Phil Purnell

List of Publications by Year
in descending order

63 papers	5,267 citations	147566 31 h-index	118652 62 g-index
64 all docs	64 docs citations	64 times ranked	5305 citing authors

#	Article	IF	Citations
1	An overview of chemical additives present in plastics: Migration, release, fate and environmental impact during their use, disposal and recycling. Journal of Hazardous Materials, 2018, 344, 179-199.	6.5	2,087
2	Principles for a sustainable circular economy. Sustainable Production and Consumption, 2021, 27, 1437-1457.	5.7	376
3	Identification of failure modes in glass/polypropylene composites by means of the primary frequency content of the acoustic emission event. Composites Science and Technology, 2004, 64, 1819-1827.	3.8	243
4	Metrics for optimising the multi-dimensional value of resources recovered from waste in a circular economy: A critical review. Journal of Cleaner Production, 2017, 166, 910-938.	4.6	185
5	A pathway to circular economy: Developing a conceptual framework for complex value assessment of resources recovered from waste. Journal of Cleaner Production, 2017, 168, 1279-1288.	4.6	176
6	Circular economy and the matter of integrated resources. Science of the Total Environment, 2019, 689, 963-969.	3.9	161
7	Mining the physical infrastructure: Opportunities, barriers and interventions in promoting structural components reuse. Science of the Total Environment, 2016, 557-558, 791-807.	3.9	102
8	Assessing the dynamic material criticality of infrastructure transitions: A case of low carbon electricity. Applied Energy, 2014, 123, 378-386.	5.1	95
9	Embodied carbon dioxide in concrete: Variation with common mix design parameters. Cement and Concrete Research, 2012, 42, 874-877.	4.6	93
10	Post-consumer plastic packaging waste in England: Assessing the yield of multiple collection-recycling schemes. Waste Management, 2018, 75, 149-159.	3.7	91
11	An application of a damage constitutive model to concrete at high temperature and prediction of spalling. International Journal of Solids and Structures, 2005, 42, 6550-6565.	1.3	87
12	The carbon footprint of reinforced concrete. Advances in Cement Research, 2013, 25, 362-368.	0.7	75
13	Managing Critical Materials with a Technology-Specific Stocks and Flows Model. Environmental Science & Technology, 2014, 48, 1298-1305.	4.6	73
14	Technical properties of biomass and solid recovered fuel (SRF) co-fired with coal: Impact on multi-dimensional resource recovery value. Waste Management, 2018, 73, 535-545.	3.7	73
15	Material Nature versus Structural Nurture: The Embodied Carbon of Fundamental Structural Elements. Environmental Science & Technology, 2012, 46, 454-461.	4.6	72
16	Durability and simulated ageing of new matrix glass fibre reinforced concrete. Cement and Concrete Composites, 2005, 27, 875-884.	4.6	71
17	The use of smart technologies in enabling construction components reuse: A viable method or a problem creating solution?. Journal of Environmental Management, 2018, 216, 214-223.	3.8	68
18	A systems thinking approach to understanding the challenges of achieving the circular economy. Environmental Science and Pollution Research, 2021, 28, 24785-24806.	2.7	67

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19	Quality of resources: A typology for supporting transitions towards resource efficiency using the single-use plastic bottle as an example. Science of the Total Environment, 2019, 647, 441-448.	3.9	66
20	Towards resource-efficient and service-oriented integrated infrastructure operation. Technological Forecasting and Social Change, 2015, 92, 40-52.	6.2	65
21	Mechanical, chemical, biological: Moving towards closed-loop bio-based recycling in a circular economy of sustainable textiles. Journal of Cleaner Production, 2021, 326, 129325.	4.6	63
22	Fully integrated modelling for sustainability assessment of resource recovery from waste. Science of the Total Environment, 2018, 612, 613-624.	3.9	57
23	Microstructural observations in new matrix glass fibre reinforced cement. Cement and Concrete Research, 2000, 30, 1747-1753.	4.6	50
24	Non-destructive evaluation of concrete using a capacitive imaging technique: Preliminary modelling and experiments. Cement and Concrete Research, 2010, 40, 1734-1743.	4.6	50
25	Resource Recovery from Waste: Restoring the Balance between Resource Scarcity and Waste Overload. Sustainability, 2017, 9, 1603.	1.6	50
26	The effect of clay content in sands used for cementitious materials in developing countries. Cement and Concrete Research, 2007, 37, 751-758.	4.6	43
27	Co-Producing a Vision and Approach for the Transition towards a Circular Economy: Perspectives from Government Partners. Sustainability, 2018, 10, 1401.	1.6	43
28	Highlighting the need to embed circular economy in low carbon infrastructure decommissioning: The case of offshore wind. Sustainable Production and Consumption, 2020, 24, 266-280.	5.7	40
29	Developing policies for the end-of-life of energy infrastructure: Coming to terms with the challenges of decommissioning. Energy Policy, 2020, 144, 111677.	4.2	39
30	Accelerated ageing characteristics of glass-fibre reinforced cement made with new cementitious matrices. Composites Part A: Applied Science and Manufacturing, 1999, 30, 1073-1080.	3.8	38
31	Super-critical carbonation of glass-fibre reinforced cement. Part 1: mechanical testing and chemical analysis. Composites Part A: Applied Science and Manufacturing, 2001, 32, 1777-1787.	3.8	33
32	Humidity and aggregate content correction factors for air-coupled ultrasonic evaluation of concrete. Ultrasonics, 2005, 43, 211-217.	2.1	33
33	Noncontact ultrasonic diagnostics in concrete: A preliminary investigation. Cement and Concrete Research, 2004, 34, 1185-1188.	4.6	30
34	Circulating blame in the circular economy: The case of wood-waste biofuels and coal ash. Energy Policy, 2019, 129, 168-172.	4.2	27
35	Assessing the role and use of recycled aggregates in the sustainable management of construction and demolition waste via a mini-review and a case study. Waste Management and Research, 2020, 38, 460-471.	2.2	24
36	Meeting sustainable development goals via robotics and autonomous systems. Nature Communications, 2022, 13, .	5.8	24

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37	Super-critical carbonation of glass-fibre reinforced cement. Part 2: Microstructural observations. Composites Part A: Applied Science and Manufacturing, 2003, 34, 1105-1112.	3.8	22
38	Digitally enabled modular construction for promoting modular components reuse: A UK view. Journal of Building Engineering, 2021, 42, 102820.	1.6	22
39	Service life modelling of fibre composites: A unified approach. Composites Science and Technology, 2008, 68, 3330-3336.	3.8	21
40	Resource recovery and low carbon transitions: The hidden impacts of substituting cement with imported â€˜wasteâ€™ materials from coal and steel production. Global Environmental Change, 2018, 53, 146-156.	3.6	20
41	Supercritical carbonation of calcareous composites: Influence of curing. Cement and Concrete Composites, 2013, 43, 48-53.	4.6	19
42	Microstructure of interface between fibre and matrix in 10-year aged GRC modified by calcium sulfoaluminate cement. Cement and Concrete Research, 2015, 76, 20-26.	4.6	17
43	Supercritical carbonation of calcareous composites: Influence of mix design. Cement and Concrete Composites, 2013, 43, 12-19.	4.6	15
44	Is carbon dioxide pricing a driver in concrete mix design?. Magazine of Concrete Research, 2016, 68, 561-567.	0.9	15
45	A Call to Integrate Economic, Social and Environmental Motives into Guidance for Business Support for the Transition to a Circular Economy. Administrative Sciences, 2019, 9, 92.	1.5	14
46	Formation of thaumasite in synthetic cement mineral slurries. Cement and Concrete Composites, 2003, 25, 857-860.	4.6	13
47	Reducing material criticality through circular business models: Challenges in renewable energy. One Earth, 2021, 4, 350-352.	3.6	13
48	Briefing: Infrastructure business models, valuation and innovation for local delivery. Infrastructure Asset Management, 2014, 1, 66-67.	1.2	11
49	On a voyage of recovery: a review of the UKâ€™s resource recovery from waste infrastructure. Sustainable and Resilient Infrastructure, 2019, 4, 1-20.	1.7	11
50	Current themes in cement research. Advances in Applied Ceramics, 2010, 109, 253-259.	0.6	10
51	Editorial: Resource Recovery From Waste. Frontiers in Environmental Science, 2020, 8, .	1.5	10
52	Preliminary investigations of the dimensional stability of super-critically carbonated glass fibre reinforced cement. Cement and Concrete Research, 2002, 32, 1639-1644.	4.6	9
53	Reply to comments to the paper â€œAn application of a damage constitutive model to concrete at high temperature and prediction of spallingâ€•by Rosen Tenchev and Phil Purnell [Int. J. Solids Struct. 42 (26) (2005) 6550â€“6565]. International Journal of Solids and Structures, 2007, 44, 4238-4241.	1.3	9
54	Low Carbon Technology Performance vs Infrastructure Vulnerability: Analysis through the Local and Global Properties Space. Environmental Science & Technology, 2014, 48, 12970-12977.	4.6	9

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55	A simplified design approach for predicting the flexural behavior of TRM-strengthened RC beams under cyclic loads. Construction and Building Materials, 2021, 285, 122799.	3.2	8
56	Study of strength durability models for GRC: Theoretical overview. Composites Part A: Applied Science and Manufacturing, 2009, 40, 2020-2030.	3.8	7
57	Durability models for GRC: uncertainties on strength predictions. Plastics, Rubber and Composites, 2012, 41, 77-87.	0.9	7
58	Critical materials for infrastructure: local vs global properties. Proceedings of the Institution of Civil Engineers: Engineering Sustainability, 2013, 166, 272-280.	0.4	4
59	Briefing: Resource scarcity and resource security â€“ a suppressed civil engineering challenge. Proceedings of Institution of Civil Engineers: Waste and Resource Management, 2017, 170, 49-52.	0.9	4
60	Supercritical carbonation of lime based sustainable structural ceramics. Advances in Applied Ceramics, 2010, 109, 280-286.	0.6	3
61	Robotic and autonomous systems for road asset management: a position paper. Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction, 2019, 172, 83-93.	1.1	3
62	Response to the Comment on â€œMaterial Nature versus Structural Nurture: The Embodied Carbon of Fundamental Structural Elementsâ€• Environmental Science & Technology, 2012, 46, 3597-3598.	4.6	1
63	Pattern recognition of fiber-reinforced plastic failure mechanism using computational intelligence techniques. , 2008, , .		0