Christopher A Kennedy

List of Publications by Year
in descending order

117	8,961	57719 44	45285 90
papers	citations	h-index	g-index

119	119	119	7405
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Changing Metabolism of Cities. Journal of Industrial Ecology, 2007, 11, 43-59.	2.8	953
2	Greenhouse Gas Emissions from Global Cities. Environmental Science & Technology, 2009, 43, 7297-7302.	4.6	581
3	Environment: Waste production must peak this century. Nature, 2013, 502, 615-617.	13.7	525
4	Comparing High and Low Residential Density: Life-Cycle Analysis of Energy Use and Greenhouse Gas Emissions. Journal of the Urban Planning and Development Division, ASCE, 2006, 132, 10-21.	0.8	458
5	Methodology for inventorying greenhouse gas emissions from global cities. Energy Policy, 2010, 38, 4828-4837.	4.2	386
6	Energy and material flows of megacities. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5985-5990.	3.3	371
7	Urban ecosystems and the North American carbon cycle. Global Change Biology, 2006, 12, 2092-2102.	4.2	354
8	The complexity and robustness of metro networks. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 3678-3691.	1.2	307
9	Comparative Life Cycle Assessment of Standard and Green Roofs. Environmental Science & Technology, 2006, 40, 4312-4316.	4.6	249
10	Developing sustainability criteria for urban infrastructure systems. Canadian Journal of Civil Engineering, 2005, 32, 72-85.	0.7	231
11	Modelling the impact of weather conditions on active transportation travel behaviour. Transportation Research, Part D: Transport and Environment, 2012, 17, 129-137.	3.2	172
12	Estimating the urban metabolism of Canadian cities: Greater Toronto Area case study. Canadian Journal of Civil Engineering, 2003, 30, 468-483.	0.7	164
13	Metabolism of Neighborhoods. Journal of the Urban Planning and Development Division, ASCE, 2008, 134, 21-31.	0.8	158
14	A Spatial Analysis of Residential Greenhouse Gas Emissions in the Toronto Census Metropolitan Area. Journal of Industrial Ecology, 2007, 11, 133-144.	2.8	155
15	Life-Cycle Energy Use and Greenhouse Gas Emissions Inventory for Water Treatment Systems. Journal of Infrastructure Systems, 2007, 13, 261-270.	1.0	151
16	Mainstreaming Urban Metabolism. Journal of Industrial Ecology, 2012, 16, 780-782.	2.8	150
17	The Four Pillars of Sustainable Urban Transportation. Transport Reviews, 2005, 25, 393-414.	4.7	146
18	Low-carbon infrastructure strategies for cities. Nature Climate Change, 2014, 4, 343-346.	8.1	143

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19	Climate change: Track urban emissions on a human scale. Nature, 2015, 525, 179-181.	13.7	138
20	Characterizing metro networks: state, form, and structure. Transportation, 2010, 37, 275-297.	2.1	136
21	Network Analysis of World Subway Systems Using Updated Graph Theory. Transportation Research Record, 2009, 2112, 17-25.	1.0	135
22	A critical knowledge pathway to lowâ€carbon, sustainable futures: Integrated understanding of urbanization, urban areas, and carbon. Earth's Future, 2014, 2, 515-532.	2.4	110
23	Applications of Graph Theory and Network Science to Transit Network Design. Transport Reviews, 2011, 31, 495-519.	4.7	101
24	City-integrated renewable energy design for low-carbon and climate-resilient communities. Applied Energy, 2019, 239, 1212-1225.	5.1	99
25	Title is missing!. Transportation, 2002, 29, 459-493.	2.1	93
26	Peak Waste: When Is It Likely to Occur?. Journal of Industrial Ecology, 2015, 19, 117-128.	2.8	93
27	Developing a multi-layered indicator set for urban metabolism studies in megacities. Ecological Indicators, 2014, 47, 7-15.	2.6	89
28	Estimating future energy use and CO2 emissions of the world's cities. Environmental Pollution, 2015, 203, 271-278.	3.7	87
29	Why Do Cities Grow? Insights from Nonequilibrium Thermodynamics at the Urban and Global Scales. Journal of Industrial Ecology, 2015, 19, 211-221.	2.8	87
30	Optimal planning of hybrid renewable energy infrastructure for urban sustainability: Green Vancouver. Renewable and Sustainable Energy Reviews, 2018, 95, 254-264.	8.2	87
31	Past performance and future needs for low carbon climate resilient infrastructureâ€“ An investment perspective. Energy Policy, 2013, 59, 773-783.	4.2	76
32	Cities reducing their greenhouse gas emissions. Energy Policy, 2012, 49, 774-777.	4.2	73
33	The energy metabolism of megacities. Applied Energy, 2017, 186, 86-95.	5.1	71
34	A Mathematical Description of Urban Metabolism. , 2012, , 275-291.		68
35	Energy use in Canada: environmental impacts and opportunities in relationship to infrastructure systems. Canadian Journal of Civil Engineering, 2005, 32, 1-15.	0.7	67
36	Greenhouse Gas Emissions from Chinese Cities. Journal of Industrial Ecology, 2012, 16, 552-563.	2.8	67

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37	A pore-scale investigation of mass transport from dissolving DNAPL droplets. Journal of Contaminant Hydrology, 1997, 24, 221-246.	1.6	65
38	Green growth planning: A multi-factor energy input-output analysis of the Canadian economy. Energy Economics, 2018, 74, 708-720.	5.6	64
39	Comparing life cycle implications of building retrofit and replacement options. Canadian Journal of Civil Engineering, 2005, 32, 1051-1063.	0.7	61
40	Toward sustainable neighbourhoods: the need to consider infrastructure interactions. Canadian Journal of Civil Engineering, 2005, 32, 45-57.	0.7	56
41	An urban approach to planetary boundaries. Ambio, 2016, 45, 567-580.	2.8	56
42	DEVELOPING A MULTI-SCALE MULTI-REGION INPUTâ€“OUTPUT MODEL. Economic Systems Research, 2015, 27, 172-193.	1.2	55
43	Greenhouse Gas Emissions from Waste Managementâ€”Assessment of Quantification Methods. Journal of the Air and Waste Management Association, 2011, 61, 480-493.	0.9	51
44	Water Use Model for Quantifying Environmental and Economic Sustainability Indicators. Journal of Water Resources Planning and Management - ASCE, 2007, 133, 550-559.	1.3	49
45	Greenhouse gas emissions from cities: comparison of international inventory frameworks. Local Environment, 2012, 17, 223-241.	1.1	49
46	A Control Volume Model of Solute Transport in a Single Fracture. Water Resources Research, 1995, 31, 313-322.	1.7	45
47	Scenarios of technology adoption towards low-carbon cities. Energy Policy, 2014, 66, 685-693.	4.2	44
48	The relationship between net energy use and the urban density of solar buildings. Environment and Planning B: Planning and Design, 2010, 37, 1002-1021.	1.7	42
49	Urban Metabolism and the Energy Stored in Cities. Journal of Industrial Ecology, 2013, 17, 656-667.	2.8	41
50	Positioning infrastructure and technologies for lowâ€carbon urbanization. Earth's Future, 2014, 2, 533-547.	2.4	41
51	Key threshold for electricity emissions. Nature Climate Change, 2015, 5, 179-181.	8.1	41
52	Sustainable Urban Systems. Journal of Industrial Ecology, 2012, 16, 775-779.	2.8	40
53	Evaluation of region-specific residential energy systems for GHG reductions: Case studies in Canadian cities. Energy Policy, 2009, 37, 1257-1266.	4.2	35
54	A Methodology for Constructing Marginal Abatement Cost Curves for Climate Action in Cities. Energies, 2016, 9, 227.	1.6	31

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55	Infrastructure for Chinaâ€™s Ecologically Balanced Civilization â€ â€Note: This paper is not intended to represent views endorsed by the OECD nor by its member countries.. Engineering, 2016, 2, 414-425.	3.2	29
56	Towards a circular economy: A comprehensive study of higher heat values and emission potential of various municipal solid wastes. Waste Management, 2020, 101, 210-221.	3.7	29
57	A comparative data mining approach for the prediction of energy recovery potential from various municipal solid waste. Renewable and Sustainable Energy Reviews, 2019, 116, 109423.	8.2	28
58	The Evolution of Great World Cities. , 2011, , .		27
59	Review of Optimal Transit Subsidies: Comparison between Models. Journal of the Urban Planning and Development Division, ASCE, 2005, 131, 71-78.	0.8	26
60	Evaluating, Comparing, and Improving Metro Networks: Application to Plans for Toronto, Canada. Transportation Research Record, 2010, 2146, 43-51.	1.0	26
61	Synergies between climate change adaptation and mitigation in development. International Journal of Climate Change Strategies and Management, 2013, 5, 95-111.	1.5	25
62	An Integrated Macroeconomic Model for Assessing Urban Sustainability. Environment and Planning B: Planning and Design, 2005, 32, 639-656.	1.7	24
63	The role of utilities in developing low carbon, electric megacities. Energy Policy, 2017, 106, 122-128.	4.2	23
64	The energy embodied in the first and second industrial revolutions. Journal of Industrial Ecology, 2020, 24, 887-898.	2.8	21
65	Determination of Sustainable Yield in Urban Groundwater Systems: Beijing, China. Journal of Hydrologic Engineering - ASCE, 2006, 11, 21-28.	0.8	19
66	Decoupling of building energy use and climate. Energy and Buildings, 2011, 43, 2961-2963.	3.1	19
67	Metabolic heat production by human and animal populations in cities. International Journal of Biometeorology, 2017, 61, 1159-1171.	1.3	19
68	Keeping global climate change within 1.5 Â°C through net negative electric cities. Current Opinion in Environmental Sustainability, 2018, 30, 18-25.	3.1	19
69	Beyond COVIDâ€19: Five commentaries on reimagining governance for future crises and resilience. Canadian Public Administration, 2020, 63, 369-408.	0.4	19
70	Macroscopic Model of Greenhouse Gas Emissions for Municipalities. Transportation Research Record, 2010, 2191, 174-181.	1.0	18
71	Non-Sewered Sanitation Systemsâ€™ Global Greenhouse Gas Emissions: Balancing Sustainable Development Goal Tradeoffs to End Open Defecation. Sustainability, 2021, 13, 11884.	1.6	17
72	Potential of building-scale alternative energy to alleviate risk from the future price of energy. Energy Policy, 2010, 38, 1885-1894.	4.2	16

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73	Greenhouse Gas Emissions from Global Cities. Environmental Science & Technology, 2011, 45, 3816-3817.	4.6	16
74	Greenhouse Gas Emission Scenario Modeling for Cities Using the PURGE Model. Journal of Industrial Ecology, 2012, 16, 875-888.	2.8	15
75	Maximizing the use of energy in cities using an open systems network approach. Ecological Modelling, 2013, 250, 155-164.	1.2	15
76	Urban Scaling and the Benefits of Living in Cities. Sustainable Cities and Society, 2021, 66, 102617.	5.1	15
77	Gross Direct and Embodied Carbon Sinks for Urban Inventories. Journal of Industrial Ecology, 2012, 16, 302-316.	2.8	14
78	Assessing the Global Operational Footprint of Higher Education with Environmentally Extended Global Multiregional Inputâ€Output Models. Journal of Industrial Ecology, 2016, 20, 462-471.	2.8	14
79	Hour-by-Hour Analysis for Increased Accuracy of Greenhouse Gas Emissions for a Low-Energy Condominium Design. Journal of Industrial Ecology, 2011, 15, 381-393.	2.8	13
80	Applications of Random-Utility-based Multi-region Inputâ€“Output Models of Transport and the Spatial Economy. Transport Reviews, 2014, 34, 418-440.	4.7	13
81	A stochastic interpretation of the tailing effect in solute transport. Stochastic Environmental Research and Risk Assessment, 2001, 15, 325-340.	1.9	12
82	The Energy for Growing and Maintaining Cities. Ambio, 2013, 42, 41-51.	2.8	12
83	What makes a building green?. International Journal of Environmental Technology and Management, 2002, 2, 38.	0.1	11
84	Thermodynamics of urban growth revealed by city scaling. Physica A: Statistical Mechanics and Its Applications, 2020, 557, 124971.	1.2	11
85	Solution to the practical problem of moments using non-classical orthogonal polynomials, with applications for probabilistic analysis. Probabilistic Engineering Mechanics, 2000, 15, 371-379.	1.3	10
86	Comment on article â€œIs There a Metabolism of an Urban Ecosystem?â€•by Golubiewski. Ambio, 2012, 41, 765-766.	2.8	10
87	A low carbon infrastructure plan for Toronto, Canada. Canadian Journal of Civil Engineering, 2013, 40, 86-96.	0.7	10
88	Boycott products from states with dirty energy. Nature, 2017, 551, 294-295.	13.7	10
89	The Nexus of Carbon, Nitrogen, and Biodiversity Impacts from Urban Metabolism. Journal of Industrial Ecology, 2018, 22, 853-867.	2.8	10
90	Evaluating the Resilience of Sustainable Neighborhoods by Exposing LEED Neighborhoods to Future Risks. Journal of Infrastructure Systems, 2018, 24, .	1.0	9

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91	Energy and capital. Journal of Industrial Ecology, 2020, 24, 1047-1058.	2.8	9
92	Capital, energy and carbon in the United States economy. Applied Energy, 2022, 314, 118914.	5.1	8
93	Global Trade Creation, Trade Diversion, and Economic Impacts from Changing Global Transport Costs. Transportation Research Record, 2016, 2598, 46-57.	1.0	7
94	Transforming the coal and steel nexus for China's ecoâ€civilization: Interplay between rail and energy infrastructure. Journal of Industrial Ecology, 2020, 24, 1352-1363.	2.8	7
95	Industrial Ecology and Cities. , 2016, , 69-86.		7
96	Moment operations on random variables, with applications for probabilistic analysis. Probabilistic Engineering Mechanics, 2001, 16, 253-259.	1.3	6
97	Development of Environmental Knowledge and Attitudes in Engineering Students. Bulletin of Science, Technology and Society, 2002, 22, 460-473.	1.1	6
98	Understanding, Implementing, and Tracking Urban Metabolism Is Key to Urban Futures. , 2018, , 68-91.		6
99	Winners of the 2017 Graedel Prizes: The Journal of Industrial Ecology Best Paper Prizes. Journal of Industrial Ecology, 2018, 22, 997-999.	2.8	6
100	Developing a multiple-criteria decision analysis for green economy transition: a Canadian case study. Economic Systems Research, 2019, 31, 617-641.	1.2	6
101	The Energy Structure of the Canadian Economy. Journal of Industrial Ecology, 2017, 21, 1301-1311.	2.8	5
102	Gaussian plume modeling of contaminant transport. Stochastic Environmental Research and Risk Assessment, 2006, 20, 119-125.	1.9	4
103	A framework for analysing neighbourhood resilience. Proceedings of the Institution of Civil Engineers: Urban Design and Planning, 2015, 168, 129-145.	0.6	4
104	Winners of the 2018 Graedel Prizes: The Journal of Industrial Ecology best paper prizes. Journal of Industrial Ecology, 2020, 24, 268-270.	2.8	4
105	A biophysical model of the industrial revolution. Journal of Industrial Ecology, 2021, 25, 663-676.	2.8	4
106	The Intersection of Biophysical Economics and Political Economy. Ecological Economics, 2022, 192, 107272.	2.9	4
107	Screening model for the contamination of a well in a uniform flow field. Water Resources Research, 1999, 35, 2871-2875.	1.7	3
108	Winners of the 2019 Graedel Prizes: The Journal of Industrial Ecology Best Paper Prizes. Journal of Industrial Ecology, 2020, 24, 940-942.	2.8	3

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109	Estimating regional trade flows using commercial vehicle survey data. Annals of Regional Science, 2015, 54, 855-876.	1.0	2
110	Winners of the 2020 Graedel prizes: The Journal of Industrial Ecology best paper prizes. Journal of Industrial Ecology, 2021, 25, 1108-1110.	2.8	2
111	Analyzing a cityâ€™s metabolism. , 2014, , .		2
112	Incorporation of Computer Algebra into an Undergraduate Course in Open Channel Hydraulics. European Journal of Engineering Education, 1997, 22, 335-341.	1.5	1
113	Fishing for a New Way to Teach Environmentally Sensitive Engineering Practice. Bulletin of Science, Technology and Society, 2000, 20, 383-392.	1.1	1
114	Role of the construction sector in the economy of a city. Canadian Journal of Civil Engineering, 2004, 31, 155-159.	0.7	1
115	Response to Wiedmann. Journal of Industrial Ecology, 2012, 16, 322-323.	2.8	1
116	Sustainability cost curves for urban infrastructure planning. Proceedings of the Institution of Civil Engineers: Civil Engineering, 2018, 171, 11-21.	0.3	1
117	Interpretation of Monte Carlo Simulations Using Parameter Space Plots. Risk Analysis, 2004, 24, 437-442.	1.5	0