Geoffrey P. Hammond

List of Publications by Year
in descending order

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120 papers	5,423 citations	76326 40 h-index	88630 70 g-index
128 all docs	128 docs citations	128 times ranked	4996 citing authors

#	Article	IF	Citations
1	Embodied energy and carbon in construction materials. Proceedings of Institution of Civil Engineers: Energy, 2008, 161, 87-98.	0.6	394
2	Development of design for remanufacturing guidelines to support sustainable manufacturing. Robotics and Computer-Integrated Manufacturing, 2007, 23, 712-719.	9.9	284
3	Developing transition pathways for a low carbon electricity system in the UK. Technological Forecasting and Social Change, 2010, 77, 1203-1213.	11.6	246
4	Exergy analysis of the United Kingdom energy system. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2001, 215, 141-162.	1.4	216
5	Decomposition analysis of energy-related carbon emissions from UK manufacturing. Energy, 2012, 41, 220-227.	8.8	186
6	Development of robust design-for-remanufacturing guidelines to further the aims of sustainable development. International Journal of Production Research, 2007, 45, 4513-4536.	7.5	176
7	Environmental life cycle assessment of lignocellulosic conversion to ethanol: A review. Renewable and Sustainable Energy Reviews, 2012, 16, 4638-4650.	16.4	164
8	Prospects for and barriers to domestic micro-generation: A United Kingdom perspective. Applied Energy, 2008, 85, 528-544.	10.1	160
9	Techno-economic appraisal of fossil-fuelled power generation systems with carbon dioxide capture and storage. Energy, 2011, 36, 975-984.	8.8	160
10	Development of biofuels for the UK automotive market. Applied Energy, 2008, 85, 506-515.	10.1	128
11	Whole systems appraisal of a UK Building Integrated Photovoltaic (BIPV) system: Energy, environmental, and economic evaluations. Energy Policy, 2012, 40, 219-230.	8.8	121
12	Industrial energy use and carbon emissions reduction in the iron and steel sector: A UK perspective. Applied Energy, 2019, 249, 109-125.	10.1	105
13	Heat recovery opportunities in UK industry. Applied Energy, 2014, 116, 387-397.	10.1	102
14	Engineering sustainability: thermodynamics, energy systems, and the environment. International Journal of Energy Research, 2004, 28, 613-639.	4.5	100
15	Energy, Environment and Sustainable Development. Chemical Engineering Research and Design, 2000, 78, 304-323.	5.6	94
16	Barriers to and drivers for UK bioenergy development. Renewable and Sustainable Energy Reviews, 2011, 15, 1217-1227.	16.4	94
17	Time to give due weight to the 'carbon footprint' issue. Nature, 2007, 445, 256-256.	27.8	93
18	The prospects for coal-fired power plants with carbon capture and storage: A UK perspective. Energy Conversion and Management, 2014, 86, 476-489.	9.2	92

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19	Indicative energy technology assessment of advanced rechargeable batteries. Applied Energy, 2015, 138, 559-571.	10.1	91
20	Industrial energy analysis, thermodynamics and sustainability. Applied Energy, 2007, 84, 675-700.	10.1	87
21	Industrial energy use and carbon emissions reduction in the chemicals sector: A UK perspective. Applied Energy, 2018, 227, 587-602.	10.1	87
22	Environmental life cycle assessment of bioethanol production from wheat straw. Biomass and Bioenergy, 2012, 47, 9-19.	5.7	83
23	Sustainability and the built environment at and beyond the city scale. Building and Environment, 2004, 39, 1223-1233.	6.9	76
24	Footprints on the landscape: An environmental appraisal of urban and rural living in the developed world. Landscape and Urban Planning, 2007, 83, 13-28.	7.5	62
25	Challenges of the transition to a low carbon, more electric future: From here to 2050. Energy Policy, 2013, 52, 1-9.	8.8	59
26	Carbon and environmental footprinting of low carbon UK electricity futures to 2050. Energy, 2012, 48, 96-107.	8.8	57
27	Carbon and environmental footprinting of global biofuel production. Applied Energy, 2013, 112, 547-559.	10.1	56
28	Thermodynamic insights and assessment of the â€˜circular economyâ€™. Journal of Cleaner Production, 2017, 162, 1356-1367.	9.3	54
29	Integrated appraisal of a Solar Hot Water system. Energy, 2010, 35, 1351-1362.	8.8	53
30	Industrial energy use and carbon emissions reduction: a UK perspective. Wiley Interdisciplinary Reviews: Energy and Environment, 2016, 5, 684-714.	4.1	53
31	Transition pathways for a UK low-carbon electricity system: Comparing scenarios and technology implications. Renewable and Sustainable Energy Reviews, 2018, 82, 2779-2790.	16.4	53
32	Enabling technologies for industrial energy demand management. Energy Policy, 2008, 36, 4434-4443.	8.8	51
33	Life-cycle energy densities and land-take requirements of various power generators: A UK perspective. Journal of the Energy Institute, 2017, 90, 201-213.	5.3	51
34	Industrial decarbonisation of the pulp and paper sector: A UK perspective. Applied Thermal Engineering, 2018, 134, 152-162.	6.0	51
35	The energy and environmental implications of UK more electric transition pathways: A whole systems perspective. Energy Policy, 2013, 52, 103-116.	8.8	48
36	Thermodynamic and related analysis of natural gas combined cycle power plants with and without carbon sequestration. International Journal of Energy Research, 2007, 31, 1180-1201.	4.5	47

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37	Risk assessment of UK electricity supply in a rapidly evolving energy sector. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2008, 222, 623-642.	1.4	47
38	Assessment of community energy supply systems using energy, exergy and exergoeconomic analysis. Energy, 2012, 45, 247-255.	8.8	46
39	Indicative energy technology assessment of UK shale gas extraction. Applied Energy, 2017, 185, 1907-1918.	10.1	46
40	Industrial energy, materials and products: UK decarbonisation challenges and opportunities. Applied Thermal Engineering, 2018, 136, 643-656.	6.0	45
41	?People, planet and prosperity?: The determinants of humanity's environmental footprint. Natural Resources Forum, 2006, 30, 27-36.	3.6	43
42	Towards sustainability: energy efficiency, thermodynamic analysis, and the â€˜two culturesâ€™. Energy Policy, 2004, 32, 1789-1798.	8.8	41
43	North and south: Regional footprints on the transition pathway towards a low carbon, global economy. Applied Energy, 2010, 87, 2945-2951.	10.1	40
44	Thermal performance of a trapezoidal-shaped solar collector/energy store. Applied Energy, 2002, 73, 195-212.	10.1	39
45	Greenhouse gas reporting for biofuels: A comparison between the RED, RTFO and PAS2050 methodologies. Energy Policy, 2011, 39, 5950-5960.	8.8	39
46	Life-Cycle Assessment of Mineral and Rapeseed Oil in Mobile Hydraulic Systems. Journal of Industrial Ecology, 2003, 7, 163-177.	5.5	38
47	The Lebanese electricity system in the context of sustainable development. Energy Policy, 2010, 38, 751-761.	8.8	37
48	Energy analysis and environmental life cycle assessment of a micro-wind turbine. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2008, 222, 669-684.	1.4	36
49	Environmental and resource burdens associated with world biofuel production out to 2050: footprint components from carbon emissions and land use to waste arisings and water consumption. GCB Bioenergy, 2016, 8, 894-908.	5.6	35
50	Realising transition pathways for a more electric, low-carbon energy system in the United Kingdom: Challenges, insights and opportunities. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2017, 231, 440-477.	1.4	35
51	Potential for use of heat rejected from industry in district heating networks, GB perspective. Journal of the Energy Institute, 2016, 89, 57-69.	5.3	32
52	Effect of operating conditions on performance of domestic heating systems with heat pumps and fuel cell micro-cogeneration. Energy and Buildings, 2014, 70, 52-60.	6.7	31
53	Detailed simulation of electrical demands due to nationwide adoption of heat pumps, taking account of renewable generation and mitigation. IET Renewable Power Generation, 2016, 10, 380-387.	3.1	29
54	Alternative Energy Strategies for the United Kingdom Revisited. Technological Forecasting and Social Change, 1998, 59, 131-151.	11.6	27

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55	The Influence of Thermodynamic Ideas on Ecological Economics: An Interdisciplinary Critique. Sustainability, 2009, 1, 1195-1225.	3.2	25
56	The prospects for â€˜green steelâ€™ making in a net-zero economy: A UK perspective. Global Transitions, 2021, 3, 72-86.	4.1	25
57	Complete Velocity Profile and â€œOptimumâ€•Skin Friction Formulas for the Plane Wall-Jet. Journal of Fluids Engineering, Transactions of the ASME, 1982, 104, 59-65.	1.5	24
58	Carbon footprints in a bipolar, climate-constrained world. Ecological Indicators, 2012, 16, 91-99.	6.3	24
59	An energy and carbon life cycle assessment of tidal power case study: The proposed Cardiffâ€“Weston severn barrage scheme. Energy, 2012, 44, 692-701.	8.8	24
60	Industrial energy use and decarbonisation in the glass sector: A UK perspective. Advances in Applied Energy, 2021, 3, 100037.	13.2	23
61	The 20% house â€“ An integrated assessment of options for reducing net carbon emissions from existing UK houses. Applied Energy, 2015, 138, 108-120.	10.1	21
62	The life cycle greenhouse gas implications of a UK gas supply transformation on a future low carbon electricity sector. Energy, 2017, 118, 937-949.	8.8	21
63	Projections of UK oil and gas supply and demand to 2010. Applied Energy, 1993, 44, 93-112.	10.1	20
64	Energy and sustainability in a complex world: Reflections on the ideas of Howard T. Odum. International Journal of Energy Research, 2007, 31, 1105-1130.	4.5	20
65	Turbulent Prandtl number within a near-wall flow. AIAA Journal, 1985, 23, 1668-1669.	2.6	19
66	Convective coolant heat transfer in internal combustion engines. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2003, 217, 133-146.	1.9	19
67	Thermodynamic and carbon analyses of micro-generators for UK households. Energy, 2010, 35, 2223-2234.	8.8	19
68	â€˜Decarbonisingâ€™ UK industry: towards a cleaner economy. Proceedings of Institution of Civil Engineers: Energy, 2018, 171, 147-157.	0.6	19
69	The implications of upstream emissions from the power sector. Proceedings of Institution of Civil Engineers: Energy, 2014, 167, 9-19.	0.6	18
70	A comparative thermodynamic evaluation of bioethanol processing from wheat straw. Applied Energy, 2018, 224, 136-146.	10.1	18
71	Impact on energy requirements and emissions of heat pumps and micro-cogenerators participating in demand side management. Applied Thermal Engineering, 2014, 71, 872-881.	6.0	17
72	Opportunities for Energy Demand and Carbon Emissions Reduction in the Chemicals Sector. Energy Procedia, 2017, 105, 4347-4356.	1.8	17

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73	Analysis of the potential for energy demand and carbon emissionsreduction in the iron and steel sector. Energy Procedia, 2019, 158, 3915-3922.	1.8	17
74	Nuclear energy into the twenty-first century. Applied Energy, 1996, 54, 327-344.	10.1	16
75	Energy efficiency potentials: Contrasting thermodynamic, technical and economic limits for organic Rankine cycles within UK industry. Applied Energy, 2016, 164, 984-990.	10.1	14
76	Briefing: The 2021 Glasgow Climate Pact: steps on the transition pathway towards a low carbon world. Proceedings of Institution of Civil Engineers: Energy, 2022, 175, 97-102.	0.6	14
77	Science, sustainability and the establishment in a technological age. Interdisciplinary Science Reviews, 2004, 29, 193-208.	1.4	13
78	Energy saving potential of high temperature heat pumps in the UK Food and Drink sector. Energy Procedia, 2019, 161, 142-149.	1.8	12
79	Embodied Carbon: The Concealed Impact of Residential Construction. Green Energy and Technology, 2010, , 367-384.	0.6	12
80	Environmental and resource burdens associated with low carbon, more electric transition pathways to 2050: Footprint components from carbon emissions and land use to waste arisings and water consumption. Global Transitions, 2019, 1, 28-43.	4.1	11
81	Ecological Debt: Exploring the Factors that Affect National Footprints. Journal of Environmental Policy and Planning, 2010, 12, 121-140.	2.8	10
82	Impact review of past UK public industrial energy efficiency RD&D programmes. Energy Conversion and Management, 2012, 60, 243-250.	9.2	10
83	Energy Technology Assessment of Shale Gas â€˜Frackingâ€™ â€“ A UK Perspective. Energy Procedia, 2015, 75, 2764-2771.	1.8	10
84	Bioenergy utilization for a low carbon future in the UK: the evaluation of some alternative scenarios and projections. BMC Energy, 2019, 1, .	6.3	10
85	Potential of Demand Side Management to Reduce Carbon Dioxide Emissions Associated with the Operation of Heat Pumps. Journal of Sustainable Development of Energy, Water and Environment Systems, 2013, 1, 94-108.	1.9	10
86	The potential environmental consequences of shifts in UK energy policy that impact on electricity generation. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2017, 231, 535-550.	1.4	9
87	Predicting boiling heat transfer using computational fluid dynamics. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2004, 218, 509-520.	1.9	8
88	Carbon dioxide capture and storage faces a challenging future. Proceedings of the Institution of Civil Engineers: Civil Engineering, 2013, 166, 147-147.	0.3	8
89	Indicative energy technology assessment of hydrogen processing from biogenic municipal waste. Applied Energy, 2020, 274, 115329.	10.1	8
90	Thermodynamic efficiency of low-carbon domestic heating systems: heat pumps and micro-cogeneration. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2013, 227, 18-29.	1.4	7

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91	The thermodynamic implications of electricity end-use for heat and power. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2017, 231, 508-525.	1.4	7
92	An intermediate-level model of external convection for building energy simulation. Energy and Buildings, 1988, 12, 53-66.	6.7	6
93	Developing transition pathways for a low carbon electricity system in the UK. , 2008, , .		6
94	Integrated appraisal of a building integrated photovoltaic (BIPV) system. , 2009, , .		6
95	Egalite, fraternite, sustainabilite: evaluating the significance of regional affluence and population growth on carbon emissions. International Journal of Global Warming, 2010, 2, 189.	0.5	6
96	Prospects for emissions reduction in the UK cement sector. Proceedings of Institution of Civil Engineers: Energy, 2014, 167, 152-161.	0.6	6
97	Realising transition pathways to a low-carbon future. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2017, 231, 435-439.	1.4	6
98	Socio-technical transitions in UK electricity: part 2 â€“ technologies and sustainability. Proceedings of Institution of Civil Engineers: Energy, 2020, 173, 123-136.	0.6	6
99	Editorial: Progress in energy demand reduction â€“ from here to 2050. Proceedings of Institution of Civil Engineers: Energy, 2014, 167, 89-104.	0.6	5
100	Some Interdisciplinary Perspectives on Environmental Appraisal and Valuation. , 2004, , 3-33.		5
101	The â€˜Shoots Barrageâ€™: An Indicative Energy Technology Assessment of a Tidal Power Scheme. Journal of Sustainable Development of Energy, Water and Environment Systems, 2014, 2, 388-407.	1.9	5
102	Socio-technical transitions in UK electricity: part 1 â€“ history, actors and pathways. Proceedings of Institution of Civil Engineers: Energy, 2020, 173, 109-122.	0.6	5
103	Sustainability Criteria for Energy Resources and Technologies. , 2011, , .		5
104	The Low-Down on Entropy and Interpretive Thermodynamics. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2003, 217, 337-339.	1.4	4
105	Indicative appraisal of clustered micro-generators for a low-carbon transition in the UK building sector. Global Transitions, 2020, 2, 83-97.	4.1	4
106	Cities and Sustainability. , 2003, , 81-105.		4
107	Mixing of two intersecting plane turbulent air jets. Applied Energy, 1978, 4, 273-283.	10.1	3
108	Risk assessment of UK biofuel developments within the rapidly evolving energy and transport sectors. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2012, 226, 526-548.	0.7	3

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109	A technology assessment of the proposed Cardiffâ€“Weston tidal barrage, UK. Proceedings of the Institution of Civil Engineers: Engineering Sustainability, 2018, 171, 383-401.	0.7	3
110	Nuclear Power in the Twenty-first Century. , 2011, , .		3
111	The UK industrial decarbonisation strategy revisited. Proceedings of Institution of Civil Engineers: Energy, 0, , 1-15.	0.6	3
112	Environmental footprint analysis of an urban community and its surrounding bioregion. Proceedings of the Institution of Civil Engineers: Urban Design and Planning, 2022, 175, 31-47.	0.7	3
113	An empirical assessment of sector-level exergy analysis. Energy Procedia, 2017, 142, 4050-4055.	1.8	2
114	System Characterisation of Carbon Capture and Storage (CCS) Systems. , 2018, , 129-162.		2
115	Special issue on micro-generation and related energy technologies and practices for low carbon buildings. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2013, 227, 3-7.	1.4	1
116	Energy Density and Spatial Footprints of Various Electrical Power Systems. Energy Procedia, 2014, 61, 578-581.	1.8	1
117	Environmental and resource burdens associated with an urban community and its surrounding bioregion. Energy Procedia, 2017, 143, 481-486.	1.8	1
118	Industrial energy-analysis and management: A European perspective. Applied Energy, 2007, 84, 671-674.	10.1	0
119	Thermodynamic analysis of bioethanol production from wheat straw. Energy Procedia, 2017, 142, 552-557.	1.8	0
120	Engineering Sustainability: Thermodynamics, Energy Systems and the Environment. , 2004, , 175-210.		0