

Astley Hastings

List of Publications by Year in descending order

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48
papers

3,754
citations

172457

29
h-index

197818

49
g-index

56
all docs

56
docs citations

56
times ranked

4460
citing authors

#	ARTICLE	IF	CITATIONS
1	Energy crops: current status and future prospects. <i>Global Change Biology</i> , 2006, 12, 2054-2076.	9.5	351
2	A critical review of the impacts of cover crops on nitrogen leaching, net greenhouse gas balance and crop productivity. <i>Global Change Biology</i> , 2019, 25, 2530-2543.	9.5	343
3	Land-use change to bioenergy production in Europe: implications for the greenhouse gas balance and soil carbon. <i>GCB Bioenergy</i> , 2012, 4, 372-391.	5.6	298
4	Food vs. fuel: the use of land for lignocellulosic "next generation" energy crops that minimize competition with primary food production. <i>GCB Bioenergy</i> , 2012, 4, 1-19.	5.6	240
5	Environmental costs and benefits of growing <i>Miscanthus</i> for bioenergy in the UK. <i>GCB Bioenergy</i> , 2017, 9, 489-507.	5.6	183
6	The potential for land sparing to offset greenhouse gas emissions from agriculture. <i>Nature Climate Change</i> , 2016, 6, 488-492.	18.8	177
7	Progress on Optimizing <i>Miscanthus</i> Biomass Production for the European Bioeconomy: Results of the EU FP7 Project OPTIMISC. <i>Frontiers in Plant Science</i> , 2016, 7, 1620.	3.6	160
8	Progress in upscaling <i>Miscanthus</i> biomass production for the European bioeconomy with seed-based hybrids. <i>GCB Bioenergy</i> , 2017, 9, 6-17.	5.6	156
9	The development of MISCANFOR, a new <i>Miscanthus</i> crop growth model: towards more robust yield predictions under different climatic and soil conditions. <i>GCB Bioenergy</i> , 2009, 1, 154-170.	5.6	155
10	Future energy potential of <i>Miscanthus</i> in Europe. <i>GCB Bioenergy</i> , 2009, 1, 180-196.	5.6	139
11	Emissions of methane from northern peatlands: a review of management impacts and implications for future management options. <i>Ecology and Evolution</i> , 2016, 6, 7080-7102.	1.9	120
12	Breeding progress and preparedness for mass-scale deployment of perennial lignocellulosic biomass crops switchgrass, miscanthus, willow and poplar. <i>GCB Bioenergy</i> , 2019, 11, 118-151.	5.6	116
13	The impact of soil salinity on the yield, composition and physiology of the bioenergy grass <i>Miscanthus</i> — <i>Agiganteus</i> . <i>GCB Bioenergy</i> , 2017, 9, 92-104.	5.6	106
14	The potential of <i>Miscanthus</i> to sequester carbon in soils: comparing field measurements in Carlow, Ireland to model predictions. <i>GCB Bioenergy</i> , 2009, 1, 413-425.	5.6	104
15	Land use change from C3 grassland to C4 <i>Miscanthus</i> : effects on soil carbon content and estimated mitigation benefit after six years. <i>GCB Bioenergy</i> , 2014, 6, 360-370.	5.6	83
16	Characterization of flowering time diversity in <i>Miscanthus</i> species. <i>GCB Bioenergy</i> , 2011, 3, 387-400.	5.6	76
17	Potential of <i>Miscanthus</i> grasses to provide energy and hence reduce greenhouse gas emissions. <i>Agronomy for Sustainable Development</i> , 2008, 28, 465-472.	5.3	69
18	Economic and Environmental Assessment of Seed and Rhizome Propagated <i>Miscanthus</i> in the UK. <i>Frontiers in Plant Science</i> , 2017, 8, 1058.	3.6	66

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19	The technical potential of <i>Cereals</i> to produce lignocellulosic biomass for bioenergy in current and future climates. <i>GCB Bioenergy</i> , 2014, 6, 108-122.	5.6	64
20	Global change synergies and trade-offs between renewable energy and biodiversity. <i>GCB Bioenergy</i> , 2016, 8, 941-951.	5.6	61
21	Electric and hydrogen buses: Shifting from conventionally fuelled cars in the UK. <i>Transportation Research, Part D: Transport and Environment</i> , 2020, 85, 102350.	6.8	58
22	Potential impacts on ecosystem services of land use transitions to second-generation bioenergy crops in <i>GB</i> . <i>GCB Bioenergy</i> , 2016, 8, 317-333.	5.6	56
23	Soil C storage as affected by tillage and straw management: An assessment using field measurements and model predictions. <i>Agriculture, Ecosystems and Environment</i> , 2011, 140, 218-225.	5.3	50
24	High-resolution spatial modelling of greenhouse gas emissions from land use change to energy crops in the United Kingdom. <i>GCB Bioenergy</i> , 2017, 9, 627-644.	5.6	47
25	Bioenergy with Carbon Capture and Storage (BECCS): Finding the win-wins for energy, negative emissions and ecosystem services size matters. <i>GCB Bioenergy</i> , 2020, 12, 586-604.	5.6	41
26	Sensitivity of crop model predictions to entire meteorological and soil input datasets highlights vulnerability to drought. <i>Environmental Modelling and Software</i> , 2012, 29, 37-43.	4.5	40
27	How does bioenergy compare with other land-based renewable energy sources globally?. <i>GCB Bioenergy</i> , 2013, 5, 513-524.	5.6	36
28	Electric and hydrogen rail: Potential contribution to net zero in the UK. <i>Transportation Research, Part D: Transport and Environment</i> , 2020, 87, 102523.	6.8	34
29	Thermal requirements for seed germination in <i>Miscanthus</i> compared with <i>Switchgrass (Panicum)</i> T_j $ETQq1$ 1 0.784314 $rgBT$ /Overlock	5.6	33
30	Synergies and trade-offs between renewable energy expansion and biodiversity conservation – a cross-national multifactor analysis. <i>GCB Bioenergy</i> , 2016, 8, 1191-1200.	5.6	28
31	Assessing the impact of within crop heterogeneity (‘‘patchiness’’™) in young <i>Miscanthus giganteus</i> fields on economic feasibility and soil carbon sequestration. <i>GCB Bioenergy</i> , 2014, 6, 566-576.	5.6	27
32	Modeled spatial assessment of biomass productivity and technical potential of <i>Miscanthus giganteus</i> , <i>Panicum virgatum</i> L., and <i>Jatropha</i> on marginal land in China. <i>GCB Bioenergy</i> , 2020, 12, 328-345.	5.6	25
33	Novel <i>Miscanthus</i> Germplasm-Based Value Chains: A Life Cycle Assessment. <i>Frontiers in Plant Science</i> , 2017, 8, 990.	3.6	24
34	Mitigation potential and environmental impact of centralized versus distributed BECCS with domestic biomass production in Great Britain. <i>GCB Bioenergy</i> , 2019, 11, 1234-1252.	5.6	23
35	Economic and greenhouse gas costs of <i>Miscanthus</i> supply chains in the United Kingdom. <i>GCB Bioenergy</i> , 2012, 4, 358-363.	5.6	21
36	Projections of global and UK bioenergy potential from <i>Miscanthus giganteus</i> feedstock yield, carbon cycling and electricity generation in the 21st century. <i>GCB Bioenergy</i> , 2020, 12, 287-305.	5.6	20

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37	Miscanthus. , 2018, , 35-59.		18
38	ELUM: A spatial modelling tool to predict soil greenhouse gas changes from land conversion to bioenergy in the UK. Environmental Modelling and Software, 2016, 84, 458-466.	4.5	17
39	Commercial experience with miscanthus crops: Establishment, yields and environmental observations. GCB Bioenergy, 2020, 12, 510-523.	5.6	17
40	Collecting wild Miscanthus germplasm in Asia for crop improvement and conservation in Europe whilst adhering to the guidelines of the United Nationsâ€™ Convention on Biological Diversity. Annals of Botany, 2019, 124, 591-604.	2.9	13
41	UK and China: Will electric vehicle integration meet Paris Agreement Targets?. Transportation Research Interdisciplinary Perspectives, 2020, 8, 100245.	2.7	13
42	Phasing in electric vehicles: Does policy focusing on operating emission achieve net zero emissions reduction objectives?. Transportation Research, Part A: Policy and Practice, 2021, 152, 100-114.	4.2	13
43	Spatiotemporal assessment of farmâ€™gate production costs and economic potential of Miscanthus Â— giganteus , Panicum virgatum L., and Jatropha grown on marginal land in China. GCB Bioenergy, 2020, 12, 310-327.	5.6	10
44	PopFor: A new model for estimating poplar yields. Biomass and Bioenergy, 2020, 134, 105470.	5.7	7
45	Uncertainty of modelled bioenergy with carbon capture and storage due to variability of input data. GCB Bioenergy, 2021, 13, 691-707.	5.6	7
46	Transportation in a Net Zero World: Transitioning Towards Low Carbon Public Transport. Green Energy and Technology, 2022, , .	0.6	3
47	Low Carbon Public Transport and the Competition with Aviation. Green Energy and Technology, 2022, , 81-90.	0.6	2
48	Trains. Green Energy and Technology, 2022, , 51-58.	0.6	1