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 Intersection of Biophysical Economics and Political Economy. Ecological Economics, 2022, 192, 107272.	2.9	4
2	Capital, energy and carbon in the United States economy. Applied Energy, 2022, 314, 118914.	5.1	8
3	A biophysical model of the industrial revolution. Journal of Industrial Ecology, 2021, 25, 663-676.	2.8	4
4	Urban Scaling and the Benefits of Living in Cities. Sustainable Cities and Society, 2021, 66, 102617.	5.1	15
5	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
6	Non-Sewered Sanitation Systemsâ€™ Global Greenhouse Gas Emissions: Balancing Sustainable Development Goal Tradeoffs to End Open Defecation. Sustainability, 2021, 13, 11884.	1.6	17
7	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
8	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
9	Beyond COVIDâ€19: Five commentaries on reimagining governance for future crises and resilience. Canadian Public Administration, 2020, 63, 369-408.	0.4	19
10	Thermodynamics of urban growth revealed by city scaling. Physica A: Statistical Mechanics and Its Applications, 2020, 557, 124971.	1.2	11
11	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
12	Energy and capital. Journal of Industrial Ecology, 2020, 24, 1047-1058.	2.8	9
13	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
14	The energy embodied in the first and second industrial revolutions. Journal of Industrial Ecology, 2020, 24, 887-898.	2.8	21
15	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
16	Developing a multiple-criteria decision analysis for green economy transition: a Canadian case study. Economic Systems Research, 2019, 31, 617-641.	1.2	6
17	City-integrated renewable energy design for low-carbon and climate-resilient communities. Applied Energy, 2019, 239, 1212-1225.	5.1	99
18	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

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19	Understanding, Implementing, and Tracking Urban Metabolism Is Key to Urban Futures. , 2018, , 68-91.		6
20	Evaluating the Resilience of Sustainable Neighborhoods by Exposing LEED Neighborhoods to Future Risks. Journal of Infrastructure Systems, 2018, 24, .	1.0	9
21	Sustainability cost curves for urban infrastructure planning. Proceedings of the Institution of Civil Engineers: Civil Engineering, 2018, 171, 11-21.	0.3	1
22	Optimal planning of hybrid renewable energy infrastructure for urban sustainability: Green Vancouver. Renewable and Sustainable Energy Reviews, 2018, 95, 254-264.	8.2	87
23	Green growth planning: A multi-factor energy input-output analysis of the Canadian economy. Energy Economics, 2018, 74, 708-720.	5.6	64
24	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
25	The Nexus of Carbon, Nitrogen, and Biodiversity Impacts from Urban Metabolism. Journal of Industrial Ecology, 2018, 22, 853-867.	2.8	10
26	Metabolic heat production by human and animal populations in cities. International Journal of Biometeorology, 2017, 61, 1159-1171.	1.3	19
27	The role of utilities in developing low carbon, electric megacities. Energy Policy, 2017, 106, 122-128.	4.2	23
28	The Energy Structure of the Canadian Economy. Journal of Industrial Ecology, 2017, 21, 1301-1311.	2.8	5
29	The energy metabolism of megacities. Applied Energy, 2017, 186, 86-95.	5.1	71
30	Boycott products from states with dirty energy. Nature, 2017, 551, 294-295.	13.7	10
31	A Methodology for Constructing Marginal Abatement Cost Curves for Climate Action in Cities. Energies, 2016, 9, 227.	1.6	31
32	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
33	Global Trade Creation, Trade Diversion, and Economic Impacts from Changing Global Transport Costs. Transportation Research Record, 2016, 2598, 46-57.	1.0	7
34	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
35	An urban approach to planetary boundaries. Ambio, 2016, 45, 567-580.	2.8	56
36	Industrial Ecology and Cities. , 2016, , 69-86.		7

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37	Estimating regional trade flows using commercial vehicle survey data. Annals of Regional Science, 2015, 54, 855-876.	1.0	2
38	Climate change: Track urban emissions on a human scale. Nature, 2015, 525, 179-181.	13.7	138
39	Key threshold for electricity emissions. Nature Climate Change, 2015, 5, 179-181.	8.1	41
40	Peak Waste: When Is It Likely to Occur?. Journal of Industrial Ecology, 2015, 19, 117-128.	2.8	93
41	DEVELOPING A MULTI-SCALE MULTI-REGION INPUTâ€“OUTPUT MODEL. Economic Systems Research, 2015, 27, 172-193.	1.2	55
42	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
43	Estimating future energy use and CO2 emissions of the world's cities. Environmental Pollution, 2015, 203, 271-278.	3.7	87
44	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
45	A framework for analysing neighbourhood resilience. Proceedings of the Institution of Civil Engineers: Urban Design and Planning, 2015, 168, 129-145.	0.6	4
46	Low-carbon infrastructure strategies for cities. Nature Climate Change, 2014, 4, 343-346.	8.1	143
47	Scenarios of technology adoption towards low-carbon cities. Energy Policy, 2014, 66, 685-693.	4.2	44
48	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
49	Developing a multi-layered indicator set for urban metabolism studies in megacities. Ecological Indicators, 2014, 47, 7-15.	2.6	89
50	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
51	Positioning infrastructure and technologies for lowâ€carbon urbanization. Earth's Future, 2014, 2, 533-547.	2.4	41
52	Analyzing a cityâ€™s metabolism. , 2014, , .		2
53	Maximizing the use of energy in cities using an open systems network approach. Ecological Modelling, 2013, 250, 155-164.	1.2	15
54	The Energy for Growing and Maintaining Cities. Ambio, 2013, 42, 41-51.	2.8	12

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55	Past performance and future needs for low carbon climate resilient infrastructureâ€“ An investment perspective. Energy Policy, 2013, 59, 773-783.	4.2	76
56	A low carbon infrastructure plan for Toronto, Canada. Canadian Journal of Civil Engineering, 2013, 40, 86-96.	0.7	10
57	Urban Metabolism and the Energy Stored in Cities. Journal of Industrial Ecology, 2013, 17, 656-667.	2.8	41
58	Synergies between climate change adaptation and mitigation in development. International Journal of Climate Change Strategies and Management, 2013, 5, 95-111.	1.5	25
59	Environment: Waste production must peak this century. Nature, 2013, 502, 615-617.	13.7	525
60	Comment on article â€œIs There a Metabolism of an Urban Ecosystem?â€•by Golubiewski. Ambio, 2012, 41, 765-766.	2.8	10
61	Mainstreaming Urban Metabolism. Journal of Industrial Ecology, 2012, 16, 780-782.	2.8	150
62	Greenhouse Gas Emission Scenario Modeling for Cities Using the PURGE Model. Journal of Industrial Ecology, 2012, 16, 875-888.	2.8	15
63	Sustainable Urban Systems. Journal of Industrial Ecology, 2012, 16, 775-779.	2.8	40
64	Cities reducing their greenhouse gas emissions. Energy Policy, 2012, 49, 774-777.	4.2	73
65	Greenhouse gas emissions from cities: comparison of international inventory frameworks. Local Environment, 2012, 17, 223-241.	1.1	49
66	Response to Wiedmann. Journal of Industrial Ecology, 2012, 16, 322-323.	2.8	1
67	Gross Direct and Embodied Carbon Sinks for Urban Inventories. Journal of Industrial Ecology, 2012, 16, 302-316.	2.8	14
68	Greenhouse Gas Emissions from Chinese Cities. Journal of Industrial Ecology, 2012, 16, 552-563.	2.8	67
69	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
70	A Mathematical Description of Urban Metabolism. , 2012, , 275-291.		68
71	Greenhouse Gas Emissions from Global Cities. Environmental Science & Technology, 2011, 45, 3816-3817.	4.6	16
72	Applications of Graph Theory and Network Science to Transit Network Design. Transport Reviews, 2011, 31, 495-519.	4.7	101

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73	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
74	Decoupling of building energy use and climate. Energy and Buildings, 2011, 43, 2961-2963.	3.1	19
75	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
76	The Evolution of Great World Cities. , 2011, , .		27
77	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
78	Macroscopic Model of Greenhouse Gas Emissions for Municipalities. Transportation Research Record, 2010, 2191, 174-181.	1.0	18
79	The complexity and robustness of metro networks. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 3678-3691.	1.2	307
80	Characterizing metro networks: state, form, and structure. Transportation, 2010, 37, 275-297.	2.1	136
81	Methodology for inventorying greenhouse gas emissions from global cities. Energy Policy, 2010, 38, 4828-4837.	4.2	386
82	Potential of building-scale alternative energy to alleviate risk from the future price of energy. Energy Policy, 2010, 38, 1885-1894.	4.2	16
83	Evaluating, Comparing, and Improving Metro Networks: Application to Plans for Toronto, Canada. Transportation Research Record, 2010, 2146, 43-51.	1.0	26
84	Network Analysis of World Subway Systems Using Updated Graph Theory. Transportation Research Record, 2009, 2112, 17-25.	1.0	135
85	Evaluation of region-specific residential energy systems for GHG reductions: Case studies in Canadian cities. Energy Policy, 2009, 37, 1257-1266.	4.2	35
86	Greenhouse Gas Emissions from Global Cities. Environmental Science & Technology, 2009, 43, 7297-7302.	4.6	581
87	Metabolism of Neighborhoods. Journal of the Urban Planning and Development Division, ASCE, 2008, 134, 21-31.	0.8	158
88	Life-Cycle Energy Use and Greenhouse Gas Emissions Inventory for Water Treatment Systems. Journal of Infrastructure Systems, 2007, 13, 261-270.	1.0	151
89	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
90	The Changing Metabolism of Cities. Journal of Industrial Ecology, 2007, 11, 43-59.	2.8	953

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91	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
92	Determination of Sustainable Yield in Urban Groundwater Systems: Beijing, China. Journal of Hydrologic Engineering - ASCE, 2006, 11, 21-28.	0.8	19
93	Comparative Life Cycle Assessment of Standard and Green Roofs. Environmental Science & Technology, 2006, 40, 4312-4316.	4.6	249
94	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
95	Urban ecosystems and the North American carbon cycle. Global Change Biology, 2006, 12, 2092-2102.	4.2	354
96	Gaussian plume modeling of contaminant transport. Stochastic Environmental Research and Risk Assessment, 2006, 20, 119-125.	1.9	4
97	An Integrated Macroeconomic Model for Assessing Urban Sustainability. Environment and Planning B: Planning and Design, 2005, 32, 639-656.	1.7	24
98	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
99	Toward sustainable neighbourhoods: the need to consider infrastructure interactions. Canadian Journal of Civil Engineering, 2005, 32, 45-57.	0.7	56
100	Review of Optimal Transit Subsidies: Comparison between Models. Journal of the Urban Planning and Development Division, ASCE, 2005, 131, 71-78.	0.8	26
101	Developing sustainability criteria for urban infrastructure systems. Canadian Journal of Civil Engineering, 2005, 32, 72-85.	0.7	231
102	Comparing life cycle implications of building retrofit and replacement options. Canadian Journal of Civil Engineering, 2005, 32, 1051-1063.	0.7	61
103	The Four Pillars of Sustainable Urban Transportation. Transport Reviews, 2005, 25, 393-414.	4.7	146
104	Interpretation of Monte Carlo Simulations Using Parameter Space Plots. Risk Analysis, 2004, 24, 437-442.	1.5	0
105	Role of the construction sector in the economy of a city. Canadian Journal of Civil Engineering, 2004, 31, 155-159.	0.7	1
106	Estimating the urban metabolism of Canadian cities: Greater Toronto Area case study. Canadian Journal of Civil Engineering, 2003, 30, 468-483.	0.7	164
107	Development of Environmental Knowledge and Attitudes in Engineering Students. Bulletin of Science, Technology and Society, 2002, 22, 460-473.	1.1	6
108	What makes a building green?. International Journal of Environmental Technology and Management, 2002, 2, 38.	0.1	11

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109	Title is missing!. Transportation, 2002, 29, 459-493.	2.1	93
110	A stochastic interpretation of the tailing effect in solute transport. Stochastic Environmental Research and Risk Assessment, 2001, 15, 325-340.	1.9	12
111	Moment operations on random variables, with applications for probabilistic analysis. Probabilistic Engineering Mechanics, 2001, 16, 253-259.	1.3	6
112	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
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	Screening model for the contamination of a well in a uniform flow field. Water Resources Research, 1999, 35, 2871-2875.	1.7	3
115	Incorporation of Computer Algebra into an Undergraduate Course in Open Channel Hydraulics. European Journal of Engineering Education, 1997, 22, 335-341.	1.5	1
116	A pore-scale investigation of mass transport from dissolving DNAPL droplets. Journal of Contaminant Hydrology, 1997, 24, 221-246.	1.6	65
117	A Control Volume Model of Solute Transport in a Single Fracture. Water Resources Research, 1995, 31, 313-322.	1.7	45