

# Panagiotis Grammelis

## List of Publications by Year in descending order

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117  
papers

3,962  
citations

109137

35  
h-index

138251

58  
g-index

120  
all docs

120  
docs citations

120  
times ranked

3697  
citing authors

#	ARTICLE	IF	CITATIONS
1	Pyrolysis characteristics and kinetics of biomass residuals mixtures with lignite. Fuel, 2003, 82, 1949-1960.	3.4	426
2	Pyrolysis kinetics and combustion characteristics of waste recovered fuels. Fuel, 2009, 88, 195-205.	3.4	204
3	Numerical investigation of the oxy-fuel combustion in large scale boilers adopting the ECO-Scrub technology. Fuel, 2011, 90, 198-214.	3.4	106
4	High-resolution 3-D full-loop simulation of a CFB carbonator cold model. Chemical Engineering Science, 2013, 90, 137-150.	1.9	104
5	Smart energy management algorithm for load smoothing and peak shaving based on load forecasting of an island's power system. Applied Energy, 2019, 238, 627-642.	5.1	104
6	Report on comparison among current industrial scale lignite drying technologies (A critical review) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50	3.4	100
7	Cultivation and Characterization of Cynara Cardunculus for Solid Biofuels Production in the Mediterranean Region. International Journal of Molecular Sciences, 2008, 9, 1241-1258.	1.8	92
8	Numerical investigation Greek lignite/cardoon co-firing in a tangentially fired furnace. Applied Energy, 2012, 97, 514-524.	5.1	91
9	An advanced EMMS scheme for the prediction of drag coefficient under a 1.2MWth CFBC isothermal flow—Part I: Numerical formulation. Chemical Engineering Science, 2010, 65, 4080-4088.	1.9	90
10	Pyrolysis and Combustion Characteristics of Biomass and Waste-Derived Feedstock. Industrial & Engineering Chemistry Research, 2006, 45, 3791-3799.	1.8	86
11	Integration of calcium looping technology in existing cement plant for CO <sub>2</sub> capture: Process modeling and technical considerations. Fuel, 2015, 153, 210-223.	3.4	83
12	Particulate removal via electrostatic precipitators—CFD simulation. Fuel Processing Technology, 2006, 87, 623-631.	3.7	81
13	Calcium looping for CO <sub>2</sub> capture from a lignite fired power plant. Fuel, 2013, 113, 826-836.	3.4	77
14	Kinetic Modeling of Coal/Agricultural By-Product Blends. Energy & Fuels, 2003, 17, 549-558.	2.5	71
15	A review of key environmental and energy performance indicators for the case of renewable energy systems when integrated with storage solutions. Applied Energy, 2018, 231, 380-398.	5.1	70
16	An advanced EMMS scheme for the prediction of drag coefficient under a 1.2MWth CFBC isothermal flow—Part II: Numerical implementation. Chemical Engineering Science, 2010, 65, 4089-4099.	1.9	69
17	Implementation of the Power to Methanol concept by using CO <sub>2</sub> from lignite power plants: Techno-economic investigation. International Journal of Hydrogen Energy, 2016, 41, 16674-16687.	3.8	65
18	Effects of biomass co-firing with coal on ash properties. Part I: Characterisation and PSD. Fuel, 2006, 85, 2310-2315.	3.4	61

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19	Experimental and economic study of a gasification plant fuelled with olive industry wastes. Energy for Sustainable Development, 2014, 23, 247-257.	2.0	61
20	Numerical investigation and comparison of coarse grain CFD “DEM and TFM in the case of a 1 MW th fluidized bed carbonator simulation. Chemical Engineering Science, 2017, 163, 189-205.	1.9	61
21	Comparative Study of Combustion Properties of Five Energy Crops and Greek Lignite. Energy & Fuels, 2012, 26, 869-878.	2.5	53
22	Numerical investigation of Solid Recovered Fuels™ co-firing with brown coal in large scale boilers “ Evaluation of different co-combustion modes. Fuel, 2010, 89, 3693-3709.	3.4	52
23	Application of an advanced coupled EMMS-TFM model to a pilot scale CFB carbonator. Chemical Engineering Science, 2015, 138, 482-498.	1.9	51
24	A Review on Management of End of Life Tires (ELTs) and Alternative Uses of Textile Fibers. Energies, 2021, 14, 571.	1.6	50
25	Modelling of biomass gasifier and microturbine for the olive oil industry. International Journal of Energy Research, 2012, 36, 355-367.	2.2	49
26	Advantages and Possibilities of Solid Recovered Fuel Cocombustion in the European Energy Sector. Journal of the Air and Waste Management Association, 2007, 57, 1178-1189.	0.9	48
27	Emissions monitoring during coal waste wood co-combustion in an industrial steam boiler. Fuel, 2002, 81, 547-554.	3.4	47
28	A Methodology for Determination and Definition of Key Performance Indicators for Smart Grids Development in Island Energy Systems. Energies, 2019, 12, 242.	1.6	45
29	Thermodynamic analysis and comparison of retrofitting pre-drying concepts at existing lignite power plants. Applied Thermal Engineering, 2015, 74, 165-173.	3.0	43
30	Biomass Availability in Europe as an Alternative Fuel for Full Conversion of Lignite Power Plants: A Critical Review. Energies, 2020, 13, 3390.	1.6	41
31	Numerical simulation of a silicon-based latent heat thermal energy storage system operating at ultra-high temperatures. Applied Energy, 2019, 242, 837-853.	5.1	40
32	Partial O <sub>2</sub> -fired coal power plant with post-combustion CO <sub>2</sub> capture: A retrofitting option for CO <sub>2</sub> capture ready plants. Fuel, 2009, 88, 2428-2436.	3.4	39
33	A comparative characterization study of Ca-looping natural sorbents. Applied Energy, 2013, 108, 373-382.	5.1	38
34	Review on dynamic process modeling of gasification based biorefineries and bio-based heat & power plants. Fuel Processing Technology, 2020, 197, 106188.	3.7	38
35	CFB air-blown flash pyrolysis. Part I: Engineering design and cold model performance. Fuel, 2007, 86, 1372-1386.	3.4	37
36	Comparison of Waste-to-Energy Processes by Means of Life Cycle Analysis Principles regarding the Global Warming Potential Impact: Applied Case Studies in Greece, France and Germany. Waste and Biomass Valorization, 2015, 6, 605-621.	1.8	37

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37	Fly Ash Formation and Characteristics from (co-)Combustion of an Herbaceous Biomass and a Greek Lignite (Low-Rank Coal) in a Pulverized Fuel Pilot-Scale Test Facility. <i>Energies</i> , 2018, 11, 1581.	1.6	35
38	Co-firing of biomass with coal in thermal power plants: technology schemes, impacts, and future perspectives. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2014, 3, 384-399.	1.9	34
39	Experimental investigation on the combustion behaviour of pre-dried Greek lignite. <i>Fuel Processing Technology</i> , 2009, 90, 1071-1079.	3.7	33
40	A decoupled approach for NO <sub>x</sub> -N <sub>2</sub> O 3-D CFD modeling in CFB plants. <i>Fuel</i> , 2014, 115, 401-415.	3.4	33
41	Quality characteristics of Greek fly ashes and potential uses. <i>Fuel Processing Technology</i> , 2007, 88, 77-85.	3.7	32
42	Chemical, leaching and toxicity characteristics of CFB combustion residues. <i>Fuel</i> , 2009, 88, 1201-1209.	3.4	32
43	Investigation of proper modeling of very dense granular flows in the recirculation system of CFBs. <i>Particuology</i> , 2012, 10, 699-709.	2.0	32
44	Performance of Natural Sorbents during Calcium Looping Cycles: A Comparison between Fluidized Bed and Thermo-Gravimetric Tests. <i>Energy &amp; Fuels</i> , 2013, 27, 6048-6054.	2.5	31
45	Effects of biomass co-firing with coal on ash properties. Part II: Leaching, toxicity and radiological behaviour. <i>Fuel</i> , 2006, 85, 2316-2322.	3.4	30
46	A global optimization study on the devolatilisation kinetics of coal, biomass and waste fuels. <i>Fuel Processing Technology</i> , 2009, 90, 762-769.	3.7	30
47	Parametric investigation of a renewable alternative for utilities adopting the co-firing lignite/biomass concept. <i>Fuel</i> , 2013, 113, 873-897.	3.4	30
48	Numerical investigation of the grid spatial resolution and the anisotropic character of EMMS in CFB multiphase flow. <i>Chemical Engineering Science</i> , 2011, 66, 3979-3990.	1.9	29
49	Exergetic comparison of CO <sub>2</sub> capture techniques from solid fossil fuel power plants. <i>International Journal of Greenhouse Gas Control</i> , 2016, 45, 106-117.	2.3	27
50	Simulation of the reacting flow within a pilot scale calciner by means of a three phase TFM model. <i>Fuel Processing Technology</i> , 2017, 162, 105-125.	3.7	27
51	Torrefaction and combustion of pellets made of a mixture of coal sludge and straw. <i>Fuel</i> , 2017, 210, 859-865.	3.4	25
52	Calcium looping process simulation based on an advanced thermodynamic model combined with CFD analysis. <i>Fuel</i> , 2015, 153, 370-381.	3.4	24
53	Classification of Refuse Derived Fuel (RDF) and Model Development of a Novel Thermal Utilization Concept Through Air-Gasification. <i>Waste and Biomass Valorization</i> , 2016, 7, 1297-1308.	1.8	24
54	Evaluation of the environmental impact of waste wood co-utilisation for energy production. <i>Energy</i> , 2004, 29, 2181-2193.	4.5	23

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55	Biomass Combustion Modeling in Fluidized Beds. Energy & Fuels, 2005, 19, 292-297.	2.5	23
56	Numerical investigation on the combustion behaviour of pre-dried Greek lignite. Fuel, 2009, 88, 2385-2391.	3.4	23
57	Solid fuel types for energy generation. , 2016, , 29-58.		23
58	Numerical examination of an operationally flexible lignite-fired boiler including its convective section using as supporting fuel pre-dried lignite. Fuel Processing Technology, 2017, 166, 237-257.	3.7	23
59	Introducing an artificial neural network energy minimization multi-scale drag scheme for fluidized particles. Chemical Engineering Science, 2021, 229, 116013.	1.9	23
60	A kinetic study on the devolatilisation of animal derived byproducts. Fuel Processing Technology, 2007, 88, 787-794.	3.7	22
61	Technical assessment of LNG based polygeneration systems for non-interconnected island cases using SOFC. International Journal of Hydrogen Energy, 2021, 46, 4827-4843.	3.8	21
62	Pre-dried lignite technology implementation in partial load/low demand cases for flexibility enhancement. Energy, 2016, 96, 427-436.	4.5	20
63	Decoupled CFD simulation of furnace and heat exchangers in a lignite utility boiler. Fuel, 2014, 117, 633-648.	3.4	19
64	Process Integration of a Polygeneration Plant with Biomass/Coal Co-pyrolysis. Energy & Fuels, 2017, 31, 14408-14422.	2.5	19
65	Energy management and techno-economic assessment of a predictive battery storage system applying a load levelling operational strategy in island systems. International Journal of Energy Research, 2021, 45, 2709-2727.	2.2	19
66	Effect of pressure and gas concentration on CO <sub>2</sub> and SO <sub>2</sub> capture performance of limestones. Fuel, 2014, 122, 236-246.	3.4	18
67	Comparative investigation of a co-firing scheme in a lignite-fired boiler at very low thermal-load operation using either pre-dried lignite or biomass as supporting fuel. Fuel Processing Technology, 2018, 180, 140-154.	3.7	18
68	Microgrid energy management strategies assessment through coupled thermal-electric considerations. Energy Conversion and Management, 2021, 228, 113711.	4.4	18
69	Combustion of olive tree pruning pellets versus sunflower husk pellets at industrial boiler. Monitoring of emissions and combustion efficiency. Renewable Energy, 2021, 171, 516-525.	4.3	17
70	CFB air-blown flash pyrolysis. Part II: Operation and experimental results. Fuel, 2007, 86, 1387-1395.	3.4	16
71	Investigation of pre-drying lignite in an existing Greek power plant. Thermal Science, 2012, 16, 283-296.	0.5	16
72	Numerical comparative investigation of a flexible lignite-fired boiler using pre-dried lignite or biomass as supporting fuel. Renewable Energy, 2020, 145, 1831-1848.	4.3	16

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73	Machine Performance and Hog Fuel Quality Evaluation in Olive Tree Pruning Harvesting Conducted Using a Towed Shredder on Flat and Hilly Fields. <i>Energies</i> , 2020, 13, 1713.	1.6	16
74	Modeling of Wheat Straw Torrefaction as a Preliminary Tool for Process Design. <i>Waste and Biomass Valorization</i> , 2013, 4, 409-420.	1.8	14
75	Predictive method for low load off-design operation of a lignite fired power plant. <i>Fuel</i> , 2017, 209, 685-693.	3.4	14
76	Refurbishment priorities at the Russian coal-fired power sector for cleaner energy production—Case studies. <i>Energy Policy</i> , 2006, 34, 3124-3136.	4.2	12
77	Refuse-derived fuel classification in a mechanical—biological treatment plant and its valorization with techno-economic criteria. <i>International Journal of Environmental Science and Technology</i> , 2015, 12, 1137-1146.	1.8	12
78	Thermal Simulation and Economic Study of Predried Lignite Production Retrofit of a Greek Power Plant for Enhanced Flexibility. <i>Journal of Energy Engineering - ASCE</i> , 2019, 145, 04019001.	1.0	12
79	The perspectives of energy production from coal-fired power plants in an enlarged EU. <i>International Journal of Energy Research</i> , 2004, 28, 799-815.	2.2	11
80	Dry Lignite Cofiring in a Greek Utility Boiler: Experimental Activities and Numerical Simulations. <i>Energy &amp; Fuels</i> , 2010, 24, 5464-5473.	2.5	11
81	Thermal Exploitation of Wastes with Lignite for Energy Production. <i>Journal of the Air and Waste Management Association</i> , 2003, 53, 1301-1311.	0.9	9
82	Combustion and environmental performance of clean coal end products. <i>International Journal of Energy Research</i> , 2007, 31, 1237-1250.	2.2	9
83	The lignite electricity-generating sector in Greece: Current status and future prospects. <i>International Journal of Energy Research</i> , 2004, 28, 785-798.	2.2	8
84	An economic and environmental assessment of biomass utilization in lignite-fired power plants of Greece. <i>International Journal of Energy Research</i> , 2006, 30, 763-775.	2.2	8
85	APPLICATION OF POLYMER MEMBRANE TECHNOLOGY IN COAL COMBUSTION PROCESSES. <i>Chemical Engineering Communications</i> , 2007, 194, 322-333.	1.5	8
86	Dynamic Modeling of a Utility Once-Through Pulverized-Fuel Steam Generator. <i>Journal of Energy Engineering - ASCE</i> , 2017, 143, 04016070.	1.0	8
87	Dynamic Modeling and Simulation of Non-Interconnected Systems under High-RES Penetration: The Madeira Island Case. <i>Energies</i> , 2020, 13, 5786.	1.6	8
88	Impact of Torrefaction on Vine Pruning—Fuel Characteristics. <i>Journal of Energy Engineering - ASCE</i> , 2020, 146, .	1.0	8
89	Applicability of Torrefied Sunflower Husk Pellets in Small and Medium Scale Furnaces. <i>Waste and Biomass Valorization</i> , 2021, 12, 2579-2596.	1.8	8
90	Efficient CHP-Plant Configuration for District Heating Systems Utilizing Low-Rank Coals. <i>Journal of Energy Engineering - ASCE</i> , 2017, 143, .	1.0	7

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91	4.27 Pyrolysis Energy Conversion Systems. , 2018, , 1065-1106.		7
92	New power production options for biomass and cogeneration. Wiley Interdisciplinary Reviews: Energy and Environment, 2015, 4, 471-485.	1.9	6
93	Drying of Lignite of Various Origins in a Pilot Scale Toroidal Fluidized Bed Dryer using Low Quality Heat. Energies, 2019, 12, 1191.	1.6	6
94	Acid-Catalyzed Wet Torrefaction for Enhancing the Heating Value of Barley Straw. Energies, 2020, 13, 1693.	1.6	6
95	Fluidized bed combustion with the use of Greek solid fuels. Thermal Science, 2003, 7, 33-42.	0.5	5
96	Characterization of Solid Residues from High Temperature Gasification of Olive Kernel. Waste and Biomass Valorization, 2014, 5, 893-901.	1.8	4
97	CFD Simulation of Domestic Gasification Boiler. Journal of Energy Engineering - ASCE, 2017, 143, 04016052.	1.0	4
98	Advanced energy management system based on PV and load forecasting for load smoothing and optimized peak shaving of islanded power systems. E3S Web of Conferences, 2019, 113, 03001.	0.2	4
99	Modeling of biofuel pellets torrefaction in a realistic geometry. Thermal Science, 2016, 20, 1223-1231.	0.5	4
100	Process Analysis and Design Considerations of a Low Carbon Methanol Synthesis Plant from Lignite/Waste Gasification. Fuels, 2022, 3, 245-274.	1.3	4
101	Fluidized Bed Combustion of Solid Biomass for Electricity and/or Heat Generation. Green Energy and Technology, 2011, , 123-149.	0.4	3
102	Pilot applications proposal for sustainable woody biomass supply chains. International Journal of Energy Research, 2016, 40, 81-90.	2.2	3
103	An environmental and economic evaluation of the lignite power generation system by using the life cycle analysis principles. International Journal of Global Warming, 2017, 13, 296.	0.2	3
104	Nanoparticle Emission and Characterization from Pre-Dried Lignite and Bituminous Coal Co-Combustion. Energies, 2020, 13, 2373.	1.6	3
105	Monitoring feedstock losses over five months storage of olive tree pruning hog fuel in piles. Comparison of covered vs. uncovered storage. Biomass and Bioenergy, 2021, 153, 106228.	2.9	3
106	Technoeconomic Assessment of LNG-Fueled Solid Oxide Fuel Cells in Small Island Systems: The Patmos Island Case Study. Energies, 2022, 15, 3892.	1.6	3
107	Implementation of a sustainable energy action plan for municipality of Ptolemaida. International Journal of Global Warming, 2016, 10, 55.	0.2	2
108	Comparison Analysis of the Effect of High and Low Port Activity Seasons on Air Quality in the Port of Heraklion. Environmental Sciences Proceedings, 2021, 8, 3.	0.3	2

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109	Experience on Combustion and Co-Combustion of Greek Brown Coal in Fluidized Bed Facilities. , 2003, , 499.		1
110	The CO <sub>2</sub> and SO <sub>2</sub> capture capability of two Greek limestones during repeated thermal cycles. International Journal of Global Warming, 2009, 1, 270.	0.2	1
111	Co-firing Solid Recovered Fuels (SRFs) with brown coal in large-scale pulverised fuel power plants &ndash; a simulation approach. International Journal of Global Warming, 2009, 1, 106.	0.2	1
112	Smart Recovery of Materials and Upgrade of Organic Compost and RDF in Existing Mechanical Biological Treatment Plants by Using NIR Technology. Green Energy and Technology, 2016, , 771-778.	0.4	1
113	Recent Innovations in Advanced Thermal Energy Systems towards Better Utilization of Energy Resources and Cleaner Environment: Issues and Challenges. Journal of Energy Engineering - ASCE, 2017, 143, 02017001.	1.0	1
114	A Comparative Case Analysis of Meteorological and Air Pollution Parameters between a High and Low Port Activity Period in Igoumenitsa Port. , 2021, 11, .		1
115	CO <sub>2</sub> and SO <sub>2</sub> Capture Capability of Two Greek Limestones. Green Energy and Technology, 2010, , 329-346.	0.4	0
116	An environmental and economic evaluation of the lignite power generation system by using the life cycle analysis principles. International Journal of Global Warming, 2017, 13, 296.	0.2	0
117	Process integration and scale up considerations of Typha domingensis macrophyte bioconversion into ethanol. Biochemical Engineering Journal, 2022, 181, 108404.	1.8	0