Atmos. Chem. Phys., 15, 5443â€“5456, 2015. Atmospheric Chemistry and Physics, 2015, 15, 6815-6815.	4.9	11
107	Loss of profit in the hotel industry of the United States due to climate change. Environmental Research Letters, 2019, 14, 084022.	5.2	11
108	Impact of Lockdowns and Winter Temperatures on Natural Gas Consumption in Europe. Earth's Future, 2022, 10, .	6.3	10

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109	Global to local impacts on atmospheric CO₂from the COVID-19 lockdown, biosphere and weather variabilities. Environmental Research Letters, 2022, 17, 015003.	5.2	10
110	Impact on China’s CO₂ emissions from COVID-19 pandemic. Chinese Science Bulletin, 2021, 66, 1912-1922.	0.7	9
111	How do weather and climate change impact the COVID-19 pandemic? Evidence from the Chinese mainland. Environmental Research Letters, 2021, 16, 014026.	5.2	8
112	Reduced health burden and economic benefits of cleaner fuel usage from household energy consumption across rural and urban China. Environmental Research Letters, 2022, 17, 014039.	5.2	7
113	Make raw emissions data public in China. Nature, 2015, 526, 640-640.	27.8	6
114	Drivers of GHG emissions from dietary transition patterns in China: Supply versus demand options. Journal of Industrial Ecology, 2021, 25, 707-719.	5.5	6
115	Tie carbon emissions to consumers. Nature, 2013, 493, 304-305.	27.8	4
116	Quantitative analysis of CO2 uptake by alkaline solid wastes in China. Journal of Cleaner Production, 2022, 363, 132454.	9.3	2
117	Is China producing too many PhDs?. Nature, 2011, 474, 450-450.	27.8	1
118	Driving Factors of Chinaâ€™s Carbon Emissions. Springer Theses, 2016, , 75-83.	0.1	1
119	Carbon Emissions from Regions and Sectors. Springer Theses, 2016, , 45-73.	0.1	0
120	Chinaâ€™s National, Regional, and Cityâ€™s Carbon Emission Inventories. Springer Theses, 2016, , 13-43.	0.1	0
121	Carbon Emissions Embodied in Trade. Springer Theses, 2016, , 85-97.	0.1	0