

Syed A Taqvi

List of Publications by Year in descending order

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115
papers

4,175
citations

94433

37
h-index

133252

59
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120
all docs

120
docs citations

120
times ranked

3265
citing authors

#	ARTICLE	IF	CITATIONS
1	Pyrolysis of high ash sewage sludge: Kinetics and thermodynamic analysis using Coats-Redfern method. <i>Renewable Energy</i> , 2019, 131, 854-860.	8.9	260
2	Synergistic effect on co-pyrolysis of rice husk and sewage sludge by thermal behavior, kinetics, thermodynamic parameters and artificial neural network. <i>Waste Management</i> , 2019, 85, 131-140.	7.4	157
3	Pyrolysis of high-ash sewage sludge: Thermo-kinetic study using TGA and artificial neural networks. <i>Fuel</i> , 2018, 233, 529-538.	6.4	148
4	Potential of biomass for bioenergy in Pakistan based on present case and future perspectives. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 81, 1247-1258.	16.4	122
5	Applications of artificial intelligence in COVID-19 pandemic: A comprehensive review. <i>Expert Systems With Applications</i> , 2021, 185, 115695.	7.6	119
6	Current challenges and innovative developments in pretreatment of lignocellulosic residues for biofuel production: A review. <i>Fuel</i> , 2021, 287, 119670.	6.4	114
7	Copper and calcium-based metal organic framework (MOF) catalyst for biodiesel production from waste cooking oil: A process optimization study. <i>Energy Conversion and Management</i> , 2020, 215, 112934.	9.2	112
8	A state of the art review on biomass processing and conversion technologies to produce hydrogen and its recovery via membrane separation. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 15166-15195.	7.1	102
9	Artificial neural network approach for the steam gasification of palm oil waste using bottom ash and CaO. <i>Renewable Energy</i> , 2019, 132, 243-254.	8.9	101
10	Demonstrating the suitability of canola residue biomass to biofuel conversion via pyrolysis through reaction kinetics, thermodynamics and evolved gas analyses. <i>Bioresource Technology</i> , 2019, 279, 67-73.	9.6	100
11	Catalytic pyrolysis of paddy husk in a drop type pyrolyzer for bio-oil production: The role of temperature and catalyst. <i>Journal of Analytical and Applied Pyrolysis</i> , 2014, 106, 57-62.	5.5	93
12	Thermo-kinetics and gaseous product analysis of banana peel pyrolysis for its bioenergy potential. <i>Biomass and Bioenergy</i> , 2019, 122, 193-201.	5.7	86
13	Prediction of Bio-oil Yield and Hydrogen Contents Based on Machine Learning Method: Effect of Biomass Compositions and Pyrolysis Conditions. <i>Energy & Fuels</i> , 2020, 34, 11050-11060.	5.1	86
14	A comparative study of machine learning methods for bio-oil yield prediction – A genetic algorithm-based features selection. <i>Bioresource Technology</i> , 2021, 335, 125292.	9.6	82
15	Machine learning prediction of pyrolytic gas yield and compositions with feature reduction methods: Effects of pyrolysis conditions and biomass characteristics. <i>Bioresource Technology</i> , 2021, 339, 125581.	9.6	81
16	Enhanced lignin extraction and optimisation from oil palm biomass using neural network modelling. <i>Fuel</i> , 2021, 293, 120485.	6.4	78
17	Syngas Production from Steam Gasification of Palm Kernel Shell with Subsequent CO ₂ Capture Using CaO Sorbent: An Aspen Plus Modeling. <i>Energy & Fuels</i> , 2017, 31, 12350-12357.	5.1	74
18	Recent developments on sewage sludge pyrolysis and its kinetics: Resources recovery, thermogravimetric platforms, and innovative prospects. <i>Computers and Chemical Engineering</i> , 2021, 150, 107325.	3.8	74

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19	Optimization on cleaner intensification of ozone production using Artificial Neural Network and Response Surface Methodology: Parametric and comparative study. <i>Journal of Cleaner Production</i> , 2020, 252, 119833.	9.3	69
20	Kinetic analysis of <i>Botryococcus braunii</i> pyrolysis using model-free and model fitting methods. <i>Fuel</i> , 2018, 214, 369-380.	6.4	65
21	Assessment of agro-industrial residues for bioenergy potential by investigating thermo-kinetic behavior in a slow pyrolysis process. <i>Fuel</i> , 2020, 278, 118259.	6.4	65
22	Microplastic degradation as a sustainable concurrent approach for producing biofuel and obliterating hazardous environmental effects: A state-of-the-art review. <i>Journal of Hazardous Materials</i> , 2021, 418, 126381.	12.4	63
23	Kinetic and thermodynamic analyses of dried oily sludge pyrolysis. <i>Journal of the Energy Institute</i> , 2021, 95, 30-40.	5.3	59
24	Neural network applications in fault diagnosis and detection: an overview of implementations in engineering-related systems. <i>Neural Computing and Applications</i> , 2020, 32, 447-472.	5.6	57
25	Artificial neural networks for the prediction of biochar yield: A comparative study of metaheuristic algorithms. <i>Bioresource Technology</i> , 2022, 355, 127215.	9.6	54
26	Kinetic and Thermodynamic Analyses of Sugar Cane Bagasse and Sewage Sludge Co-pyrolysis Process. <i>Energy & Fuels</i> , 2018, 32, 9551-9558.	5.1	52
27	A Feed-Forward Back Propagation Neural Network Approach to Predict the Life Condition of Crude Oil Pipeline. <i>Processes</i> , 2020, 8, 661.	2.8	52
28	Modeling and simulation of coupled pyrolysis and gasification of oily sludge in a rotary kiln. <i>Fuel</i> , 2020, 279, 118152.	6.4	51
29	Kinetic study of the catalytic pyrolysis of paddy husk by use of thermogravimetric data and the Coats&Redfern model. <i>Research on Chemical Intermediates</i> , 2015, 41, 9743-9755.	2.7	50
30	Tailored hydrotalcite-based Mg-Ni-Al catalyst for hydrogen production via methane decomposition: Effect of nickel concentration and spinel-like structures. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 14424-14433.	7.1	48
31	Air catalytic biomass (PKS) gasification in a fixed-bed downdraft gasifier using waste bottom ash as catalyst with NARX neural network modelling. <i>Computers and Chemical Engineering</i> , 2020, 142, 107048.	3.8	48
32	A Review on Data-Driven Learning Approaches for Fault Detection and Diagnosis in Chemical Processes. <i>ChemBioEng Reviews</i> , 2021, 8, 239-259.	4.4	48
33	Hydrogeochemical and health risk evaluation of arsenic in shallow and deep aquifers along the different floodplains of Punjab, Pakistan. <i>Journal of Hazardous Materials</i> , 2021, 402, 124074.	12.4	46
34	A performance evaluation study of nano-biochar as a potential slow-release nano-fertilizer from wheat straw residue for sustainable agriculture. <i>Chemosphere</i> , 2021, 285, 131382.	8.2	46
35	Catalytic fast pyrolysis of rice husk: Influence of commercial and synthesized microporous zeolites on deoxygenation of biomass pyrolysis vapors. <i>International Journal of Energy Research</i> , 2018, 42, 1352-1362.	4.5	45
36	A Comprehensive Review on Thermal Coconversion of Biomass, Sludge, Coal, and Their Blends Using Thermogravimetric Analysis. <i>Journal of Chemistry</i> , 2020, 2020, 1-23.	1.9	41

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37	An overview on control strategies for CO ₂ capture using absorption/stripping system. <i>Chemical Engineering Research and Design</i> , 2019, 147, 319-337.	5.6	40
38	Optimization and Dynamics of Distillation Column Using Aspen Plus®. <i>Procedia Engineering</i> , 2016, 148, 978-984.	1.2	39
39	A state-of-the-art review on spent coffee ground (SCG) pyrolysis for future biorefinery. <i>Chemosphere</i> , 2022, 286, 131730.	8.2	39
40	In situ catalytic fast pyrolysis of paddy husk pyrolysis vapors over MCM-22 and ITQ-2 zeolites. <i>Journal of Analytical and Applied Pyrolysis</i> , 2015, 114, 32-39.	5.5	38
41	NO and SO ₂ emissions in palm kernel shell catalytic steam gasification with in-situ CO ₂ adsorption for hydrogen production in a pilot-scale fluidized bed gasification system. <i>Journal of Cleaner Production</i> , 2019, 236, 117636.	9.3	38
42	Fault detection in distillation column using NARX neural network. <i>Neural Computing and Applications</i> , 2020, 32, 3503-3519.	5.6	37
43	New trends in improving gasoline quality and octane through naphtha isomerization: a short review. <i>Applied Petrochemical Research</i> , 2018, 8, 131-139.	1.3	33
44	Use of Gasoline, LPG and LPG-HHO Blend in SI Engine: A Comparative Performance for Emission Control and Sustainable Environment. <i>Processes</i> , 2020, 8, 74.	2.8	33
45	Off-grid electricity generation using mixed biomass compost: A scenario-based study with sensitivity analysis. <i>Applied Energy</i> , 2017, 201, 363-370.	10.1	32
46	Catalytic Pyrolysis Of Botryococcus Braunii (microalgae) Over Layered and Delaminated Zeolites For Aromatic Hydrocarbon Production. <i>Energy Procedia</i> , 2017, 142, 381-385.	1.8	32
47	Landfill site selection by integrating fuzzy logic, AHP, and WLC method based on multi-criteria decision analysis. <i>Environmental Science and Pollution Research</i> , 2021, 28, 19726-19741.	5.3	32
48	Thermokinetics synergistic effects on co-pyrolysis of coal and rice husk blends for bioenergy production. <i>Fuel</i> , 2022, 318, 123685.	6.4	32
49	Investigating the characterisation, kinetic mechanism, and thermodynamic behaviour of coal-biomass blends in co-pyrolysis process. <i>Chemical Engineering Research and Design</i> , 2022, 163, 645-658.	5.6	32
50	Waste Biomass Gasification Based off-grid Electricity Generation: A Case Study in Pakistan. <i>Energy Procedia</i> , 2016, 103, 406-412.	1.8	30
51	Improved process monitoring using the CUSUM and EWMA-based multiscale PCA fault detection framework. <i>Chinese Journal of Chemical Engineering</i> , 2021, 29, 253-265.	3.5	30
52	Improved project control for sustainable development of construction sector to reduce environment risks. <i>Journal of Cleaner Production</i> , 2019, 240, 118214.	9.3	27
53	Oxidative reaction interaction and synergistic index of emulsified pyrolysis bio-oil/diesel fuels. <i>Renewable Energy</i> , 2019, 136, 223-234.	8.9	27
54	Multiple Fault Diagnosis in Distillation Column Using Multikernel Support Vector Machine. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 14689-14706.	3.7	25

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55	Energy, exergy and economic (3E) evaluation of CO ₂ capture from natural gas using pyridinium functionalized ionic liquids: A simulation study. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 90, 103951.	4.4	25
56	Methane decomposition for hydrogen production over biomass fly ash-based CeO ₂ nanowires promoted cobalt catalyst. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105816.	6.7	24
57	Catalytic Consequences of Micropore Topology on Biomass Pyrolysis Vapors over Shape Selective Zeolites. <i>Energy Procedia</i> , 2017, 105, 557-561.	1.8	23
58	SVM, ANN, and PSF modelling approaches for prediction of iron dust minimum ignition temperature (MIT) based on the synergistic effect of dispersion pressure and concentration. <i>Chemical Engineering Research and Design</i> , 2021, 152, 375-390.	5.6	23
59	<sc>HF</sc> free greener <sc>Cl</sc> terminated <sc>MXene</sc> as novel electrocatalyst for overall water splitting in alkaline media. <i>International Journal of Energy Research</i> , 2022, 46, 10942-10954.	4.5	23
60	Optimal integration of a biomass-based polygeneration system in an iron production plant for negative carbon emissions. <i>International Journal of Energy Research</i> , 2020, 44, 9350-9366.	4.5	22
61	Agro-industrial residue gasification feasibility in captive power plants: A South-Asian case study. <i>Energy</i> , 2021, 214, 118952.	8.8	22
62	Global plastic waste management strategies (Technical and behavioral) during and after COVID-19 pandemic for cleaner global urban life. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 0, , 1-10.	2.3	22
63	Performance, Emission and Combustion Characteristics of a Diesel Engine Powered by Macadamia and Grapeseed Biodiesels. <i>Energies</i> , 2020, 13, 2748.	3.1	20
64	Investigation of slow pyrolysis mechanism and kinetic modeling of <i>Scenedesmus quadricauda</i> biomass. <i>Journal of Analytical and Applied Pyrolysis</i> , 2021, 158, 105149.	5.5	20
65	An integrated framework of data-driven, metaheuristic, and mechanistic modeling approach for biomass pyrolysis. <i>Chemical Engineering Research and Design</i> , 2022, 162, 337-345.	5.6	20
66	Production and Evaluation of Physicochemical Characteristics of Paddy Husk Bio-char for its C Sequestration Applications. <i>Bioenergy Research</i> , 2015, 8, 1800-1809.	3.9	18
67	A comparative assessment of solid fuel pellets production from torrefied agro-residues and their blends. <i>Journal of Analytical and Applied Pyrolysis</i> , 2021, 156, 105125.	5.5	18
68	Leak Detection in Gas Mixture Pipelines under Transient Conditions Using Hammerstein Model and Adaptive Thresholds. <i>Processes</i> , 2020, 8, 474.	2.8	17
69	Modelling of the minimum ignition temperature (MIT) of corn dust using statistical analysis and artificial neural networks based on the synergistic effect of concentration and dispersion pressure. <i>Chemical Engineering Research and Design</i> , 2021, 147, 742-755.	5.6	17
70	Experimental Study of CO ₂ Conversion into Methanol by Synthesized Photocatalyst (ZnFe ₂ O ₄ /TiO ₂) Using Visible Light as an Energy Source. <i>Catalysts</i> , 2020, 10, 163.	3.5	16
71	Impact of layered and delaminated zeolites on catalytic fast pyrolysis of microalgae using fixed-bed reactor and Py-GC/MS. <i>Journal of Analytical and Applied Pyrolysis</i> , 2021, 155, 105025.	5.5	16
72	Multiscale Principal Component Analysis-Signed Directed Graph Based Process Monitoring and Fault Diagnosis. <i>ACS Omega</i> , 2022, 7, 9496-9512.	3.5	15

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73	Rigorous dynamic modelling and identification of distillation column using Aspen Plus. , 2017, , .		14
74	Fruit Waste to Energy through Open Fermentation. Energy Procedia, 2017, 142, 904-909.	1.8	13
75	Emerging potential of spent coffee ground valorization for fuel pellet production in a biorefinery. Environment, Development and Sustainability, 2023, 25, 7585-7623.	5.0	13
76	Evolved Gas Analysis and Kinetics of Catalytic and Non-Catalytic Pyrolysis of Microalgae Chlorella sp. Biomass With Ni ₁ -Al ₂ O ₃ Catalyst via Thermogravimetric Analysis. Frontiers in Energy Research, 0, 9, .	2.3	12
77	Impact Analysis of Large-Scale Wind Farms Integration in Weak Transmission Grid from Technical Perspectives. Energies, 2020, 13, 5513.	3.1	11
78	Synthesis, characterization and catalytic testing of MCM-22 derived catalysts for n-hexane cracking. Scientific Reports, 2020, 10, 21786.	3.3	10
79	Enhanced Methane Production from Anaerobic Co-Digestion of Wheat Straw Rice Straw and Sugarcane Bagasse: A Kinetic Analysis. Applied Sciences (Switzerland), 2021, 11, 6069.	2.5	10
80	A Molecular Simulation Study of Silica/Polysulfone Mixed Matrix Membrane for Mixed Gas Separation. Polymers, 2021, 13, 2199.	4.5	10
81	Thermodynamic Performance Analysis of Hydrofluoroolefins (HFO) Refrigerants in Commercial Air-Conditioning Systems for Sustainable Environment. Processes, 2020, 8, 187.	2.8	9
82	Prediction of industrial debutanizer column compositions using data-driven ANFIS- and ANN-based approaches. Neural Computing and Applications, 2021, 33, 8375-8387.	5.6	9
83	Torrefaction Thermogravimetric Analysis and Kinetics of Sorghum Distilled Residue for Sustainable Fuel Production. Sustainability, 2021, 13, 4246.	3.2	9
84	Performance Comparison of Industrially Produced Formaldehyde Using Two Different Catalysts. Processes, 2020, 8, 571.	2.8	8
85	Prediction of infinite dilution activity coefficient of alcohol in ionic liquids using group contribution method. Journal of Molecular Liquids, 2021, 324, 114723.	4.9	8
86	A mathematical model-based approach for DC multi-microgrid performance evaluations considering intermittent distributed energy resources, energy storage, multiple load classes, and system components variations. Energy Science and Engineering, 2021, 9, 1919-1934.	4.0	8
87	One-Step Biodiesel Production from Waste Cooking Oil Using CaO Promoted Activated Carbon Catalyst from Prunus persica Seeds. Catalysts, 2022, 12, 592.	3.5	8
88	Nano-catalysts for upgrading bio-oil: Catalytic decarboxylation and hydrodeoxygenation. AIP Conference Proceedings, 2017, , .	0.4	7
89	Aspen Plus® Simulation Studies of Steam Gasification in Fluidized Bed Reactor for Hydrogen Production Using Palm Kernel Shell. Communications in Computer and Information Science, 2017, , 628-641.	0.5	7
90	System Behavior and Predictive Controller Performance Near the Azeotropic Region. Chemical Engineering and Technology, 2018, 41, 806-818.	1.5	7

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91	Effect of drying parameters on the physical, morphological and thermal properties of spray-dried inulin. <i>Journal of Polymer Engineering</i> , 2018, 38, 775-783.	1.4	7
92	Influence of Plasticizers on Mechanical and Thermal Properties of Methyl Cellulose-Based Edible Films. <i>Journal of Polymers and the Environment</i> , 2018, 26, 291-300.	5.0	7
93	Investigation of Biomass Integrated Air Gasification Regenerative Gas Turbine Power Plants. <i>Energies</i> , 2022, 15, 741.	3.1	7
94	Artificial Neural Network for Anomalies Detection in Distillation Column. <i>Communications in Computer and Information Science</i> , 2017, , 302-311.	0.5	6
95	Plant-wide MPC control scheme for CO ₂ absorption/stripping system. <i>Materials Today: Proceedings</i> , 2021, 42, 191-200.	1.8	6
96	Multistage carbon dioxide compressor efficiency enhancement using waste heat powered absorption chillers. <i>Energy Science and Engineering</i> , 2021, 9, 1373-1384.	4.0	6
97	Simultaneous fault diagnosis based on multiple kernel support vector machine in nonlinear dynamic distillation column. <i>Energy Science and Engineering</i> , 2022, 10, 814-839.	4.0	6
98	Experimental analysis and data-driven machine learning modelling of the minimum ignition temperature (MIT) of aluminium dust. <i>Fuel</i> , 2022, 324, 124569.	6.4	6
99	System Identification of Industrial Debutanizer Column. , 2019, , .		5
100	Impact of Varying Load Conditions and Cooling Energy Comparison of a Double-Inlet Pulse Tube Refrigerator. <i>Processes</i> , 2020, 8, 352.	2.8	4
101	Process system analysis on oil processing facility and economic viability from oil well-to-tank. <i>SN Applied Sciences</i> , 2021, 3, 1.	2.9	4
102	Development of Regression Models by Closed-Loop Identification of Distillation Column - A Case Study. <i>Indian Journal of Science and Technology</i> , 2017, 10, .	0.7	4
103	Simulation of steam gasification of halophyte biomass for syngas production using Aspen Plus®. <i>Biomass Conversion and Biorefinery</i> , 0, , 1.	4.6	4
104	Ionic Liquid Assessment as Suitable Solvent for Biogas Upgrading Technology Based on the Process System Engineering Perspective. <i>ChemBioEng Reviews</i> , 2022, 9, 190-211.	4.4	4
105	Realizing the Value of Big Data in Process Monitoring and Control: Current Issues and Opportunities. <i>Advances in Intelligent Systems and Computing</i> , 2019, , 128-138.	0.6	3
106	Amine-impregnated silica zeolite from microalgae ash at different calcination temperatures for CO ₂ capture. <i>International Journal of Energy Research</i> , 2022, 46, 1220-1233.	4.5	3
107	Online system modeling of chemical process plant using U-model. , 2017, , .		2
108	Catalytic pyrolysis of biomass using shape-selective zeolites for bio-oil enhancement. , 2021, , 39-60.		2

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109	NARX NETWORK BASED DATA-DRIVEN ALGORITHM FOR DETECTION OF TRAY FAULTS IN NONLINEAR DYNAMIC DISTILLATION COLUMN. Jurnal Teknologi (Sciences and Engineering), 2020, 82, .	0.4	2
110	Intelligent Control of an Industrial Debutanizer Column. Chemical Engineering and Technology, 2022, 45, 667-677.	1.5	2
111	Distillation Column: Review of Major Disturbances. , 2019, , .		1
112	Physical property and gas transport studies of ultrathin polysulfone membrane from 298.15 to 328.15 K and 2 to 50 bar: atomistic molecular simulation and empirical modelling. RSC Advances, 2020, 10, 32370-32392.	3.6	1
113	Methoxyâ€methylheptane as a cleaner fuel additive: An energyâ€and costâ€efficient enhancement for separation and purification units. Energy Science and Engineering, 2021, 9, 1632-1646.	4.0	1
114	Development of Reaction Kinetics Model for the Production of Synthesis Gas from Dry Methane Reforming. Bulletin of Chemical Reaction Engineering and Catalysis, 2021, 16, 440-445.	1.1	1
115	Polyetherimide-Montmorillonite Nano-Hybrid Composite Membranes: CO2 Permeance Study via Theoretical Models. Processes, 2020, 8, 118.	2.8	1