

Nikolaos Nikolopoulos

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5052936/publications.pdf>

Version: 2024-02-01

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	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
2	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
3	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
4	Numerical investigation of the oxy-fuel combustion in large scale boilers adopting the ECO-Scrub technology. Fuel, 2011, 90, 198-214.	3.4	106
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	A numerical investigation of central binary collision of droplets. Computers and Fluids, 2009, 38, 1191-1202.	1.3	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 flowâ€”Part I: Numerical formulation. Chemical Engineering Science, 2010, 65, 4080-4088.	1.9	90
10	Three-dimensional numerical investigation of a droplet impinging normally onto a wall film. Journal of Computational Physics, 2007, 225, 322-341.	1.9	80
11	Calcium looping for CO2 capture from a lignite fired power plant. Fuel, 2013, 113, 826-836.	3.4	77
12	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
13	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
14	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
15	Numerical study of a naturally cross-ventilated building. Energy and Buildings, 2010, 42, 422-434.	3.1	54
16	A numerical study on droplet-particle collision dynamics. International Journal of Heat and Fluid Flow, 2016, 61, 499-509.	1.1	54
17	Predicting droplet deformation and breakup for moderate Weber numbers. International Journal of Multiphase Flow, 2016, 85, 96-109.	1.6	53
18	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

#	ARTICLE	IF	CITATIONS
19	Predicting the evaporation rate of stationary droplets with the VOF methodology for a wide range of ambient temperature conditions. <i>International Journal of Thermal Sciences</i> , 2016, 109, 253-262.	2.6	49
20	Off-centre binary collision of droplets: A numerical investigation. <i>International Journal of Heat and Mass Transfer</i> , 2009, 52, 4160-4174.	2.5	47
21	Numerical investigation of firing concepts for a flexible Greek lignite-fired power plant. <i>Fuel Processing Technology</i> , 2016, 142, 370-395.	3.7	45
22	A Methodology for Determination and Definition of Key Performance Indicators for Smart Grids Development in Island Energy Systems. <i>Energies</i> , 2019, 12, 242.	1.6	45
23	Thermodynamic analysis and comparison of retrofitting pre-drying concepts at existing lignite power plants. <i>Applied Thermal Engineering</i> , 2015, 74, 165-173.	3.0	43
24	A Methodological Framework for the Selection of Key Performance Indicators to Assess Smart City Solutions. <i>Smart Cities</i> , 2019, 2, 269-306.	5.5	41
25	Biomass Availability in Europe as an Alternative Fuel for Full Conversion of Lignite Power Plants: A Critical Review. <i>Energies</i> , 2020, 13, 3390.	1.6	41
26	The effect of Weber number on the central binary collision outcome between unequal-sized droplets. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 2137-2150.	2.5	40
27	The Smart City Business Model Canvas – A Smart City Business Modeling Framework and Practical Tool. <i>Energies</i> , 2019, 12, 4798.	1.6	40
28	Experimental and numerical investigation of the tracer gas methodology in the case of a naturally cross-ventilated building. <i>Building and Environment</i> , 2012, 56, 379-388.	3.0	39
29	Numerical investigation of aerodynamic droplet breakup in a high temperature gas environment. <i>Fuel</i> , 2016, 181, 450-462.	3.4	38
30	Review on dynamic process modeling of gasification based biorefineries and bio-based heat & power plants. <i>Fuel Processing Technology</i> , 2020, 197, 106188.	3.7	38
31	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. <i>Journal of Computational Physics</i> , 2015, 300, 732-753.	1.9	36
32	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. <i>Fuel Processing Technology</i> , 2017, 156, 317-330.	3.7	35
33	Numerical investigation of heavy fuel oil droplet breakup enhancement with water emulsions. <i>Fuel</i> , 2020, 278, 118381.	3.4	35
34	The effect of gas and liquid properties and droplet size ratio on the central collision between two unequal-size droplets in the reflexive regime. <i>International Journal of Heat and Mass Transfer</i> , 2011, 54, 678-691.	2.5	34
35	Non-dimensionalisation parameters for predicting the cooling effectiveness of droplets impinging on moderate temperature solid surfaces. <i>International Journal of Thermal Sciences</i> , 2011, 50, 698-711.	2.6	32
36	Investigation of proper modeling of very dense granular flows in the recirculation system of CFBs. <i>Particulogy</i> , 2012, 10, 699-709.	2.0	32

#	ARTICLE	IF	CITATIONS
37	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
38	AMADEUS: Next generation materials and solid state devices for ultra high temperature energy storage and conversion. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	29
39	Characterization and prediction of the volume flow rate aerating a cross ventilated building by means of experimental techniques and numerical approaches. <i>Energy and Buildings</i> , 2011, 43, 1371-1381.	3.1	28
40	Numerical investigation of heavy fuel droplet-particle collisions in the injection zone of a Fluid Catalytic Cracking reactor, part II: 3D simulations. <i>Fuel Processing Technology</i> , 2017, 156, 43-53.	3.7	28
41	Numerical investigation of the aerodynamic breakup of Diesel and heavy fuel oil droplets. <i>International Journal of Heat and Fluid Flow</i> , 2017, 68, 203-215.	1.1	26
42	Improved droplet breakup models for spray applications. <i>International Journal of Heat and Fluid Flow</i> , 2019, 76, 274-286.	1.1	26
43	Calcium looping process simulation based on an advanced thermodynamic model combined with CFD analysis. <i>Fuel</i> , 2015, 153, 370-381.	3.4	24
44	Introducing an artificial neural network energy minimization multi-scale drag scheme for fluidized particles. <i>Chemical Engineering Science</i> , 2021, 229, 116013.	1.9	23
45	Cooling effectiveness of droplets at low Weber numbers: Effect of temperature. <i>International Journal of Thermal Sciences</i> , 2013, 72, 60-72.	2.6	21
46	Aerodynamic breakup of an n -decane droplet in a high temperature gas environment. <i>Fuel</i> , 2016, 185, 370-380.	3.4	21
47	Molten silicon storage of concentrated solar power with integrated thermophotovoltaic energy conversion. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	21
48	An Investigation on the Feasibility of Near-Zero and Positive Energy Communities in the Greek Context. <i>Smart Cities</i> , 2020, 3, 362-384.	5.5	21
49	A simple model for breakup time prediction of water-heavy fuel oil emulsion droplets. <i>International Journal of Heat and Mass Transfer</i> , 2021, 164, 120581.	2.5	21
50	Conceptual design and dynamic simulation of an integrated solar driven thermal system with thermochemical energy storage for heating and cooling. <i>Journal of Energy Storage</i> , 2021, 41, 102870.	3.9	21
51	From a Comprehensive Pool to a Project-Specific List of Key Performance Indicators for Monitoring the Positive Energy Transition of Smart Cities—An Experience-Based Approach. <i>Smart Cities</i> , 2020, 3, 705-735.	5.5	20
52	Decoupled CFD simulation of furnace and heat exchangers in a lignite utility boiler. <i>Fuel</i> , 2014, 117, 633-648.	3.4	19
53	Integration of hydroprocessing modeling of bio-liquids into flowsheeting design tools for biofuels production. <i>Fuel Processing Technology</i> , 2018, 171, 148-161.	3.7	19
54	Numerical investigation of the aerodynamic breakup of droplets in tandem. <i>International Journal of Multiphase Flow</i> , 2019, 113, 289-303.	1.6	19

#	ARTICLE	IF	CITATIONS
55	Energy management and techno-economic assessment of a predictive battery storage system applying a load levelling operational strategy in island systems. <i>International Journal of Energy Research</i> , 2021, 45, 2709-2727.	2.2	19
56	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. <i>Fuel Processing Technology</i> , 2018, 180, 140-154.	3.7	18
57	Microgrid energy management strategies assessment through coupled thermal-electric considerations. <i>Energy Conversion and Management</i> , 2021, 228, 113711.	4.4	18
58	Numerical comparative investigation of a flexible lignite-fired boiler using pre-dried lignite or biomass as supporting fuel. <i>Renewable Energy</i> , 2020, 145, 1831-1848.	4.3	16
59	Dynamic modeling and energy analysis of renewable heating and electricity systems at residential buildings using phase change material based heat storage technologies. <i>Journal of Energy Storage</i> , 2020, 32, 101942.	3.9	15
60	Assessing Impact, Performance and Sustainability Potential of Smart City Projects: Towards a Case Agnostic Evaluation Framework. <i>Sustainability</i> , 2021, 13, 7395.	1.6	15
61	Predictive method for low load off-design operation of a lignite fired power plant. <i>Fuel</i> , 2017, 209, 685-693.	3.4	14
62	Numerical Investigation of the Aerodynamic Droplet Breakup at Mach Numbers Greater Than 1. <i>Journal of Energy Engineering - ASCE</i> , 2021, 147, .	1.0	14
63	An Efficient Backward/Forward Sweep Algorithm for Power Flow Analysis through a Novel Tree-Like Structure for Unbalanced Distribution Networks. <i>Energies</i> , 2021, 14, 897.	1.6	14
64	Determination of the aerodynamic droplet breakup boundaries based on a total force approach. <i>International Journal of Heat and Fluid Flow</i> , 2018, 69, 164-173.	1.1	13
65	Enhancing the self-resilience of <sc>high</sc> renewable energy sources, interconnected islanding areas through innovative energy production, storage, and management technologies: Grid simulations and energy assessment. <i>International Journal of Energy Research</i> , 2021, 45, 13591-13615.	2.2	12
66	Numerical investigation of the aerodynamic breakup of a parallel moving droplet cluster. <i>International Journal of Multiphase Flow</i> , 2019, 121, 103123.	1.6	11
67	Numerical methods for solid-liquid phase-change problems. , 2021, , 165-199.		11
68	Simulation of a CFB Boiler Integrated With a Thermal Energy Storage System During Transient Operation. <i>Frontiers in Energy Research</i> , 2020, 8, .	1.2	10
69	EXPERIMENTAL INVESTIGATION OF A SINGLE DROPLET IMPACT ONTO A SESSILE DROP. <i>Atomization and Sprays</i> , 2010, 20, 909-922.	0.3	10
70	A PARAMETRIC NUMERICAL STUDY OF THE HEAD-ON COLLISION BEHAVIOR OF DROPLETS. <i>Atomization and Sprays</i> , 2010, 20, 191-209.	0.3	10
71	Model Predictive Control for the Energy Management in a District of Buildings Equipped with Building Integrated Photovoltaic Systems and Batteries. <i>Energies</i> , 2021, 14, 3369.	1.6	9
72	Dynamic Modeling of a Utility Once-Through Pulverized-Fuel Steam Generator. <i>Journal of Energy Engineering - ASCE</i> , 2017, 143, 04016070.	1.0	8

#	ARTICLE	IF	CITATIONS
73	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
74	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. <i>Smart Cities</i> , 2020, 3, 604-641.	5.5	8
75	Operation assessment of a hybrid solar-biomass energy system with absorption refrigeration scenarios. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 2022, 44, 700-717.	1.2	7
76	Critical review of current industrial scale lignite drying technologies. , 2017, , 41-71.		6
77	Ultra-high temperature energy storage and conversion: A review of the AMADEUS project results. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	6
78	Numerical Investigation of a Coal-Fired Power Plant Main Furnace under Normal and Reduced-Oxygen Operating Conditions. <i>Journal of Energy Engineering - ASCE</i> , 2017, 143, .	1.0	5
79	Determination of a Methodology to Derive Correlations Between Window Opening Mass Flow Rate and Wind Conditions Based on CFD Results. <i>Energies</i> , 2019, 12, 1600.	1.6	5
80	An in-house built code incorporated into CFD model for the simulation of boiler's convection section. <i>Fuel Processing Technology</i> , 2020, 202, 106333.	3.7	5
81	CFD Simulation of Domestic Gasification Boiler. <i>Journal of Energy Engineering - ASCE</i> , 2017, 143, 04016052.	1.0	4
82	Advanced energy management system based on PV and load forecasting for load smoothing and optimized peak shaving of islanded power systems. <i>E3S Web of Conferences</i> , 2019, 113, 03001.	0.2	4
83	Process Analysis and Design Considerations of a Low Carbon Methanol Synthesis Plant from Lignite/Waste Gasification. <i>Fuels</i> , 2022, 3, 245-274.	1.3	4
84	Simulation of a circulating fluidized bed power plant integrated with a thermal energy storage system during transient operation. <i>Journal of Energy Storage</i> , 2021, 43, 103239.	3.9	3
85	SINGLE DROPLET IMPACTS ONTO DEPOSITED DROPS. NUMERICAL ANALYSIS AND COMPARISON. <i>Atomization and Sprays</i> , 2010, 20, 935-953.	0.3	3
86	Introducing a 1D numerical model for the simulation of PN junctions of varying spectral material properties and operating conditions. <i>Energy Conversion and Management</i> , 2021, 230, 113819.	4.4	2
87	Dynamic Simulation and Performance Enhancement Analysis of a Renewable Driven Trigeneration System. <i>Energies</i> , 2022, 15, 3688.	1.6	2
88	Numerical investigation of the aerodynamic breakup of diesel droplets under various gas pressures. , 0, , .		1
89	A New Modeling Approach and New Two-Stage Reactor for Straw Pellets Torrefaction for Energy. <i>International Journal of Chemical Engineering and Applications (IJCEA)</i> , 2012, , 315-319.	0.3	0
90	Numerical investigation of the role of heat transfer in bubble dynamics. , 0, , .		0