

# Ahmed F Ghoniem

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89  
papers

3,584  
citations

30  
h-index

57  
g-index

90  
ext. papers

4,039  
ext. citations

5.8  
avg, IF

5.91  
L-index

#	Paper	IF	Citations
89	The Impact of Critical Operational Parameters on the Performance of the Aluminum Anode Baking Furnace. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , <b>2021</b> , 143,	2.6	2
88	Highly Durable C2 Hydrocarbon Production via the Oxidative Coupling of Methane Using a BaFe0.9Zr0.1O3 Mixed Ionic and Electronic Conducting Membrane and La2O3 Catalyst. <i>ACS Catalysis</i> , <b>2021</b> , 11, 3638-3661	13.1	11
87	A high-efficiency novel IGCC-OTM carbon capture power plant design. <i>Journal of Advanced Manufacturing and Processing</i> , <b>2020</b> , 2,	2.7	6
86	High-performance oxygen transport membrane reactors integrated with IGCC for carbon capture. <i>AIChE Journal</i> , <b>2020</b> , 66, e16427	3.6	13
85	Life cycle assessment of rice husk torrefaction and prospects for decentralized facilities at rice mills. <i>Journal of Cleaner Production</i> , <b>2020</b> , 275, 123177	10.3	14
84	Mixed ionic-electronic conducting (MIEC) membranes for thermochemical reduction of CO <sub>2</sub> : A review. <i>Progress in Energy and Combustion Science</i> , <b>2019</b> , 74, 1-30	33.6	43
83	Oxidative Dehydrogenation of Ethane to Ethylene in an Oxygen-Ion-Transport-Membrane Reactor: A Proposed Design for Process Intensification. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 7989-7997	3.9	7
82	CO <sub>2</sub> reduction and methane partial oxidation on surface catalyzed La <sub>0.9</sub> Ca <sub>0.1</sub> FeO <sub>3-<math>\delta</math></sub> oxygen transport membranes. <i>Proceedings of the Combustion Institute</i> , <b>2019</b> , 37, 5517-5524	5.9	7
81	Gas oxy combustion and conversion technologies for low carbon energy: Fundamentals, modeling and reactors. <i>Proceedings of the Combustion Institute</i> , <b>2019</b> , 37, 33-56	5.9	18
80	In situ catalyst exsolution on perovskite oxides for the production of CO and synthesis gas in ceramic membrane reactors. <i>Sustainable Energy and Fuels</i> , <b>2019</b> , 3, 2347-2355	5.8	22
79	Oxy-combustion of coal in liquid-antimony-anode solid oxide fuel cell system. <i>Proceedings of the Combustion Institute</i> , <b>2019</b> , 37, 2841-2848	5.9	4
78	Response of Premixed Stoichiometric Oxy Flames to Strain: Role of Chemistry and Transport. <i>Journal of Propulsion and Power</i> , <b>2018</b> , 34, 825-835	1.8	3
77	Hydrogen-assisted Carbon Dioxide Thermochemical Reduction on La Ca FeO Membranes: A Kinetics Study. <i>ChemSusChem</i> , <b>2018</b> , 11, 483-493	8.3	22
76	Steam-air blown bubbling fluidized bed biomass gasification (BFBBG): Multi-scale models and experimental validation. <i>AIChE Journal</i> , <b>2017</b> , 63, 1543-1565	3.6	21
75	Next-generation HVAC: Prospects for and limitations of desiccant and membrane-based dehumidification and cooling. <i>Applied Energy</i> , <b>2017</b> , 200, 330-346	10.7	57
74	On the characteristic flow and flame times for scaling oxy and air flame stabilization modes in premixed swirl combustion. <i>Proceedings of the Combustion Institute</i> , <b>2017</b> , 36, 3799-3807	5.9	28
73	Enhancing co-production of H <sub>2</sub> and syngas via water splitting and POM on surface-modified oxygen permeable membranes. <i>AIChE Journal</i> , <b>2016</b> , 62, 4427-4435	3.6	27

72	Modeling of indirect carbon fuel cell systems with steam and dry gasification. <i>Journal of Power Sources</i> , <b>2016</b> , 313, 51-64	8.9	21
71	Modeling of Biomass Char Gasification, Combustion, and Attrition Kinetics in Fluidized Beds. <i>Energy &amp; Fuels</i> , <b>2016</b> , 30, 360-376	4.1	26
70	The structure of swirl-stabilized turbulent premixed CH <sub>4</sub> /air and CH <sub>4</sub> /O <sub>2</sub> /CO <sub>2</sub> flames and mechanisms of intense burning of oxy-flames. <i>Combustion and Flame</i> , <b>2016</b> , 174, 111-119	5.3	25
69	Analysis of thermally coupled chemical looping combustion-based power plants with carbon capture. <i>International Journal of Greenhouse Gas Control</i> , <b>2015</b> , 35, 56-70	4.2	17
68	Modeling and parametric analysis of nitrogen and sulfur oxide removal from oxy-combustion flue gas using a single column absorber. <i>Fuel</i> , <b>2015</b> , 160, 178-188	7.1	26
67	Toward enhanced hydrogen generation from water using oxygen permeating LCF membranes. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 10093-107	3.6	27
66	Prediction and Validation of Major Gas and Tar Species from a Reactor Network Model of Air-Blown Fluidized Bed Biomass Gasification. <i>Energy &amp; Fuels</i> , <b>2015</b> , 29, 2437-2452	4.1	32
65	Surface oxygen vacancy and oxygen permeation flux limits of perovskite ion transport membranes. <i>Journal of Membrane Science</i> , <b>2015</b> , 489, 248-257	9.6	27
64	The coupling effect of gas-phase chemistry and surface reactions on oxygen permeation and fuel conversion in ITM reactors. <i>Journal of Membrane Science</i> , <b>2015</b> , 488, 1-12	9.6	3
63	Formation and Control of Sulfur Oxides in Sour Gas Oxy-Combustion: Prediction Using a Reactor Network Model. <i>Energy &amp; Fuels</i> , <b>2015</b> , 29, 7670-7680	4.1	8
62	Correspondence Between Stable Flame Macrostructure and Thermo-acoustic Instability in Premixed Swirl-Stabilized Turbulent Combustion. <i>Journal of Engineering for Gas Turbines and Power</i> , <b>2015</b> , 137,	1.7	24
61	Impact of fuel composition on the recirculation zone structure and its role in lean premixed flame anchoring. <i>Proceedings of the Combustion Institute</i> , <b>2015</b> , 35, 1493-1500	5.9	29
60	Design of a rotary reactor for chemical-looping combustion. Part 1: Fundamentals and design methodology. <i>Fuel</i> , <b>2014</b> , 121, 327-343	7.1	34
59	Modeling CO <sub>2</sub> Chemical Effects on CO Formation in Oxy-Fuel Diffusion Flames Using Detailed, Quasi-Global, and Global Reaction Mechanisms. <i>Combustion Science and Technology</i> , <b>2014</b> , 186, 829-848	1.5	17
58	Techno-economic assessment of two novel feeding systems for a dry-feed gasifier in an IGCC plant with Pd-membranes for CO <sub>2</sub> capture. <i>International Journal of Greenhouse Gas Control</i> , <b>2014</b> , 25, 62-78	4.2	30
57	Laminar oxy-fuel diffusion flame supported by an oxygen-permeable-ion-transport membrane. <i>Combustion and Flame</i> , <b>2013</b> , 160, 704-717	5.3	17
56	On the phase between pressure and heat release fluctuations for propane/hydrogen flames and its role in mode transitions. <i>Combustion and Flame</i> , <b>2013</b> , 160, 2827-2842	5.3	42
55	Modeling the slag behavior in three dimensional CFD simulation of a vertically-oriented oxy-coal combustor. <i>Fuel Processing Technology</i> , <b>2013</b> , 112, 106-117	7.2	54

54	Rotary Bed Reactor for Chemical-Looping Combustion with Carbon Capture. Part 1: Reactor Design and Model Development. <i>Energy &amp; Fuels</i> , <b>2013</b> , 27, 327-343	4.1	37
53	Impact of the Flame-Holder Heat-Transfer Characteristics on the Onset of Combustion Instability. <i>Combustion Science and Technology</i> , <b>2013</b> , 185, 1541-1567	1.5	17
52	Interactions between oxygen permeation and homogeneous-phase fuel conversion on the sweep side of an ion transport membrane. <i>Journal of Membrane Science</i> , <b>2013</b> , 428, 309-322	9.6	25
51	The influence of gasification reactions on char consumption under oxy-combustion conditions: Effects of particle trajectory and conversion. <i>Proceedings of the Combustion Institute</i> , <b>2013</b> , 34, 3471-3478 <sup>9</sup>	5.9	21
50	Development of a three-dimensional computational slag flow model for coal combustion and gasification. <i>Fuel</i> , <b>2013</b> , 113, 357-366	7.1	26
49	Large eddy simulations of coal gasification in an entrained flow gasifier. <i>Fuel</i> , <b>2013</b> , 104, 664-680	7.1	93
48	Rotary Bed Reactor for Chemical-Looping Combustion with Carbon Capture. Part 2: Base Case and Sensitivity Analysis. <i>Energy &amp; Fuels</i> , <b>2013</b> , 27, 344-359	4.1	19
47	Oxy-fuel combustion of pulverized coal: Characterization, fundamentals, stabilization and CFD modeling. <i>Progress in Energy and Combustion Science</i> , <b>2012</b> , 38, 156-214	33.6	690
46	Multiphysics Simulations of Entrained Flow Gasification. Part II: Constructing and Validating the Overall Model. <i>Energy &amp; Fuels</i> , <b>2012</b> , 26, 464-479	4.1	84
45	Multiphysics Simulations of Entrained Flow Gasification. Part I: Validating the Nonreacting Flow Solver and the Particle Turbulent Dispersion Model. <i>Energy &amp; Fuels</i> , <b>2012</b> , 26, 451-463	4.1	44
44	Simulation of Oxy-Coal Combustion in a 100 kWth Test Facility Using RANS and LES: A Validation Study. <i>Energy &amp; Fuels</i> , <b>2012</b> , 26, 4783-4798	4.1	89
43	Impact of curvature on the kinematic response of small flames. <i>Journal of Engineering Mathematics</i> , <b>2012</b> , 74, 37-52	1.2	
42	A dynamic reduced order model for simulating entrained flow gasifiers. <i>Fuel</i> , <b>2012</b> , 91, 61-80	7.1	67
41	Contributions of the wall boundary layer to the formation of the counter-rotating vortex pair in transverse jets. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 676, 461-490	3.7	27
40	An Adaptive Random Pore Model for Multimodal Pore Structure Evolution with Application to Char Gasification. <i>Energy &amp; Fuels</i> , <b>2011</b> , 25, 1423-1437	4.1	34
39	Needs, resources and climate change: Clean and efficient conversion technologies. <i>Progress in Energy and Combustion Science</i> , <b>2011</b> , 37, 15-51	33.6	203
38	Two-dimensional simulations of steady perforated-plate stabilized premixed flames. <i>Combustion Theory and Modelling</i> , <b>2010</b> , 14, 125-154	1.5	26
37	Techno-Economic Evaluation of Pressurized Oxy-Fuel Combustion Systems <b>2010</b> ,		1

36	Operating pressure dependence of the pressurized oxy-fuel combustion power cycle. <i>Energy</i> , <b>2010</b> , 35, 5391-5399	7.9	94
35	CFD Simulation of Entrained Flow Gasification With Improved Devolatilization and Char Consumption Submodels <b>2009</b> ,		6
34	Analysis of oxy-fuel combustion power cycle utilizing a pressurized coal combustor. <i>Energy</i> , <b>2009</b> , 34, 1332-1340	7.9	181
33	A fast 3D particle method for the simulation of buoyant flow. <i>Journal of Computational Physics</i> , <b>2008</b> , 227, 9063-9090	4.1	11
32	Vorticity structure and evolution in a transverse jet. <i>Journal of Fluid Mechanics</i> , <b>2007</b> , 575, 267-305	3.7	46
31	Modified interpolation kernels for treating diffusion and remeshing in vortex methods. <i>Journal of Computational Physics</i> , <b>2006</b> , 213, 239-263	4.1	24
30	K-means clustering for optimal partitioning and dynamic load balancing of parallel hierarchical N-body simulations. <i>Journal of Computational Physics</i> , <b>2005</b> , 207, 493-528	4.1	42
29	Self-sustained oscillations and vortex shedding in backward-facing step flows: Simulation and linear instability analysis. <i>Physics of Fluids</i> , <b>2004</b> , 16, 3361-3373	4.4	84
28	Shear flow-driven combustion instability: Evidence, simulation, and modeling. <i>Proceedings of the Combustion Institute</i> , <b>2002</b> , 29, 53-60	5.9	43
27	Simulation of the Piston Driven Flow Inside a Cylinder With an Eccentric Port. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , <b>1998</b> , 120, 319-326	2.1	4
26	BEM SOLUTION OF THE 3D INTERNAL NEUMANN PROBLEM AND A REGULARIZED FORMULATION FOR THE POTENTIAL VELOCITY GRADIENTS. <i>International Journal for Numerical Methods in Fluids</i> , <b>1997</b> , 24, 81-100	1.9	7
25	Three-Dimensional Vortex Simulation of Time Dependent Incompressible Internal Viscous Flows. <i>Journal of Computational Physics</i> , <b>1997</b> , 134, 75-95	4.1	23
24	3D Vortex Simulation of Intake Flow in a Port-Cylinder with a Valve Seat and a Moving Piston <b>1996</b> ,		2
23	Lagrangian simulation of a thin non-premixed flame in the field of an asymmetric layer. <i>Combustion and Flame</i> , <b>1996</b> , 106, 41-61	5.3	7
22	Effects of the free-stream density ratio on free and forced spatially developing shear layers. <i>Physics of Fluids</i> , <b>1995</b> , 7, 2036-2051	4.4	78
21	A computational model for the rise and dispersion of wind-blown, buoyancy-driven plumesII. Penetration of atmospheric inversion. <i>Atmospheric Environment</i> , <b>1994</b> , 28, 3019-3032	5.3	4
20	A computational model for the rise and dispersion of wind-blown, buoyancy-driven plumesI. Linearly stratified atmosphere. <i>Atmospheric Environment</i> , <b>1994</b> , 28, 3005-3018	5.3	14
19	A computational model for the rise and dispersion of wind-blown, buoyancy-driven plumesI. Neutrally stratified atmosphere. <i>Atmospheric Environment Part A General Topics</i> , <b>1993</b> , 27, 2295-2311		21

18	Simulation of the Nonreacting Flow in a Bluff-Body Burner; Effect of the Diameter Ratio. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , <b>1993</b> , 115, 474-484	2.1	10
17	Dispersion and deposition of smoke plumes generated in massive fires. <i>Journal of Hazardous Materials</i> , <b>1993</b> , 33, 275-293	12.8	20
16	Vortex simulation of a three-dimensional reacting shear layer with infinite-rate kinetics. <i>AIAA Journal</i> , <b>1992</b> , 30, 105-116	2.1	19
15	The three-dimensional structure of periodic vorticity layers under non-symmetric conditions. <i>Journal of Fluid Mechanics</i> , <b>1992</b> , 243, 353	3.7	19
14	Simulation of rollup and mixing in rayleigh-taylor flow using the transport-element method. <i>Journal of Computational Physics</i> , <b>1992</b> , 99, 1-27	4.1	18
13	Three-dimensional vortex simulation of rollup and entrainment in a shear layer. <i>Journal of Computational Physics</i> , <b>1991</b> , 97, 172-223	4.1	33
12	Vortex simulation of the intake flow in a planar piston-chamber device. <i>International Journal for Numerical Methods in Fluids</i> , <b>1991</b> , 12, 237-260	1.9	9
11	Numerical simulation of the convective instability in a dump combustor. <i>AIAA Journal</i> , <b>1991</b> , 29, 911-919	2.1	49
10	Numerical study of a three-dimensional vortex method. <i>Journal of Computational Physics</i> , <b>1990</b> , 86, 75-106	4.1	91
9	Effect of Two-Dimensional Shear Layer Dynamics on Mixing and Combustion at Low Heat Release. <i>Combustion Science and Technology</i> , <b>1990</b> , 72, 79-99	1.5	16
8	Numerical simulation of a thermally stratified shear layer using the vortex element method. <i>Journal of Computational Physics</i> , <b>1988</b> , 79, 135-166	4.1	37
7	Validation study of vortex methods. <i>Journal of Computational Physics</i> , <b>1988</b> , 74, 283-317	4.1	67
6	Lagrangian simulation of a reacting mixing layer at low heat release. <i>AIAA Journal</i> , <b>1988</b> , 26, 690-697	2.1	15
5	Effect of Reynolds number on the structure of recirculating flow. <i>AIAA Journal</i> , <b>1987</b> , 25, 168-171	2.1	14
4	Numerical study of the dynamics of a forced shear layer. <i>Physics of Fluids</i> , <b>1987</b> , 30, 706		53
3	Vortex simulation of laminar recirculating flow. <i>Journal of Computational Physics</i> , <b>1987</b> , 68, 346-377	4.1	61
2	Grid-free simulation of diffusion using random walk methods. <i>Journal of Computational Physics</i> , <b>1985</b> , 61, 1-37	4.1	95
1	Inference of reaction kinetics for supercritical water heavy oil upgrading with a two-phase stirred reactor model. <i>AIChE Journal</i> , e17488	3.6	0

