Nikolaos Nikolopoulos

List of Publications by Year
in descending order

90 papers	3,094 citations	117453 34 h-index	174990 52 g-index
91 all docs	91 docs citations	91 times ranked	2551 citing authors

#	Article	IF	Citations
1	Operation assessment of a hybrid solar-biomass energy system with absorption refrigeration scenarios. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2022, 44, 700-717.	1.2	7
2	Process Analysis and Design Considerations of a Low Carbon Methanol Synthesis Plant from Lignite/Waste Gasification. Fuels, 2022, 3, 245-274.	1.3	4
3	Dynamic Simulation and Performance Enhancement Analysis of a Renewable Driven Trigeneration System. Energies, 2022, 15, 3688.	1.6	2
4	Introducing an artificial neural network energy minimization multi-scale drag scheme for fluidized particles. Chemical Engineering Science, 2021, 229, 116013.	1.9	23
5	Energy management and technoâ€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
6	A simple model for breakup time prediction of water-heavy fuel oil emulsion droplets. International Journal of Heat and Mass Transfer, 2021, 164, 120581.	2.5	21
7	Numerical Investigation of the Aerodynamic Droplet Breakup at Mach Numbers Greater Than 1. Journal of Energy Engineering - ASCE, 2021, 147, .	1.0	14
8	Numerical methods for solid-liquid phase-change problems. , 2021, , 165-199.		11
9	Microgrid energy management strategies assessment through coupled thermal-electric considerations. Energy Conversion and Management, 2021, 228, 113711.	4.4	18
10	An Efficient Backward/Forward Sweep Algorithm for Power Flow Analysis through a Novel Tree-Like Structure for Unbalanced Distribution Networks. Energies, 2021, 14, 897.	1.6	14
11	Introducing a 1D numerical model for the simulation of PN junctions of varying spectral material properties and operating conditions. Energy Conversion and Management, 2021, 230, 113819.	4.4	2
12	Enhancing the selfâ€resilience of <scp>highâ€</scp> renewable energy sources, interconnected islanding areas through innovative energy production, storage, and management technologies: Grid simulations and energy assessment. International Journal of Energy Research, 2021, 45, 13591-13615.	2.2	12
13	Model Predictive Control for the Energy Management in a District of Buildings Equipped with Building Integrated Photovoltaic Systems and Batteries. Energies, 2021, 14, 3369.	1.6	9
14	Assessing Impact, Performance and Sustainability Potential of Smart City Projects: Towards a Case Agnostic Evaluation Framework. Sustainability, 2021, 13, 7395.	1.6	15
15	Conceptual design and dynamic simulation of an integrated solar driven thermal system with thermochemical energy storage for heating and cooling. Journal of Energy Storage, 2021, 41, 102870.	3.9	21
16	Simulation of a circulating fluidized bed power plant integrated with a thermal energy storage system during transient operation. Journal of Energy Storage, 2021, 43, 103239.	3.9	3
17	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
18	Review on dynamic process modeling of gasification based biorefineries and bio-based heat & power plants. Fuel Processing Technology, 2020, 197, 106188.	3.7	38

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19	Dynamic modeling and energy analysis of renewable heating and electricity systems at residential buildings using phase change material based heat storage technologies. Journal of Energy Storage, 2020, 32, 101942.	3.9	15
20	Dynamic Modeling and Simulation of Non-Interconnected Systems under High-RES Penetration: The Madeira Island Case. Energies, 2020, 13, 5786.	1.6	8
21	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
22	The Nexus between Market Needs and Value Attributes of Smart City Solutions towards Energy Transition. An Empirical Evidence of Two European Union (EU) Smart Cities, Evora and Alkmaar. Smart Cities, 2020, 3, 604-641.	5.5	8
23	From a Comprehensive Pool to a Project-Specific List of Key Performance Indicators for Monitoring the Positive Energy Transition of Smart Citiesâ€"An Experience-Based Approach. Smart Cities, 2020, 3, 705-735.	5.5	20
24	Simulation of a CFB Boiler Integrated With a Thermal Energy Storage System During Transient Operation. Frontiers in Energy Research, 2020, 8, .	1.2	10
25	An Investigation on the Feasibility of Near-Zero and Positive Energy Communities in the Greek Context. Smart Cities, 2020, 3, 362-384.	5.5	21
26	Numerical investigation of heavy fuel oil droplet breakup enhancement with water emulsions. Fuel, 2020, 278, 118381.	3.4	35
27	An in-house built code incorporated into CFD model for the simulation of boiler's convection section. Fuel Processing Technology, 2020, 202, 106333.	3.7	5
28	Ultra-high temperature energy storage and conversion: A review of the AMADEUS project results. AIP Conference Proceedings, 2020, , .	0.3	6
29	A Methodological Framework for the Selection of Key Performance Indicators to Assess Smart City Solutions. Smart Cities, 2019, 2, 269-306.	5.5	41
30	Numerical investigation of the aerodynamic breakup of a parallel moving droplet cluster. International Journal of Multiphase Flow, 2019, 121, 103123.	1.6	11
31	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
32	Smart energy management algorithm for load smoothing and peak shaving based on load forecasting of an islandâ€™s power system. Applied Energy, 2019, 238, 627-642.	5.1	104
33	Determination of a Methodology to Derive Correlations Between Window Opening Mass Flow Rate and Wind Conditions Based on CFD Results. Energies, 2019, 12, 1600.	1.6	5
34	Improved droplet breakup models for spray applications. International Journal of Heat and Fluid Flow, 2019, 76, 274-286.	1.1	26
35	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
36	The Smart City Business Model Canvasâ€"A Smart City Business Modeling Framework and Practical Tool. Energies, 2019, 12, 4798.	1.6	40

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37	Numerical investigation of the aerodynamic breakup of droplets in tandem. International Journal of Multiphase Flow, 2019, 113, 289-303.	1.6	19
38	Determination of the aerodynamic droplet breakup boundaries based on a total force approach. International Journal of Heat and Fluid Flow, 2018, 69, 164-173.	1.1	13
39	Integration of hydroprocessing modeling of bio-liquids into flowsheeting design tools for biofuels production. Fuel Processing Technology, 2018, 171, 148-161.	3.7	19
40	AMADEUS: Next generation materials and solid state devices for ultra high temperature energy storage and conversion. AIP Conference Proceedings, 2018, , .	0.3	29
41	Molten silicon storage of concentrated solar power with integrated thermophotovoltaic energy conversion. AIP Conference Proceedings, 2018, , .	0.3	21
42	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
43	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
44	Dynamic Modeling of a Utility Once-Through Pulverized-Fuel Steam Generator. Journal of Energy Engineering - ASCE, 2017, 143, 04016070.	1.0	8
45	Predictive method for low load off-design operation of a lignite fired power plant. Fuel, 2017, 209, 685-693.	3.4	14
46	Numerical Investigation of a Coal-Fired Power Plant Main Furnace under Normal and Reduced-Oxygen Operating Conditions. Journal of Energy Engineering - ASCE, 2017, 143, .	1.0	5
47	Numerical investigation of the aerodynamic breakup of Diesel and heavy fuel oil droplets. International Journal of Heat and Fluid Flow, 2017, 68, 203-215.	1.1	26
48	CFD Simulation of Domestic Gasification Boiler. Journal of Energy Engineering - ASCE, 2017, 143, 04016052.	1.0	4
49	Numerical investigation of heavy fuel droplet-particle collisions in the injection zone of a Fluid Catalytic Cracking reactor, part II: 3D simulations. Fuel Processing Technology, 2017, 156, 43-53.	3.7	28
50	Numerical investigation of heavy fuel droplet-particle collisions in the injection zone of a Fluid Catalytic Cracking reactor, Part I: Numerical model and 2D simulations. Fuel Processing Technology, 2017, 156, 317-330.	3.7	35
51	Critical review of current industrial scale lignite drying technologies. , 2017, , 41-71.		6
52	A numerical study on droplet-particle collision dynamics. International Journal of Heat and Fluid Flow, 2016, 61, 499-509.	1.1	54
53	Numerical investigation of firing concepts for a flexible Greek lignite-fired power plant. Fuel Processing Technology, 2016, 142, 370-395.	3.7	45
54	Numerical investigation of aerodynamic droplet breakup in a high temperature gas environment. Fuel, 2016, 181, 450-462.	3.4	38

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55	Aerodynamic breakup of an n -decane droplet in a high temperature gas environment. Fuel, 2016, 185, 370-380.	3.4	21
56	Predicting the evaporation rate of stationary droplets with the VOF methodology for a wide range of ambient temperature conditions. International Journal of Thermal Sciences, 2016, 109, 253-262.	2.6	49
57	Predicting droplet deformation and breakup for moderate Weber numbers. International Journal of Multiphase Flow, 2016, 85, 96-109.	1.6	53
58	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
59	Calcium looping process simulation based on an advanced thermodynamic model combined with CFD analysis. Fuel, 2015, 153, 370-381.	3.4	24
60	Coupling a local adaptive grid refinement technique with an interface sharpening scheme for the simulation of two-phase flow and free-surface flows using VOF methodology. Journal of Computational Physics, 2015, 300, 732-753.	1.9	36
61	Thermodynamic analysis and comparison of retrofitting pre-drying concepts at existing lignite power plants. Applied Thermal Engineering, 2015, 74, 165-173.	3.0	43
62	Decoupled CFD simulation of furnace and heat exchangers in a lignite utility boiler. Fuel, 2014, 117, 633-648.	3.4	19
63	VOF simulations of the contact angle dynamics during the drop spreading: Standard models and a new wetting force model. Advances in Colloid and Interface Science, 2014, 212, 1-20.	7.0	158
64	Cooling effectiveness of droplets at low Weber numbers: Effect of temperature. International Journal of Thermal Sciences, 2013, 72, 60-72.	2.6	21
65	Calcium looping for CO2 capture from a lignite fired power plant. Fuel, 2013, 113, 826-836.	3.4	77
66	Numerical investigation Greek lignite/cardoon co-firing in a tangentially fired furnace. Applied Energy, 2012, 97, 514-524.	5.1	91
67	Investigation of proper modeling of very dense granular flows in the recirculation system of CFBs. Particuology, 2012, 10, 699-709.	2.0	32
68	Experimental and numerical investigation of the tracer gas methodology in the case of a naturally cross-ventilated building. Building and Environment, 2012, 56, 379-388.	3.0	39
69	The effect of Weber number on the central binary collision outcome between unequal-sized droplets. International Journal of Heat and Mass Transfer, 2012, 55, 2137-2150.	2.5	40
70	A New Modeling Approach and New Twoâ€“Stage Reactor for Straw Pellets Torrefaction for Energy. International Journal of Chemical Engineering and Applications (IJCEA), 2012, , 315-319.	0.3	0
71	Non-dimensionalisation parameters for predicting the cooling effectiveness of droplets impinging on moderate temperature solid surfaces. International Journal of Thermal Sciences, 2011, 50, 698-711.	2.6	32
72	Numerical investigation of the grid spatial resolution and the anisotropic character of EMMS in CFB multiphase flow. Chemical Engineering Science, 2011, 66, 3979-3990.	1.9	29

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73	Characterization and prediction of the volume flow rate aerating a cross ventilated building by means of experimental techniques and numerical approaches. Energy and Buildings, 2011, 43, 1371-1381.	3.1	28
74	Numerical investigation of the oxy-fuel combustion in large scale boilers adopting the ECO-Scrub technology. Fuel, 2011, 90, 198-214.	3.4	106
75	The effect of gas and liquid properties and droplet size ratio on the central collision between two unequal-size droplets in the reflexive regime. International Journal of Heat and Mass Transfer, 2011, 54, 678-691.	2.5	34
76	An advanced EMMS scheme for the prediction of drag coefficient under a 1.2MWth CFBC isothermal flowâ€"Part II: Numerical implementation. Chemical Engineering Science, 2010, 65, 4089-4099.	1.9	69
77	Numerical investigation of Solid Recovered Fuelsâ€™ co-firing with brown coal in large scale boilers â€“ Evaluation of different co-combustion modes. Fuel, 2010, 89, 3693-3709.	3.4	52
78	An advanced EMMS scheme for the prediction of drag coefficient under a 1.2MWth CFBC isothermal flowâ€"Part I: Numerical formulation. Chemical Engineering Science, 2010, 65, 4080-4088.	1.9	90
79	Numerical study of a naturally cross-ventilated building. Energy and Buildings, 2010, 42, 422-434.	3.1	54
80	EXPERIMENTAL INVESTIGATION OF A SINGLE DROPLET IMPACT ONTO A SESSILE DROP. Atomization and Sprays, 2010, 20, 909-922.	0.3	10
81	SINGLE DROPLET IMPACTS ONTO DEPOSITED DROPS. NUMERICAL ANALYSIS AND COMPARISON. Atomization and Sprays, 2010, 20, 935-953.	0.3	3
82	A PARAMETRIC NUMERICAL STUDYOFTHE HEAD-ON COLLISION BEHAVIOR OF DROPLETS. Atomization and Sprays, 2010, 20, 191-209.	0.3	10
83	A numerical investigation of central binary collision of droplets. Computers and Fluids, 2009, 38, 1191-1202.	1.3	92
84	Off-centre binary collision of droplets: A numerical investigation. International Journal of Heat and Mass Transfer, 2009, 52, 4160-4174.	2.5	47
85	A numerical investigation of the evaporation process of a liquid droplet impinging onto a hot substrate. International Journal of Heat and Mass Transfer, 2007, 50, 303-319.	2.5	109
86	Three-dimensional numerical investigation of a droplet impinging normally onto a wall film. Journal of Computational Physics, 2007, 225, 322-341.	1.9	80
87	Dynamics of water droplets detached from porous surfaces of relevance to PEM fuel cells. Journal of Colloid and Interface Science, 2006, 300, 673-687.	5.0	237
88	Normal impingement of a droplet onto a wall film: a numerical investigation. International Journal of Heat and Fluid Flow, 2005, 26, 119-132.	1.1	62
89	Numerical investigation of the aerodynamic breakup of diesel droplets under various gas pressures. , 0, , .		1
90	Numerical investigation of the role of heat transfer in bubble dynamics. , 0, , .		0