Medhat Nemitallah

List of Publications by Year
in descending order

105	2,151	185998 28	288905 40
papers	citations	h-index	g-index

108	108	108	1341
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Stratified and Hydrogen Combustion Techniques for Higher Turndown and Lower Emissions in Gas Turbines. Journal of Energy Resources Technology, Transactions of the ASME, 2022, 144, .	1.4	11
2	Effects of adiabatic flame temperature on flamesâ€™ characteristics in a gas-turbine combustor. Energy, 2022, 243, 123077.	4.5	7
3	Azo-Linked Porous Organic Polymers for Selective Carbon Dioxide Capture and Metal Ion Removal. ACS Omega, 2022, 7, 14535-14543.	1.6	13
4	Pyrolysis and Oxidation of Waste Tire Oil: Analysis of Evolved Gases. ACS Omega, 2022, 7, 21574-21582.	1.6	5
5	Operability of a premixed combustor holding hydrogenâ€enriched oxyâ€methane flames: An experimental and numerical study. International Journal of Energy Research, 2021, 45, 3049-3063.	2.2	7
6	Comparative analysis of the stability and structure of premixed C3H8/O2/CO2 and C3H8/O2/N2 flames for clean flexible energy production. Energy, 2021, 214, 118887.	4.5	9
7	Palladium-Alloy Membrane Reactors for Fuel Reforming and Hydrogen Production: A Review. Energy & Fuels, 2021, 35, 5558-5593.	2.5	49
8	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
9	Numerical analysis supported with experimental measurements of premixed oxyâ€propane flames in a fuelâ€flex gas turbine combustor. International Journal of Energy Research, 2021, 45, 16038-16061.	2.2	6
10	Effects of jet diameter and spacing in a micromixer-like burner for clean oxy-fuel combustion in gas turbines. Energy, 2021, 228, 120561.	4.5	12
11	Numerical modeling of heat transfer characteristics in a two-pass oxygen transport reactor for fire tube boilers under oxy-fuel combustion. Applied Thermal Engineering, 2021, 195, 117248.	3.0	8
12	Second law analysis of premixed and non-premixed oxy-fuel combustion cycles utilizing oxygen separation membranes. Applied Energy, 2020, 259, 114213.	5.1	8
13	CFD modeling of hydrogen separation through Pd-based membrane. International Journal of Hydrogen Energy, 2020, 45, 23006-23019.	3.8	25
14	Review of Fuel/Oxidizer-Flexible Combustion in Gas Turbines. Energy & Fuels, 2020, 34, 10459-10485.	2.5	17
15	Numerical and experimental study of swirl premixed CH4/H2/O2/CO2 flames for controlled-emissions gas turbines. International Journal of Hydrogen Energy, 2020, 45, 29616-29629.	3.8	18
16	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
17	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
18	Frontiers in combustion techniques and burner designs for emissions control and CO₂capture: A review. International Journal of Energy Research, 2019, 43, 7790.	2.2	22

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19	Characteristics of Oxyfuel Combustion in Lean-Premixed Multihole Burners. Energy & Fuels, 2019, 33, 11948-11958.	2.5	15
20	Experimental and numerical study of oxyâ€methane flames in a porousâ€plate reactor mimicking membrane reactor operation. International Journal of Energy Research, 2019, 43, 7040.	2.2	3
21	Experimental study on combustion characteristics and lean blow-out limits of non-premixed oxy-methane flames in a porous-plate reactor. Heat and Mass Transfer, 2019, 55, 3265-3274.	1.2	3
22	Experimental and computational study on stability characteristics of hydrogen-enriched oxy-methane premixed flames. Applied Energy, 2019, 250, 433-443.	5.1	36
23	Application of Oxy-fuel Combustion Technology into Conventional Combustors. Green Energy and Technology, 2019, , 43-89.	0.4	0
24	Modeling of Combustion in Gas Turbines. Green Energy and Technology, 2019, , 193-274.	0.4	0
25	Experimental and Numerical Investigations of Structure and Stability of Premixed Swirl-Stabilized CH₄/O₂/CO₂ Flames in a Model Gas Turbine Combustor. Energy & Fuels, 2019, 33, 2526-2537.	2.5	11
26	Numerical Predictions of Three-Dimensional Unsteady Turbulent Film-Cooling for Trailing Edge of Gas-Turbine Blade Using Large Eddy Simulation. Journal of Energy Resources Technology, Transactions of the ASME, 2019, 141, .	1.4	10
27	Applications of OTRs in Gas Turbines and Boilers. Green Energy and Technology, 2019, , 275-368.	0.4	0
28	Ion Transport Membranes (ITMs) for Oxygen Separation. Green Energy and Technology, 2019, , 91-132.	0.4	0
29	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
30	Stability map and shape of premixed CH4/O2/CO2 flames in a model gas-turbine combustor. Applied Energy, 2018, 215, 63-74.	5.1	44
31	Adsorption characterization and CO2 breakthrough of MWCNT/Mg-MOF-74 and MWCNT/MIL-100(Fe) composites. International Journal of Energy and Environmental Engineering, 2018, 9, 169-185.	1.3	20
32	Numerical investigation of a hybrid polymeric-ceramic membrane unit for carbon-free oxy-combustion applications. Energy, 2018, 147, 362-376.	4.5	2
33	Review of Novel Combustion Techniques for Clean Power Production in Gas Turbines. Energy & Fuels, 2018, 32, 979-1004.	2.5	71
34	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
35	Oxy-fuel combustion in a two-pass oxygen transport reactor for fire tube boiler application. Applied Energy, 2018, 229, 828-840.	5.1	10
36	Experimental investigation of the stability of a turbulent diffusion flame in a gas turbine combustor. Energy, 2018, 157, 904-913.	4.5	29

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37	Effect analysis on the macrostructure and static stability limits of oxy-methane flames in a premixed swirl combustor. Energy, 2018, 159, 86-96.	4.5	17
38	Combustion behavior and stability map of hydrogen-enriched oxy-methane premixed flames in a model gas turbine combustor. International Journal of Hydrogen Energy, 2018, 43, 16652-16666.	3.8	49
39	Experimental and numerical investigation of flow field and oxy-methane combustion characteristics in a low-power porous-plateÂreactor. Energy, 2018, 160, 783-795.	4.5	5
40	Effects of H₂ Enrichment and Inlet Velocity on Stability Limits and Shape of CH₄/H₂â€“O₂/CO₂ Flames in a Premixed Swirl Combustor. Energy & Fuels, 2018, 32, 9916-9925.	2.5	20
41	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
42	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. Journal of Cleaner Production, 2018, 196, 796-807.	4.6	1
43	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
44	Experimental study of atmospheric partially premixed oxy-combustion flames anchored over a perforated plate burner. Energy, 2017, 122, 159-167.	4.5	27
45	Oxy-Combustion of Hydrogen-Enriched Methane: Experimental Measurements and Analysis. Energy & Fuels, 2017, 31, 2007-2016.	2.5	23
46	Structure and Lean Extinction of Premixed Flames Stabilized on Conductive Perforated Plates. Energy & Fuels, 2017, 31, 1980-1992.	2.5	12
47	Oxy-fuel combustion technology: current status, applications, and trends. International Journal of Energy Research, 2017, 41, 1670-1708.	2.2	93
48	The Characteristics of Oxycombustion of Liquid Fuel in a Typical Water-Tube Boiler. Energy & Fuels, 2017, 31, 6305-6313.	2.5	12
49	Hydrogen production, oxygen separation and syngas oxy-combustion inside a water splitting membrane reactor. Renewable Energy, 2017, 113, 221-234.	4.3	12
50	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
51	Characteristic of air separation in hollow-fiber polymeric membrane for oxygen enriched air clean combustion applications. Journal of Cleaner Production, 2017, 143, 960-972.	4.6	15
52	Boiler dynamic control with optimized nitric oxides and efficiency. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2017, 231, 778-796.	0.7	1
53	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
54	Enhancement of adsorption carbon capture capacity of 13X with optimal incorporation of carbon nanotubes. International Journal of Energy and Environmental Engineering, 2017, 8, 219-230.	1.3	11

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55	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
56	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
57	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
58	Characteristics of H 2 -enriched CH 4 O 2 diffusion flames in a swirl-stabilized gas turbine combustor: Experimental and numerical study. International Journal of Hydrogen Energy, 2016, 41, 20418-20432.	3.8	41
59	Review on Premixed Combustion Technology: Stability, Emission Control, Applications, and Numerical Case Study. Energy & Fuels, 2016, 30, 9981-10014.	2.5	64
60	Effects of oxidizer flexibility and bluff-body blockage ratio on flammability limits of diffusion flames. Applied Energy, 2016, 178, 19-28.	5.1	34
61	Numerical study of hydrogen-enriched methane-air combustion under ultra-lean conditions. International Journal of Energy Research, 2016, 40, 743-762.	2.2	21
62	Experimental investigation of partially premixed methaneâ€“air and methaneâ€“oxygen flames stabilized over a perforated-plate burner. Applied Energy, 2016, 169, 126-137.	5.1	59
63	Soft Analyzer for Monitoring NOx Emissions From a Gas Turbine Combustor. Journal of Energy Resources Technology, Transactions of the ASME, 2016, 138, .	1.4	7
64	Numerical investigation of syngas oxy-combustion inside a LSCF-6428 oxygen transport membrane reactor. Energy, 2016, 96, 654-665.	4.5	32
65	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
66	Investigations of heat transfer, entropy generation and pressure build up for upward flow in a vertical channel equipped with a fin array. Heat and Mass Transfer, 2016, 52, 1953-1961.	1.2	4
67	Effect of microstructure and thickness on oxygen permeation of La2NiO4+Î´ membranes. Ceramics International, 2016, 42, 666-672.	2.3	12
68	Experimental and numerical analysis of oxy-fuel combustion in a porous plate reactor. International Journal of Energy Research, 2015, 39, 1229-1240.	2.2	16
69	Experimental analysis of oxygen-methane combustion inside a gas turbine reactor under various operating conditions. Energy, 2015, 86, 105-114.	4.5	38
70	Investigation of liquid ethanol evaporation and combustion in air and oxygen environments inside a 25 kW vertical reactor. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2015, 229, 647-661.	0.8	8
71	Solid Particle Erosion Downstream of an Orifice. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	0.8	18
72	Evaluation of the Accuracy of Selected Syngas Chemical Mechanisms. Journal of Energy Resources Technology, Transactions of the ASME, 2015, 137, .	1.4	14

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73	A New Study for Hybrid PV/Wind off-Grid Power Generation Systems with the Comparison of Results from Homer. International Journal of Green Energy, 2015, 12, 526-542.	2.1	37
74	Heat Transfer Characteristics in a Double-Pipe Heat Exchanger Equipped with Coiled Circular Wires. Experimental Heat Transfer, 2015, 28, 531-545.	2.3	36
75	Computational fluid dynamics study of hydrogen generation by low temperature methane reforming in a membrane reactor. International Journal of Hydrogen Energy, 2015, 40, 3158-3169.	3.8	47
76	Experimental Study on the Effect of Hydrogen Enrichment of Methane on the Stability and Emission of Nonpremixed Swirl Stabilized Combustor. Journal of Energy Resources Technology, Transactions of the ASME, 2015, 137, .	1.4	18
77	On the Modeling of Steam Methane Reforming. Journal of Energy Resources Technology, Transactions of the ASME, 2015, 137, .	1.4	35
78	Experimental and Numerical Investigation of La2NiO4 Membranes for Oxygen Separation: Geometry Optimization and Model Validation. Journal of Energy Resources Technology, Transactions of the ASME, 2015, 137, .	1.4	11
79	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
80	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
81	Design of an ion transport membrane reactor for application in fire tube boilers. Energy, 2015, 81, 787-801.	4.5	35
82	Numerical predictions of flow boiling characteristics: Current status, model setup and CFD modeling for different non-uniform heatingÂprofiles. Applied Thermal Engineering, 2015, 75, 451-460.	3.0	31
83	Boilers Optimal Control for Maximum Load Change Rate. Journal of Energy Resources Technology, Transactions of the ASME, 2014, 136, .	1.4	10
84	Experimental Investigation of the Flow Maldistribution Inside an Air-Cooled Heat Exchanger. Arabian Journal for Science and Engineering, 2014, 39, 8187-8198.	1.1	2
85	Characteristics of Oxyfuel and Airâ€“Fuel Combustion in an Industrial Water Tube Boiler. Heat Transfer Engineering, 2014, 35, 1394-1404.	1.2	11
86	Evaluation of gas radiation models in CFD modeling of oxy-combustion. Energy Conversion and Management, 2014, 81, 83-97.	4.4	49
87	Numerical investigations of combustion and emissions of syngas as compared to methane in a 200MW package boiler. Energy Conversion and Management, 2014, 83, 296-305.	4.4	22
88	Design of an ion transport membrane reactor for gas turbine combustion application. Journal of Membrane Science, 2014, 450, 60-71.	4.1	30
89	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
90	Current status of CHF predictions using CFD modeling technique and review of other techniques especially for non-uniform axial and circumferential heating profiles. Annals of Nuclear Energy, 2014, 70, 188-207.	0.9	15

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91	Study of Combustion Characteristics of Ethanol at Different Dilution With the Carrier Gas. , 2014, , .		0
92	Modeling of ion transport reactor for oxy-fuel combustion. International Journal of Energy Research, 2013, 37, 1265-1279.	2.2	15
93	Experimental and numerical investigations of an atmospheric diffusion oxy-combustion flame in a gas turbine model combustor. Applied Energy, 2013, 111, 401-415.	5.1	108
94	Numerical investigation of oxygen permeation and methane oxy-combustion in a stagnation flow ion transport membrane reactor. Energy, 2013, 54, 322-332.	4.5	21
95	Strain Influence on the Oxygen Electrocatalysis of the (100)-Oriented Epitaxial La₂NiO_{4+Î´} Thin Films at Elevated Temperatures. Journal of Physical Chemistry C, 2013, 117, 18789-18795.	1.5	48
96	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
97	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
98	Recent Development in Oxy-Combustion Technology and Its Applications to Gas Turbine Combustors and ITM Reactors. Energy & Fuels, 2013, 27, 2-19.	2.5	89
99	Investigations of an Ion Transport Membrane Reactor Specially Designed for a Power Cycle. Applied Mechanics and Materials, 2013, 302, 440-446.	0.2	7
100	Fluid to Fluid Modeling for Post Dry Out Using Dimensional Analysis and Energy Scaling. Applied Mechanics and Materials, 2013, 302, 42-48.	0.2	0
101	Investigations of Oxy-Fuel Combustion Characteristics and Oxygen Permeation Process in a Stagnation Flow ITM Reactor. Applied Mechanics and Materials, 2013, 302, 35-41.	0.2	0
102	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
103	Characteristics of Oxy-fuel Combustion in an Oxygen Transport Reactor. Energy & Fuels, 2012, 26, 4599-4606.	2.5	35
104	Prediction of Boilers Emission using Polynomial Networks. , 2006, , .		4
105	Analysis of methane, propane, and syngas oxyâ€flames in a fuelâ€flex gas turbine combustor for carbon capture. International Journal of Energy Research, 0, , .	2.2	4