

Anthony V Bridgwater

List of Publications by Citations

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111
papers

17,979
citations

51
h-index

112
g-index

112
ext. papers

19,655
ext. citations

6.6
avg, IF

7.55
L-index

#	Paper	IF	Citations
111	Review of fast pyrolysis of biomass and product upgrading. <i>Biomass and Bioenergy</i> , 2012 , 38, 68-94	5.3	2917
110	Overview of Applications of Biomass Fast Pyrolysis Oil. <i>Energy & Fuels</i> , 2004 , 18, 590-598	4.1	2180
109	Fast pyrolysis processes for biomass. <i>Renewable and Sustainable Energy Reviews</i> , 2000 , 4, 1-73	16.2	1258
108	An overview of fast pyrolysis of biomass. <i>Organic Geochemistry</i> , 1999 , 30, 1479-1493	3.1	1253
107	The technical and economic feasibility of biomass gasification for power generation. <i>Fuel</i> , 1995 , 74, 631-653	7.3	733
106	Principles and practice of biomass fast pyrolysis processes for liquids. <i>Journal of Analytical and Applied Pyrolysis</i> , 1999 , 51, 3-22	6	571
105	The effect of lignin and inorganic species in biomass on pyrolysis oil yields, quality and stability. <i>Fuel</i> , 2008 , 87, 1230-1240	7.1	415
104	Production of renewable phenolic resins by thermochemical conversion of biomass: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2008 , 12, 2092-2116	16.2	391
103	A techno-economic comparison of power production by biomass fast pyrolysis with gasification and combustion. <i>Renewable and Sustainable Energy Reviews</i> , 2002 , 6, 181-246	16.2	391
102	Study on the pyrolytic behaviour of xylan-based hemicellulose using TG/FTIR and Py-GC/FTIR. <i>Journal of Analytical and Applied Pyrolysis</i> , 2010 , 87, 199-206	6	371
101	Catalysis in thermal biomass conversion. <i>Applied Catalysis A: General</i> , 1994 , 116, 5-47	5.1	349
100	Lignin fast pyrolysis: Results from an international collaboration. <i>Journal of Analytical and Applied Pyrolysis</i> , 2010 , 88, 53-72	6	309
99	The effect of alkali metals on combustion and pyrolysis of Lolium and Festuca grasses, switchgrass and willow. <i>Fuel</i> , 2007 , 86, 1560-1569	7.1	299
98	Production of high grade fuels and chemicals from catalytic pyrolysis of biomass. <i>Catalysis Today</i> , 1996 , 29, 285-295	5.3	284
97	Review of physicochemical properties and analytical characterization of lignocellulosic biomass. <i>Renewable and Sustainable Energy Reviews</i> , 2017 , 76, 309-322	16.2	280
96	Developments in direct thermochemical liquefaction of biomass: 1983-1990. <i>Energy & Fuels</i> , 1991 , 5, 399-410	4.1	260
95	Fast pyrolysis of cassava rhizome in the presence of catalysts. <i>Journal of Analytical and Applied Pyrolysis</i> , 2008 , 81, 72-79	6	256

94	A systematic study of the kinetics of lignin pyrolysis. <i>Thermochimica Acta</i> , 2010 , 498, 61-66	2.9	252
93	Effect of the Temperature on the Composition of Lignin Pyrolysis Products. <i>Energy & Fuels</i> , 2010 , 24, 4470-4475	4.1	226
92	State-of-the-art of fast pyrolysis in IEA bioenergy member countries. <i>Renewable and Sustainable Energy Reviews</i> , 2013 , 20, 619-641	16.2	223
91	Development of emulsions from biomass pyrolysis liquid and diesel and their use in enginesPart 1 : emulsion production. <i>Biomass and Bioenergy</i> , 2003 , 25, 85-99	5.3	218
90	The thermal performance of the polysaccharides extracted from hardwood: Cellulose and hemicellulose. <i>Carbohydrate Polymers</i> , 2010 , 82, 39-45	10.3	208
89	Kinetic study on thermal decomposition of woods in oxidative environment. <i>Fuel</i> , 2009 , 88, 1024-1030	7.1	204
88	Biomass for energy. <i>Journal of the Science of Food and Agriculture</i> , 2006 , 86, 1755-1768	4.3	195
87	Influence of particle size on the analytical and chemical properties of two energy crops. <i>Fuel</i> , 2007 , 86, 60-72	7.1	173
86	Development of emulsions from biomass pyrolysis liquid and diesel and their use in enginesPart 2: tests in diesel engines. <i>Biomass and Bioenergy</i> , 2003 , 25, 101-111	5.3	163
85	A comparative study of straw, perennial grasses and hardwoods in terms of fast pyrolysis products. <i>Fuel</i> , 2013 , 108, 216-230	7.1	158
84	Processing thermogravimetric analysis data for isoconversional kinetic analysis of lignocellulosic biomass pyrolysis: Case study of corn stalk. <i>Renewable and Sustainable Energy Reviews</i> , 2018 , 82, 2705-2715	16.2	155
83	Opportunities for biomass pyrolysis liquids production and upgrading. <i>Energy & Fuels</i> , 1992 , 6, 113-120	1.2	127
82	CFD modelling of the fast pyrolysis of biomass in fluidised bed reactors. Part B. <i>Chemical Engineering Science</i> , 2009 , 64, 1036-1045	4.4	122
81	Upgrading biomass fast pyrolysis liquids. <i>Environmental Progress and Sustainable Energy</i> , 2012 , 31, 261-268	6.8	109
80	Evaluation of catalytic pyrolysis of cassava rhizome by principal component analysis. <i>Fuel</i> , 2010 , 89, 244-253	7.5	107
79	Fast pyrolysis of sweet sorghum and sweet sorghum bagasse. <i>Journal of Analytical and Applied Pyrolysis</i> , 1998 , 46, 15-29	6	103
78	Application of CFD to model fast pyrolysis of biomass. <i>Fuel Processing Technology</i> , 2009 , 90, 504-512	7.2	101
77	CFD modelling of the fast pyrolysis of biomass in fluidised bed reactors, Part A: Eulerian computation of momentum transport in bubbling fluidised beds. <i>Chemical Engineering Science</i> , 2008 , 63, 4218-4227	4.4	92

76	Genotypic and environmentally derived variation in the cell wall composition of Miscanthus in relation to its use as a biomass feedstock. <i>Biomass and Bioenergy</i> , 2010 , 34, 652-660	5.3	83
75	Techno-economic and uncertainty analysis of Biomass to Liquid (BTL) systems for transport fuel production. <i>Renewable and Sustainable Energy Reviews</i> , 2018 , 88, 160-175	16.2	81
74	Prediction of Klason lignin and lignin thermal degradation products by PyGC/MS in a collection of Lolium and Festuca grasses. <i>Journal of Analytical and Applied Pyrolysis</i> , 2007 , 80, 16-23	6	81
73	The production of biofuels and renewable chemicals by fast pyrolysis of biomass. <i>International Journal of Global Energy Issues</i> , 2007 , 27, 160	0.3	75
72	Opportunities for biomass-derived Bio-oil in European heat and power markets. <i>Energy Policy</i> , 2006 , 34, 2871-2880	7.2	74
71	Drying technologies for an integrated gasification bio-energy plant. <i>Renewable and Sustainable Energy Reviews</i> , 1999 , 3, 243-289	16.2	70
70	Technoeconomic assessment of biomass to energy. <i>Biomass and Bioenergy</i> , 1995 , 9, 205-226	5.3	70
69	The influence of feedstock drying on the performance and economics of a biomass gasifier-Engine CHP system. <i>Biomass and Bioenergy</i> , 2002 , 22, 271-281	5.3	67
68	Computational modelling of the impact of particle size to the heat transfer coefficient between biomass particles and a fluidised bed. <i>Fuel Processing Technology</i> , 2010 , 91, 68-79	7.2	66
67	Thermochemical characterisation of straws and high yielding perennial grasses. <i>Industrial Crops and Products</i> , 2012 , 36, 449-459	5.9	64
66	Ablative plate pyrolysis of biomass for liquids. <i>Biomass and Bioenergy</i> , 1994 , 7, 147-154	5.3	63
65	Kinetic study of the pyrolysis of miscanthus and its acid hydrolysis residue by thermogravimetric analysis. <i>Fuel Processing Technology</i> , 2015 , 138, 184-193	7.2	62
64	Slow pyrolysis of organic fraction of municipal solid waste (OFMSW): Characterisation of products and screening of the aqueous liquid product for anaerobic digestion. <i>Applied Energy</i> , 2018 , 213, 158-168	10.7	58
63	Biodegradability of biomass pyrolysis oils: Comparison to conventional petroleum fuels and alternatives fuels in current use. <i>Fuel</i> , 2007 , 86, 2679-2686	7.1	58
62	Results of the IEA Round Robin on Viscosity and Stability of Fast Pyrolysis Bio-oils. <i>Energy & Fuels</i> , 2012 , 26, 3769-3776	4.1	55
61	Combined heat and power from the intermediate pyrolysis of biomass materials: performance, economics and environmental impact. <i>Applied Energy</i> , 2017 , 191, 639-652	10.7	52
60	A techno-economic analysis of energy recovery from organic fraction of municipal solid waste (MSW) by an integrated intermediate pyrolysis and combined heat and power (CHP) plant. <i>Energy Conversion and Management</i> , 2018 , 174, 406-416	10.6	51
59	A kinetic reaction model for biomass pyrolysis processes in Aspen Plus. <i>Applied Energy</i> , 2017 , 188, 595-603	3.7	50

58	Using Apparent Activation Energy as a Reactivity Criterion for Biomass Pyrolysis. <i>Energy & Fuels</i> , 2016 , 30, 7834-7841	4.1	50
57	Techno-economic modelling of biomass flash pyrolysis and upgrading systems. <i>Biomass and Bioenergy</i> , 1994 , 7, 267-273	5.3	50
56	Effect of temperature on product performance of a high ash biomass during fast pyrolysis and its bio-oil storage evaluation. <i>Fuel Processing Technology</i> , 2018 , 172, 97-105	7.2	49
55	Impact of Potassium and Phosphorus in Biomass on the Properties of Fast Pyrolysis Bio-oil. <i>Energy & Fuels</i> , 2016 , 30, 8009-8018	4.1	49
54	Results of the IEA Round Robin on Viscosity and Aging of Fast Pyrolysis Bio-oils: Long-Term Tests and Repeatability. <i>Energy & Fuels</i> , 2012 , 26, 7362-7366	4.1	49
53	Quantification of hydroxycinnamic acids and lignin in perennial forage and energy grasses by Fourier-transform infrared spectroscopy and partial least squares regression. <i>Bioresource Technology</i> , 2009 , 100, 1252-61	11	48
52	Intermediate pyrolysis of organic fraction of municipal solid waste and rheological study of the pyrolysis oil for potential use as bio-bitumen. <i>Journal of Cleaner Production</i> , 2018 , 187, 390-399	10.3	47
51	Challenges and Opportunities in Fast Pyrolysis of Biomass: Part I. <i>Johnson Matthey Technology Review</i> , 2018 , 62, 118-130	2.5	45
50	Measurement of key compositional parameters in two species of energy grass by Fourier transform infrared spectroscopy. <i>Bioresource Technology</i> , 2009 , 100, 6428-33	11	45
49	Physical properties of flash pyrolysis liquids. <i>Biomass and Bioenergy</i> , 1994 , 7, 169-177	5.3	44
48	Pyrolysis of Rice Husk and Corn Stalk in Auger Reactor. 1. Characterization of Char and Gas at Various Temperatures. <i>Energy & Fuels</i> , 2016 , 30, 10568-10574	4.1	42
47	Upgrading fast pyrolysis liquids: Blends of biodiesel and pyrolysis oil. <i>Fuel</i> , 2013 , 109, 417-426	7.1	41
46	Results of the International Energy Agency Round Robin on Fast Pyrolysis Bio-oil Production. <i>Energy & Fuels</i> , 2017 , 31, 5111-5119	4.1	40
45	Quantitative Insights into the Fast Pyrolysis of Extracted Cellulose, Hemicelluloses, and Lignin. <i>ChemSusChem</i> , 2017 , 10, 3212-3224	8.3	40
44	Pillared clays as catalysts for hydrocracking of heavy liquid fuels. <i>Applied Catalysis A: General</i> , 2005 , 282, 205-214	5.1	35
43	Assessment of liquefaction and pyrolysis systems. <i>Biomass and Bioenergy</i> , 1992 , 2, 279-297	5.3	35
42	Encapsulation of phase change materials using rice-husk-char. <i>Applied Energy</i> , 2016 , 182, 274-281	10.7	35
41	A comparison of fast and slow pyrolysis liquids from mallee. <i>International Journal of Global Energy Issues</i> , 2007 , 27, 204	0.3	34

40	Co-pyrolysis of Miscanthus Sacchariflorus and coals: A systematic study on the synergies in thermal decomposition, kinetics and vapour phase products. <i>Fuel</i> , 2020 , 262, 116603	7.1	34
39	Fast pyrolysis processing of surfactant washed Miscanthus. <i>Fuel Processing Technology</i> , 2014 , 128, 94-103.2		33
38	Effect of reactor configuration on the yields and structures of pine-wood derived pyrolysis liquids: A comparison between ablative and wire-mesh pyrolysis. <i>Biomass and Bioenergy</i> , 1994 , 7, 155-167	5.3	32
37	The catalytic cracking of sterically challenging plastic feedstocks over high acid density Al-SBA-15 catalysts. <i>Applied Catalysis A: General</i> , 2019 , 570, 218-227	5.1	31
36	CFB air-blown flash pyrolysis. Part I: Engineering design and cold model performance. <i>Fuel</i> , 2007 , 86, 1372-1386	7.1	30
35	Fast pyrolysis of date palm (<i>Phoenix dactylifera</i>) waste in a bubbling fluidized bed reactor. <i>Renewable Energy</i> , 2019 , 143, 719-730	8.1	28
34	Production costs of liquid fuels from biomass. <i>Fuel</i> , 1991 , 70, 1209-1224	7.1	28
33	Sequential pyrolysis of willow SRC at low and high heating rates [Implications for selective pyrolysis. <i>Fuel</i> , 2012 , 93, 692-702	7.1	27
32	Pilot-scale combustion of fast-pyrolysis bio-oil: Ash deposition and gaseous emissions. <i>Environmental Progress and Sustainable Energy</i> , 2009 , 28, 397-403	2.5	27
31	Challenges and Opportunities in Fast Pyrolysis of Biomass: Part II. <i>Johnson Matthey Technology Review</i> , 2018 , 62, 150-160	2.5	24
30	CFD and experimental studies on a circulating fluidised bed reactor for biomass gasification. <i>Chemical Engineering and Processing: Process Intensification</i> , 2018 , 130, 284-295	3.7	22
29	Upgrading Fast Pyrolysis Liquids 2011 , 157-199		17
28	Biomass fast pyrolysis energy balance of a 1kg/h test rig 2015 , 18, 267		17
27	Monometallic and bimetallic catalysts based on Pd, Cu and Ni for hydrogen transfer deoxygenation of a prototypical fatty acid to diesel range hydrocarbons. <i>Catalysis Today</i> , 2020 , 355, 882-892	5.3	17
26	Steam gasification of Miscanthus derived char: the reaction kinetics and reactivity with correlation to the material composition and microstructure. <i>Energy Conversion and Management</i> , 2020 , 219, 113026	10.6	16
25	Viscosity of Aged Bio-oils from Fast Pyrolysis of Beech Wood and Miscanthus: Shear Rate and Temperature Dependence. <i>Energy & Fuels</i> , 2016 , 30, 4999-5004	4.1	16
24	Theoretical Analysis of Double Logistic Distributed Activation Energy Model for Thermal Decomposition Kinetics of Solid Fuels. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 7817-7825	3.9	15
23	Influence of Moisture Contents on the Fast Pyrolysis of Trommel Fines in a Bubbling Fluidized Bed Reactor. <i>Waste and Biomass Valorization</i> , 2020 , 11, 3711-3722	3.2	13

22	European biorefineries: Implications for land, trade and employment. <i>Environmental Science and Policy</i> , 2014 , 37, 255-265	6.2	12
21	THE PRODUCTION OF BIOFUELS BY THE THERMOCHEMICAL PROCESSING OF BIOMASS. <i>Series on Photoconversion of Solar Energy</i> , 2004 , 521-611		11
20	Economics of liquid fuels production by coal gasification. <i>Fuel</i> , 1991 , 70, 1193-1207	7.1	11
19	In-situ hydrogen generation from 1,2,3,4-tetrahydronaphthalene for catalytic conversion of oleic acid to diesel fuel hydrocarbons: Parametric studies using Response Surface Methodology approach. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 20678-20689	6.7	11
18	Drying Kinetic Analysis of Municipal Solid Waste Using Modified Page Model and Pattern Search Method. <i>Waste and Biomass Valorization</i> , 2017 , 8, 301-312	3.2	10
17	Comparative Study on Catalytic and Non-Catalytic Pyrolysis of Olive Mill Solid Wastes. <i>Waste and Biomass Valorization</i> , 2018 , 9, 301-313	3.2	10
16	Physical pretreatment of biogenic-rich trommel fines for fast pyrolysis. <i>Waste Management</i> , 2017 , 70, 81-90	8.6	9
15	The role of catalyst acidity and shape selectivity on products from the catalytic fast pyrolysis of beech wood. <i>Journal of Analytical and Applied Pyrolysis</i> , 2019 , 162, 104710	6	8
14	Reaction chemistry and kinetics of corn stalk pyrolysis without and with Ga/HZSM-5. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019 , 137, 491-500	4.1	8
13	Poplar wood torrefaction: Kinetics, thermochemistry and implications. <i>Renewable and Sustainable Energy Reviews</i> , 2021 , 143, 110962	16.2	5
12	Slice-Selective NMR: A Noninvasive Method for the Analysis of Separated Pyrolysis Fuel Samples. <i>Energy & Fuels</i> , 2017 , 31, 4135-4142	4.1	4
11	Energy recovery by fast pyrolysis of pre-treated trommel fines derived from a UK-based MSW material recycling facility. <i>Journal of the Energy Institute</i> , 2020 , 93, 2006-2016	5.7	4
10	A comparative techno-economic assessment of three bio-oil upgrading routes for aviation biofuel production. <i>International Journal of Energy Research</i> , 2019 , 43, 7206	4.5	4
9	Kinetic modelling of hydrogen transfer deoxygenation of a prototypical fatty acid over a bimetallic Pd60Cu40 catalyst: an investigation of the surface reaction mechanism and rate limiting step. <i>Reaction Chemistry and Engineering</i> , 2020 , 5, 1682-1693	4.9	4
8	Mini-Review on Hot Gas Filtration in Biomass Gasification: Focusing on Ceramic Filter Candles. <i>Energy & Fuels</i> , 2021 , 35, 11800-11819	4.1	4
7	Local Sensitivity Analysis of Kinetic Models for Cellulose Pyrolysis. <i>Waste and Biomass Valorization</i> , 2019 , 10, 975-984	3.2	4
6	Hydrogen donation of bio-acids over transition metal facets: A density functional theory study. <i>Applied Catalysis A: General</i> , 2019 , 586, 117218	5.1	3
5	Fast Pyrolysis of Hemicelluloses into Short-Chain Acids: An Investigation on Concerted Mechanisms. <i>Energy & Fuels</i> , 2020 , 34, 14232-14248	4.1	2

4	Pyrolysis of Solid Biomass: Basics, Processes and Products 2019 , 1221-1250		1
3	A predictive PBM-DEAM model for lignocellulosic biomass pyrolysis. <i>Journal of Analytical and Applied Pyrolysis</i> , 2021 , 157, 105231	6	1
2	CO ₂ adsorption on Miscanthus giganteus (MG) chars prepared in different atmospheres. <i>Journal of CO₂ Utilization</i> , 2021 , 52, 101670	7.6	1
1	The mechanism of hydrogen donation by bio-acids over metal supported on nitrogen-doped carbon nanotubes. <i>Molecular Catalysis</i> , 2021 , 499, 111289	3.3	