Anthony V Bridgwater

List of Publications by Year
in descending order

110 papers	21,561 citations	22132 59 h-index	24961 109 g-index
112 all docs	112 docs citations	112 times ranked	12669 citing authors

#	Article	IF	Citations
1	Review of fast pyrolysis of biomass and product upgrading. Biomass and Bioenergy, 2012, 38, 68-94.	2.9	3,536
2	Overview of Applications of Biomass Fast Pyrolysis Oil. Energy & Fuels, 2004, 18, 590-598.	2.5	2,477
3	Fast pyrolysis processes for biomass. Renewable and Sustainable Energy Reviews, 2000, 4, 1-73.	8.2	1,452
4	An overview of fast pyrolysis of biomass. Organic Geochemistry, 1999, 30, 1479-1493.	0.9	1,434
5	The technical and economic feasibility of biomass gasification for power generation. Fuel, 1995, 74, 631-653.	3.4	851
6	Principles and practice of biomass fast pyrolysis processes for liquids. Journal of Analytical and Applied Pyrolysis, 1999, 51, 3-22.	2.6	644
7	A techno-economic comparison of power production by biomass fast pyrolysis with gasification and combustion. Renewable and Sustainable Energy Reviews, 2002, 6, 181-246.	8.2	482
8	The effect of lignin and inorganic species in biomass on pyrolysis oil yields, quality and stability. Fuel, 2008, 87, 1230-1240.	3.4	477
9	Production of renewable phenolic resins by thermochemical conversion of biomass: A review. Renewable and Sustainable Energy Reviews, 2008, 12, 2092-2116.	8.2	450
10	Review of physicochemical properties and analytical characterization of lignocellulosic biomass. Renewable and Sustainable Energy Reviews, 2017, 76, 309-322.	8.2	448
11	Study on the pyrolytic behaviour of xylan-based hemicellulose using TGâ€“FTIR and Pyâ€“GCâ€“FTIR. Journal of Analytical and Applied Pyrolysis, 2010, 87, 199-206.	2.6	445
12	Catalysis in thermal biomass conversion. Applied Catalysis A: General, 1994, 116, 5-47.	2.2	404
13	Lignin fast pyrolysis: Results from an international collaboration. Journal of Analytical and Applied Pyrolysis, 2010, 88, 53-72.	2.6	343
14	The effect of alkali metals on combustion and pyrolysis of Lolium and Festuca grasses, switchgrass and willow. Fuel, 2007, 86, 1560-1569.	3.4	337
15	Production of high grade fuels and chemicals from catalytic pyrolysis of biomass. Catalysis Today, 1996, 29, 285-295.	2.2	326
16	A systematic study of the kinetics of lignin pyrolysis. Thermochimica Acta, 2010, 498, 61-66.	1.2	290
17	Developments in direct thermochemical liquefaction of biomass: 1983-1990. Energy & Fuels, 1991, 5, 399-410.	2.5	286
18	Fast pyrolysis of cassava rhizome in the presence of catalysts. Journal of Analytical and Applied Pyrolysis, 2008, 81, 72-79.	2.6	277

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19	Effect of the Temperature on the Composition of Lignin Pyrolysis Products. Energy & Fuels, 2010, 24, 4470-4475.	2.5	274
20	State-of-the-art of fast pyrolysis in IEA bioenergy member countries. Renewable and Sustainable Energy Reviews, 2013, 20, 619-641.	8.2	257
21	Biomass for energy. Journal of the Science of Food and Agriculture, 2006, 86, 1755-1768.	1.7	254
22	Processing thermogravimetric analysis data for isoconversional kinetic analysis of lignocellulosic biomass pyrolysis: Case study of corn stalk. Renewable and Sustainable Energy Reviews, 2018, 82, 2705-2715.	8.2	254
23	The thermal performance of the polysaccharides extracted from hardwood: Cellulose and hemicellulose. Carbohydrate Polymers, 2010, 82, 39-45.	5.1	253
24	Kinetic study on thermal decomposition of woods in oxidative environment. Fuel, 2009, 88, 1024-1030.	3.4	248
25	Development of emulsions from biomass pyrolysis liquid and diesel and their use in enginesâ€"Part 1 : emulsion production. Biomass and Bioenergy, 2003, 25, 85-99.	2.9	239
26	Influence of particle size on the analytical and chemical properties of two energy crops. Fuel, 2007, 86, 60-72.	3.4	192
27	Development of emulsions from biomass pyrolysis liquid and diesel and their use in enginesâ€"Part 2: tests in diesel engines. Biomass and Bioenergy, 2003, 25, 101-111.	2.9	186
28	A comparative study of straw, perennial grasses and hardwoods in terms of fast pyrolysis products. Fuel, 2013, 108, 216-230.	3.4	182
29	Opportunities for biomass pyrolysis liquids production and upgrading. Energy & Fuels, 1992, 6, 113-120.	2.5	144
30	CFD modelling of the fast pyrolysis of biomass in fluidised bed reactors. Part B. Chemical Engineering Science, 2009, 64, 1036-1045.	1.9	134
31	Techno-economic and uncertainty analysis of Biomass to Liquid (BTL) systems for transport fuel production. Renewable and Sustainable Energy Reviews, 2018, 88, 160-175.	8.2	130
32	Fast pyrolysis of sweet sorghum and sweet sorghum bagasse. Journal of Analytical and Applied Pyrolysis, 1998, 46, 15-29.	2.6	125
33	Application of CFD to model fast pyrolysis of biomass. Fuel Processing Technology, 2009, 90, 504-512.	3.7	122
34	Upgrading biomass fast pyrolysis liquids. Environmental Progress and Sustainable Energy, 2012, 31, 261-268.	1.3	121
35	Evaluation of catalytic pyrolysis of cassava rhizome by principal component analysis. Fuel, 2010, 89, 244-253.	3.4	115
36	CFD modelling of the fast pyrolysis of biomass in fluidised bed reactors, Part A: Eulerian computation of momentum transport in bubbling fluidised beds. Chemical Engineering Science, 2008, 63, 4218-4227.	1.9	103

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37	Genotypic and environmentally derived variation in the cell wall composition of Miscanthus in relation to its use as a biomass feedstock. Biomass and Bioenergy, 2010, 34, 652-660.	2.9	103
38	The production of biofuels and renewable chemicals by fast pyrolysis of biomass. International Journal of Global Energy Issues, 2007, 27, 160.	0.2	92
39	Prediction of Klason lignin and lignin thermal degradation products by Pyâ€“GC/MS in a collection of Lolium and Festuca grasses. Journal of Analytical and Applied Pyrolysis, 2007, 80, 16-23.	2.6	92
40	A kinetic reaction model for biomass pyrolysis processes in Aspen Plus. Applied Energy, 2017, 188, 595-603.	5.1	87
41	Drying technologies for an integrated gasification bio-energy plant. Renewable and Sustainable Energy Reviews, 1999, 3, 243-289.	8.2	86
42	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. Energy Conversion and Management, 2018, 174, 406-416.	4.4	84
43	The influence of feedstock drying on the performance and economics of a biomass gasifierâ€“engine CHP system. Biomass and Bioenergy, 2002, 22, 271-281.	2.9	81
44	Opportunities for biomass-derived â€œbio-oilâ€• in European heat and power markets. Energy Policy, 2006, 34, 2871-2880.	4.2	81
45	Thermochemical characterisation of straws and high yielding perennial grasses. Industrial Crops and Products, 2012, 36, 449-459.	2.5	81
46	Kinetic study of the pyrolysis of miscanthus and its acid hydrolysis residue by thermogravimetric analysis. Fuel Processing Technology, 2015, 138, 184-193.	3.7	81
47	Technoeconomic assessment of biomass to energy. Biomass and Bioenergy, 1995, 9, 205-226.	2.9	80
48	Ablative plate pyrolysis of biomass for liquids. Biomass and Bioenergy, 1994, 7, 147-154.	2.9	79
49	Computational modelling of the impact of particle size to the heat transfer coefficient between biomass particles and a fluidised bed. Fuel Processing Technology, 2010, 91, 68-79.	3.7	73
50	Using Apparent Activation Energy as a Reactivity Criterion for Biomass Pyrolysis. Energy & Fuels, 2016, 30, 7834-7841.	2.5	73
51	Slow pyrolysis of organic fraction of municipal solid waste (OFMSW): Characterisation of products and screening of the aqueous liquid product for anaerobic digestion. Applied Energy, 2018, 213, 158-168.	5.1	72
52	Combined heat and power from the intermediate pyrolysis of biomass materials: performance, economics and environmental impact. Applied Energy, 2017, 191, 639-652.	5.1	71
53	Quantitative Insights into the Fast Pyrolysis of Extracted Cellulose, Hemicelluloses, and Lignin. ChemSusChem, 2017, 10, 3212-3224.	3.6	69
54	Effect of temperature on product performance of a high ash biomass during fast pyrolysis and its bio-oil storage evaluation. Fuel Processing Technology, 2018, 172, 97-105.	3.7	69

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55	Impact of Potassium and Phosphorus in Biomass on the Properties of Fast Pyrolysis Bio-oil. Energy & Fuels, 2016, 30, 8009-8018.	2.5	67
56	Challenges and Opportunities in Fast Pyrolysis of Biomass: Part I. Johnson Matthey Technology Review, 2018, 62, 118-130.	0.5	67
57	Biodegradability of biomass pyrolysis oils: Comparison to conventional petroleum fuels and alternatives fuels in current use. Fuel, 2007, 86, 2679-2686.	3.4	65
58	Results of the IEA Round Robin on Viscosity and Stability of Fast Pyrolysis Bio-oils. Energy & Fuels, 2012, 26, 3769-3776.	2.5	65
59	Intermediate pyrolysis of organic fraction of municipal solid waste and rheological study of the pyrolysis oil for potential use as bio-bitumen. Journal of Cleaner Production, 2018, 187, 390-399.	4.6	64
60	Pyrolysis of Rice Husk and Corn Stalk in Auger Reactor. 1. Characterization of Char and Gas at Various Temperatures. Energy & Fuels, 2016, 30, 10568-10574.	2.5	62
61	Fast pyrolysis of date palm (Phoenix dactylifera) waste in a bubbling fluidized bed reactor. Renewable Energy, 2019, 143, 719-730.	4.3	61
62	The catalytic cracking of sterically challenging plastic feedstocks over high acid density Al-SBA-15 catalysts. Applied Catalysis A: General, 2019, 570, 218-227.	2.2	59
63	Techno-economic modelling of biomass flash pyrolysis and upgrading systems. Biomass and Bioenergy, 1994, 7, 267-273.	2.9	57
64	Measurement of key compositional parameters in two species of energy grass by Fourier transform infrared spectroscopy. Bioresource Technology, 2009, 100, 6428-6433.	4.8	55
65	Results of the IEA Round Robin on Viscosity and Aging of Fast Pyrolysis Bio-oils: Long-Term Tests and Repeatability. Energy & Fuels, 2012, 26, 7362-7366.	2.5	55
66	Co-pyrolysis of Miscanthus Sacchariflorus and coals: A systematic study on the synergies in thermal decomposition, kinetics and vapour phase products. Fuel, 2020, 262, 116603.	3.4	55
67	A comparison of fast and slow pyrolysis liquids from mallee. International Journal of Global Energy Issues, 2007, 27, 204.	0.2	53
68	Quantification of hydroxycinnamic acids and lignin in perennial forage and energy grasses by Fourier-transform infrared spectroscopy and partial least squares regression. Bioresource Technology, 2009, 100, 1252-1261.	4.8	53
69	Upgrading fast pyrolysis liquids: Blends of biodiesel and pyrolysis oil. Fuel, 2013, 109, 417-426.	3.4	49
70	Encapsulation of phase change materials using rice-husk-char. Applied Energy, 2016, 182, 274-281.	5.1	49
71	Physical properties of flash pyrolysis liquids. Biomass and Bioenergy, 1994, 7, 169-177.	2.9	48
72	Results of the International Energy Agency Round Robin on Fast Pyrolysis Bio-oil Production. Energy & Fuels, 2017, 31, 5111-5119.	2.5	47

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73	Assessment of liquefaction and pyrolysis systems. Biomass and Bioenergy, 1992, 2, 279-297.	2.9	43
74	Pillared clays as catalysts for hydrocracking of heavy liquid fuels. Applied Catalysis A: General, 2005, 282, 205-214.	2.2	42
75	Steam gasification of Miscanthus derived char: the reaction kinetics and reactivity with correlation to the material composition and microstructure. Energy Conversion and Management, 2020, 219, 113026.	4.4	41
76	Fast pyrolysis processing of surfactant washed Miscanthus. Fuel Processing Technology, 2014, 128, 94-103.	3.7	38
77	CFB air-blown flash pyrolysis. Part I: Engineering design and cold model performance. Fuel, 2007, 86, 1372-1386.	3.4	37
78	Challenges and Opportunities in Fast Pyrolysis of Biomass: Part II. Johnson Matthey Technology Review, 2018, 62, 150-160.	0.5	35
79	Monometallic and bimetallic catalysts based on Pd, Cu and Ni for hydrogen transfer deoxygenation of a prototypical fatty acid to diesel range hydrocarbons. Catalysis Today, 2020, 355, 882-892.	2.2	35
80	Influence of Moisture Contents on the Fast Pyrolysis of Trommel Fines in a Bubbling Fluidized Bed Reactor. Waste and Biomass Valorization, 2020, 11, 3711-3722.	1.8	35
81	Effect of reactor configuration on the yields and structures of pine-wood derived pyrolysis liquids: A comparison between ablative and wire-mesh pyrolysis. Biomass and Bioenergy, 1994, 7, 155-167.	2.9	33
82	Sequential pyrolysis of willow SRC at low and high heating rates â€“ Implications for selective pyrolysis. Fuel, 2012, 93, 692-702.	3.4	33
83	Production costs of liquid fuels from biomass. Fuel, 1991, 70, 1209-1224.	3.4	30
84	Pilotâ€scale combustion of fastâ€pyrolysis bioâ€oil: Ash deposition and gaseous emissions. Environmental Progress and Sustainable Energy, 2009, 28, 397-403.	1.3	30
85	CFD and experimental studies on a circulating fluidised bed reactor for biomass gasification. Chemical Engineering and Processing: Process Intensification, 2018, 130, 284-295.	1.8	28
86	Poplar wood torrefaction: Kinetics, thermochemistry and implications. Renewable and Sustainable Energy Reviews, 2021, 143, 110962.	8.2	24
87	Biomass fast pyrolysis energy balance of a 1kg/h test rig. International Journal of Thermodynamics, 2015, 18, 267.	0.4	24
88	Theoretical Analysis of Double Logistic Distributed Activation Energy Model for Thermal Decomposition Kinetics of Solid Fuels. Industrial & Engineering Chemistry Research, 2018, 57, 7817-7825.	1.8	22
89	Comparative Study on Catalytic and Non-Catalytic Pyrolysis of Olive Mill Solid Wastes. Waste and Biomass Valorization, 2018, 9, 301-313.	1.8	21
90	THE PRODUCTION OF BIOFUELS BY THE THERMOCHEMICAL PROCESSING OF BIOMASS. Series on Photoconversion of Solar Energy, 2004, , 521-611.	0.2	18

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91	Viscosity of Aged Bio-oils from Fast Pyrolysis of Beech Wood and <i>Miscanthus</i>: Shear Rate and Temperature Dependence. Energy & Fuels, 2016, 30, 4999-5004.	2.5	17
92	The role of catalyst acidity and shape selectivity on products from the catalytic fast pyrolysis of beech wood. Journal of Analytical and Applied Pyrolysis, 2022, 162, 104710.	2.6	16
93	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. International Journal of Hydrogen Energy, 2019, 44, 20678-20689.	3.8	16
94	European biorefineries: Implications for land, trade and employment. Environmental Science and Policy, 2014, 37, 255-265.	2.4	15
95	Mini-Review on Hot Gas Filtration in Biomass Gasification: Focusing on Ceramic Filter Candles. Energy & Fuels, 2021, 35, 11800-11819.	2.5	14
96	Economics of liquid fuels production by coal gasification. Fuel, 1991, 70, 1193-1207.	3.4	13
97	Drying Kinetic Analysis of Municipal Solid Waste Using Modified Page Model and Pattern Search Method. Waste and Biomass Valorization, 2017, 8, 301-312.	1.8	12
98	Reaction chemistry and kinetics of corn stalk pyrolysis without and with Ga/HZSM-5. Journal of Thermal Analysis and Calorimetry, 2019, 137, 491-500.	2.0	10
99	Physical pretreatment of biogenic-rich trommel fines for fast pyrolysis. Waste Management, 2017, 70, 81-90.	3.7	9
100	A comparative technoâ€economic assessment of three bioâ€oil upgrading routes for aviation biofuel production. International Journal of Energy Research, 2019, 43, 7206.	2.2	7
101	Fast Pyrolysis of Hemicelluloses into Short-Chain Acids: An Investigation on Concerted Mechanisms. Energy & Fuels, 2020, 34, 14232-14248.	2.5	7
102	Kinetic modelling of hydrogen transfer deoxygenation of a prototypical fatty acid over a bimetallic Pd₆₀Cu₄₀catalyst: an investigation of the surface reaction mechanism and rate limiting step. Reaction Chemistry and Engineering, 2020, 5, 1682-1693.	1.9	7
103	Energy recovery by fast pyrolysis of pre-treated trommel fines derived from a UK-based MSW material recycling facility. Journal of the Energy Institute, 2020, 93, 2006-2016.	2.7	6
104	A predictive PBM-DEAM model for lignocellulosic biomass pyrolysis. Journal of Analytical and Applied Pyrolysis, 2021, 157, 105231.	2.6	6
105	CO2 adsorption on Miscanthus Ã— giganteus (MG) chars prepared in different atmospheres. Journal of CO2 Utilization, 2021, 52, 101670.	3.3	6
106	Slice-Selective NMR: A Noninvasive Method for the Analysis of Separated Pyrolysis Fuel Samples. Energy & Fuels, 2017, 31, 4135-4142.	2.5	5
107	Hydrogen donation of bio-acids over transition metal facets: A density functional theory study. Applied Catalysis A: General, 2019, 586, 117218.	2.2	5
108	Local Sensitivity Analysis of Kinetic Models for Cellulose Pyrolysis. Waste and Biomass Valorization, 2019, 10, 975-984.	1.8	5

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109	Pyrolysis of Solid Biomass: Basics, Processes and Products. , 2019, , 1221-1250.		2
110	The mechanism of hydrogen donation by bio-acids over metal supported on nitrogen-doped carbon nanotubes. Molecular Catalysis, 2021, 499, 111289.	1.0	0