

Medhat Nemitallah

List of Publications by Year in descending order

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105
papers

2,151
citations

185998

28
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108
all docs

108
docs citations

108
times ranked

1341
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental and numerical investigations of an atmospheric diffusion oxy-combustion flame in a gas turbine model combustor. <i>Applied Energy</i> , 2013, 111, 401-415.	5.1	108
2	Oxy-fuel combustion technology: current status, applications, and trends. <i>International Journal of Energy Research</i> , 2017, 41, 1670-1708.	2.2	93
3	Recent Development in Oxy-Combustion Technology and Its Applications to Gas Turbine Combustors and ITM Reactors. <i>Energy & Fuels</i> , 2013, 27, 2-19.	2.5	89
4	Review of Novel Combustion Techniques for Clean Power Production in Gas Turbines. <i>Energy & Fuels</i> , 2018, 32, 979-1004.	2.5	71
5	Review on Premixed Combustion Technology: Stability, Emission Control, Applications, and Numerical Case Study. <i>Energy & Fuels</i> , 2016, 30, 9981-10014.	2.5	64
6	Experimental investigation of partially premixed methane-air and methane-oxygen flames stabilized over a perforated-plate burner. <i>Applied Energy</i> , 2016, 169, 126-137.	5.1	59
7	Evaluation of gas radiation models in CFD modeling of oxy-combustion. <i>Energy Conversion and Management</i> , 2014, 81, 83-97.	4.4	49
8	Combustion behavior and stability map of hydrogen-enriched oxy-methane premixed flames in a model gas turbine combustor. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 16652-16666.	3.8	49
9	Palladium-Alloy Membrane Reactors for Fuel Reforming and Hydrogen Production: A Review. <i>Energy & Fuels</i> , 2021, 35, 5558-5593.	2.5	49
10	Strain Influence on the Oxygen Electrocatalysis of the (100)-Oriented Epitaxial $\text{La}_{2-x}\text{NiO}_{4+\delta}$ Thin Films at Elevated Temperatures. <i>Journal of Physical Chemistry C</i> , 2013, 117, 18789-18795.	1.5	48
11	Computational fluid dynamics study of hydrogen generation by low temperature methane reforming in a membrane reactor. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 3158-3169.	3.8	47
12	Stability map and shape of premixed $\text{CH}_4/\text{O}_2/\text{CO}_2$ flames in a model gas-turbine combustor. <i>Applied Energy</i> , 2018, 215, 63-74.	5.1	44
13	Characteristics of H_2 -enriched CH_4/O_2 diffusion flames in a swirl-stabilized gas turbine combustor: Experimental and numerical study. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 20418-20432.	3.8	41
14	Experimental analysis of oxygen-methane combustion inside a gas turbine reactor under various operating conditions. <i>Energy</i> , 2015, 86, 105-114.	4.5	38
15	A New Study for Hybrid PV/Wind off-Grid Power Generation Systems with the Comparison of Results from Homer. <i>International Journal of Green Energy</i> , 2015, 12, 526-542.	2.1	37
16	Heat Transfer Characteristics in a Double-Pipe Heat Exchanger Equipped with Coiled Circular Wires. <i>Experimental Heat Transfer</i> , 2015, 28, 531-545.	2.3	36
17	Experimental and computational study on stability characteristics of hydrogen-enriched oxy-methane premixed flames. <i>Applied Energy</i> , 2019, 250, 433-443.	5.1	36
18	Characteristics of Oxy-fuel Combustion in an Oxygen Transport Reactor. <i>Energy & Fuels</i> , 2012, 26, 4599-4606.	2.5	35

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19	On the Modeling of Steam Methane Reforming. Journal of Energy Resources Technology, Transactions of the ASME, 2015, 137, .	1.4	35
20	Design of an ion transport membrane reactor for application in fire tube boilers. Energy, 2015, 81, 787-801.	4.5	35
21	Investigation of a turbulent premixed combustion flame in a backward-facing step combustor; effect of equivalence ratio. Energy, 2016, 95, 211-222.	4.5	35
22	Effects of oxidizer flexibility and bluff-body blockage ratio on flammability limits of diffusion flames. Applied Energy, 2016, 178, 19-28.	5.1	34
23	Investigations of oxy-fuel combustion and oxygen permeation in an ITM reactor using a two-step oxy-combustion reaction kinetics model. Journal of Membrane Science, 2013, 432, 1-12.	4.1	33
24	Numerical investigation of syngas oxy-combustion inside a LSCF-6428 oxygen transport membrane reactor. Energy, 2016, 96, 654-665.	4.5	32
25	Experimental and numerical study of oxygen separation and oxy-combustion characteristics inside a button-cell LNO-ITM reactor. Energy, 2015, 84, 600-611.	4.5	31
26	Numerical predictions of flow boiling characteristics: Current status, model setup and CFD modeling for different non-uniform heating profiles. Applied Thermal Engineering, 2015, 75, 451-460.	3.0	31
27	Design of an ion transport membrane reactor for gas turbine combustion application. Journal of Membrane Science, 2014, 450, 60-71.	4.1	30
28	CFD (computational fluid dynamics) analysis of a novel reactor design using ion transport membranes for oxy-fuel combustion. Energy, 2014, 77, 932-944.	4.5	29
29	Experimental investigation of the stability of a turbulent diffusion flame in a gas turbine combustor. Energy, 2018, 157, 904-913.	4.5	29
30	Adiabatic Flame Temperature for Controlling the Macrostructures and Stabilization Modes of Premixed Methane Flames in a Model Gas-Turbine Combustor. Energy & Fuels, 2018, 32, 7868-7877.	2.5	28
31	Experimental study of atmospheric partially premixed oxy-combustion flames anchored over a perforated plate burner. Energy, 2017, 122, 159-167.	4.5	27
32	CFD modeling of hydrogen separation through Pd-based membrane. International Journal of Hydrogen Energy, 2020, 45, 23006-23019.	3.8	25
33	A study of methane oxy-combustion characteristics inside a modified design button-cell membrane reactor utilizing a modified oxygen permeation model for reacting flows. Journal of Natural Gas Science and Engineering, 2016, 28, 61-73.	2.1	24
34	Stability maps of non-premixed methane flames in different oxidizing environments of a gas turbine model combustor. Applied Energy, 2017, 189, 177-186.	5.1	24
35	Oxy-Combustion of Hydrogen-Enriched Methane: Experimental Measurements and Analysis. Energy & Fuels, 2017, 31, 2007-2016.	2.5	23
36	Oxygen Permeation from Oxygen Ion-Conducting Membranes Coated with Porous Metals or Mixed Ionic and Electronic Conducting Oxides. Journal of the Electrochemical Society, 2013, 160, E148-E153.	1.3	22

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37	Numerical investigations of combustion and emissions of syngas as compared to methane in a 200MW package boiler. <i>Energy Conversion and Management</i> , 2014, 83, 296-305.	4.4	22
38	Frontiers in combustion techniques and burner designs for emissions control and CO ₂ capture: A review. <i>International Journal of Energy Research</i> , 2019, 43, 7790.	2.2	22
39	Numerical investigation of oxygen permeation and methane oxy-combustion in a stagnation flow ion transport membrane reactor. <i>Energy</i> , 2013, 54, 322-332.	4.5	21
40	Numerical study of hydrogen-enriched methane-air combustion under ultra-lean conditions. <i>International Journal of Energy Research</i> , 2016, 40, 743-762.	2.2	21
41	Adsorption characterization and CO ₂ breakthrough of MWCNT/Mg-MOF-74 and MWCNT/MIL-100(Fe) composites. <i>International Journal of Energy and Environmental Engineering</i> , 2018, 9, 169-185.	1.3	20
42	Effects of H ₂ Enrichment and Inlet Velocity on Stability Limits and Shape of CH ₄ /H ₂ /O ₂ /CO ₂ Flames in a Premixed Swirl Combustor. <i>Energy & Fuels</i> , 2018, 32, 9916-9925.	2.5	20
43	Solid Particle Erosion Downstream of an Orifice. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2015, 137, .	0.8	18
44	Experimental Study on the Effect of Hydrogen Enrichment of Methane on the Stability and Emission of Nonpremixed Swirl Stabilized Combustor. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2015, 137, .	1.4	18
45	Numerical and experimental study of swirl premixed CH ₄ /H ₂ /O ₂ /CO ₂ flames for controlled-emissions gas turbines. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29616-29629.	3.8	18
46	Effect analysis on the macrostructure and static stability limits of oxy-methane flames in a premixed swirl combustor. <i>Energy</i> , 2018, 159, 86-96.	4.5	17
47	Review of Fuel/Oxidizer-Flexible Combustion in Gas Turbines. <i>Energy & Fuels</i> , 2020, 34, 10459-10485.	2.5	17
48	Experimental and numerical analysis of oxy-fuel combustion in a porous plate reactor. <i>International Journal of Energy Research</i> , 2015, 39, 1229-1240.	2.2	16
49	Modeling of ion transport reactor for oxy-fuel combustion. <i>International Journal of Energy Research</i> , 2013, 37, 1265-1279.	2.2	15
50	Current status of CHF predictions using CFD modeling technique and review of other techniques especially for non-uniform axial and circumferential heating profiles. <i>Annals of Nuclear Energy</i> , 2014, 70, 188-207.	0.9	15
51	Characteristic of air separation in hollow-fiber polymeric membrane for oxygen enriched air clean combustion applications. <i>Journal of Cleaner Production</i> , 2017, 143, 960-972.	4.6	15
52	Characteristics of Oxyfuel Combustion in Lean-Premixed Multihole Burners. <i>Energy & Fuels</i> , 2019, 33, 11948-11958.	2.5	15
53	Evaluation of the Accuracy of Selected Syngas Chemical Mechanisms. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2015, 137, .	1.4	14
54	Azo-Linked Porous Organic Polymers for Selective Carbon Dioxide Capture and Metal Ion Removal. <i>ACS Omega</i> , 2022, 7, 14535-14543.	1.6	13

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55	Effect of microstructure and thickness on oxygen permeation of La ₂ NiO ₄ +δ membranes. <i>Ceramics International</i> , 2016, 42, 666-672.	2.3	12
56	Structure and Lean Extinction of Premixed Flames Stabilized on Conductive Perforated Plates. <i>Energy & Fuels</i> , 2017, 31, 1980-1992.	2.5	12
57	The Characteristics of Oxycombustion of Liquid Fuel in a Typical Water-Tube Boiler. <i>Energy & Fuels</i> , 2017, 31, 6305-6313.	2.5	12
58	Hydrogen production, oxygen separation and syngas oxy-combustion inside a water splitting membrane reactor. <i>Renewable Energy</i> , 2017, 113, 221-234.	4.3	12
59	Effects of jet diameter and spacing in a micromixer-like burner for clean oxy-fuel combustion in gas turbines. <i>Energy</i> , 2021, 228, 120561.	4.5	12
60	Characteristics of Oxyfuel and Air-Fuel Combustion in an Industrial Water Tube Boiler. <i>Heat Transfer Engineering</i> , 2014, 35, 1394-1404.	1.2	11
61	Experimental and Numerical Investigation of La ₂ NiO ₄ Membranes for Oxygen Separation: Geometry Optimization and Model Validation. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2015, 137, .	1.4	11
62	Enhancement of adsorption carbon capture capacity of 13X with optimal incorporation of carbon nanotubes. <i>International Journal of Energy and Environmental Engineering</i> , 2017, 8, 219-230.	1.3	11
63	Experimental and Numerical Investigations of Structure and Stability of Premixed Swirl-Stabilized CH ₄ /O ₂ /CO ₂ Flames in a Model Gas Turbine Combustor. <i>Energy & Fuels</i> , 2019, 33, 2526-2537.	2.5	11
64	Stratified and Hydrogen Combustion Techniques for Higher Turndown and Lower Emissions in Gas Turbines. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2022, 144, .	1.4	11
65	Boilers Optimal Control for Maximum Load Change Rate. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2014, 136, .	1.4	10
66	Oxy-fuel combustion in a two-pass oxygen transport reactor for fire tube boiler application. <i>Applied Energy</i> , 2018, 229, 828-840.	5.1	10
67	Numerical Predictions of Three-Dimensional Unsteady Turbulent Film-Cooling for Trailing Edge of Gas-Turbine Blade Using Large Eddy Simulation. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2019, 141, .	1.4	10
68	Comparative analysis of the stability and structure of premixed C ₃ H ₈ /O ₂ /CO ₂ and C ₃ H ₈ /O ₂ /N ₂ flames for clean flexible energy production. <i>Energy</i> , 2021, 214, 118887.	4.5	9
69	Investigation of liquid ethanol evaporation and combustion in air and oxygen environments inside a 25 kW vertical reactor. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2015, 229, 647-661.	0.8	8
70	Second law analysis of premixed and non-premixed oxy-fuel combustion cycles utilizing oxygen separation membranes. <i>Applied Energy</i> , 2020, 259, 114213.	5.1	8
71	Numerical modeling of heat transfer characteristics in a two-pass oxygen transport reactor for fire tube boilers under oxy-fuel combustion. <i>Applied Thermal Engineering</i> , 2021, 195, 117248.	3.0	8
72	Investigations of an Ion Transport Membrane Reactor Specially Designed for a Power Cycle. <i>Applied Mechanics and Materials</i> , 2013, 302, 440-446.	0.2	7

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73	Soft Analyzer for Monitoring NO _x Emissions From a Gas Turbine Combustor. Journal of Energy Resources Technology, Transactions of the ASME, 2016, 138, .	1.4	7
74	Design of a multi-can carbon-free gas turbine combustor utilizing multiple shell-and-tube OTRs for ZEPP applications. Journal of Natural Gas Science and Engineering, 2017, 46, 172-187.	2.1	7
75	Oxy-combustion of liquid fuel in an ion transport membrane reactor. International Journal of Energy and Environmental Engineering, 2018, 9, 21-37.	1.3	7
76	Static Stability and Combustion Characteristics of Oxy-Propane Flames in a Premixed Fuel-Flexible Swirl Combustor. Energy & Fuels, 2019, 33, 11996-12007.	2.5	7
77	Operability of a premixed combustor holding hydrogen-enriched oxy-methane flames: An experimental and numerical study. International Journal of Energy Research, 2021, 45, 3049-3063.	2.2	7
78	On the quality of micromixing in an oxy-fuel micromixer burner for gas turbine applications: A numerical study. Chemical Engineering and Processing: Process Intensification, 2021, 162, 108336.	1.8	7
79	Effects of adiabatic flame temperature on flames' characteristics in a gas-turbine combustor. Energy, 2022, 243, 123077.	4.5	7
80	Study of Combustion Characteristics of Ethanol at Different Dilution With the Carrier Gas. Journal of Energy Resources Technology, Transactions of the ASME, 2015, 137, .	1.4	6
81	Numerical investigation of liquid methanol evaporation and oxy-combustion inside a button-cell ITM reactor. Applied Thermal Engineering, 2017, 112, 378-391.	3.0	6
82	Characteristics of Oxygen Permeation and Partial Oxidation of Methane in a Catalytic Membrane Reactor for Syngas Production. Energy & Fuels, 2020, 34, 7522-7532.	2.5	6
83	Numerical analysis supported with experimental measurements of premixed oxy-propane flames in a fuel-flex gas turbine combustor. International Journal of Energy Research, 2021, 45, 16038-16061.	2.2	6
84	Investigation of performance of fire-tube boilers integrated with ion transport membrane for oxy-fuel combustion. International Journal of Energy Research, 2016, 40, 1673-1687.	2.2	5
85	Experimental and numerical investigation of flow field and oxy-methane combustion characteristics in a low-power porous-plate reactor. Energy, 2018, 160, 783-795.	4.5	5
86	Thermodynamics and emission analysis of a modified Brayton cycle subjected to air cooling and evaporative after cooling. Energy Conversion and Management, 2018, 174, 322-335.	4.4	5
87	Operability of Fuel/Oxidizer-Flexible Combustor Holding Hydrogen-Enriched Partially Premixed Oxy-Flames Stabilized over a Perforated Plate Burner. Energy & Fuels, 2020, 34, 8653-8665.	2.5	5
88	Pyrolysis and Oxidation of Waste Tire Oil: Analysis of Evolved Gases. ACS Omega, 2022, 7, 21574-21582.	1.6	5
89	Prediction of Boilers Emission using Polynomial Networks. , 2006, , .		4
90	Softsensor for estimation of steam quality in riser tubes of boilers. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2013, 227, 2337-2347.	1.1	4

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91	Investigations of heat transfer, entropy generation and pressure build up for upward flow in a vertical channel equipped with a fin array. <i>Heat and Mass Transfer</i> , 2016, 52, 1953-1961.	1.2	4
92	Analysis of methane, propane, and syngas oxy-fuel flames in a fuel-flex gas turbine combustor for carbon capture. <i>International Journal of Energy Research</i> , 0, , .	2.2	4
93	Experimental and numerical study of oxy-methane flames in a porous-plate reactor mimicking membrane reactor operation. <i>International Journal of Energy Research</i> , 2019, 43, 7040.	2.2	3
94	Experimental study on combustion characteristics and lean blow-out limits of non-premixed oxy-methane flames in a porous-plate reactor. <i>Heat and Mass Transfer</i> , 2019, 55, 3265-3274.	1.2	3
95	Experimental Investigation of the Flow Maldistribution Inside an Air-Cooled Heat Exchanger. <i>Arabian Journal for Science and Engineering</i> , 2014, 39, 8187-8198.	1.1	2
96	Numerical investigation of a hybrid polymeric-ceramic membrane unit for carbon-free oxy-combustion applications. <i>Energy</i> , 2018, 147, 362-376.	4.5	2
97	Boiler dynamic control with optimized nitric oxides and efficiency. <i>Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering</i> , 2017, 231, 778-796.	0.7	1
98	On the effects of fuel type, fuel mixing and sulphur content on the performance of a high-temperature membrane reactor adapting liquid fuel: A numerical study. <i>Journal of Cleaner Production</i> , 2018, 196, 796-807.	4.6	1
99	Fluid to Fluid Modeling for Post Dry Out Using Dimensional Analysis and Energy Scaling. <i>Applied Mechanics and Materials</i> , 2013, 302, 42-48.	0.2	0
100	Investigations of Oxy-Fuel Combustion Characteristics and Oxygen Permeation Process in a Stagnation Flow ITM Reactor. <i>Applied Mechanics and Materials</i> , 2013, 302, 35-41.	0.2	0
101	Study of Combustion Characteristics of Ethanol at Different Dilution With the Carrier Gas. , 2014, , .		0
102	Application of Oxy-fuel Combustion Technology into Conventional Combustors. <i>Green Energy and Technology</i> , 2019, , 43-89.	0.4	0
103	Modeling of Combustion in Gas Turbines. <i>Green Energy and Technology</i> , 2019, , 193-274.	0.4	0
104	Applications of OTRs in Gas Turbines and Boilers. <i>Green Energy and Technology</i> , 2019, , 275-368.	0.4	0
105	Ion Transport Membranes (ITMs) for Oxygen Separation. <i>Green Energy and Technology</i> , 2019, , 91-132.	0.4	0