

Syed A Taqvi

List of Publications by Year in descending order

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115
papers

4,175
citations

94381

37
h-index

133188

59
g-index

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.	4.3	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.	3.7	157
3	Pyrolysis of high-ash sewage sludge: Thermo-kinetic study using TGA and artificial neural networks. <i>Fuel</i> , 2018, 233, 529-538.	3.4	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.	8.2	122
5	Applications of artificial intelligence in COVID-19 pandemic: A comprehensive review. <i>Expert Systems With Applications</i> , 2021, 185, 115695.	4.4	119
6	Current challenges and innovative developments in pretreatment of lignocellulosic residues for biofuel production: A review. <i>Fuel</i> , 2021, 287, 119670.	3.4	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.	4.4	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.	3.8	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.	4.3	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.	4.8	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.	2.6	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.	2.9	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.	2.5	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.	4.8	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.	4.8	81
16	Enhanced lignin extraction and optimisation from oil palm biomass using neural network modelling. <i>Fuel</i> , 2021, 293, 120485.	3.4	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.	2.5	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.	2.0	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.	4.6	69
20	Kinetic analysis of <i>Botryococcus braunii</i> pyrolysis using model-free and model fitting methods. <i>Fuel</i> , 2018, 214, 369-380.	3.4	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.	3.4	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.	6.5	63
23	Kinetic and thermodynamic analyses of dried oily sludge pyrolysis. <i>Journal of the Energy Institute</i> , 2021, 95, 30-40.	2.7	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.	3.2	57
25	Artificial neural networks for the prediction of biochar yield: A comparative study of metaheuristic algorithms. <i>Bioresource Technology</i> , 2022, 355, 127215.	4.8	54
26	Kinetic and Thermodynamic Analyses of Sugar Cane Bagasse and Sewage Sludge Co-pyrolysis Process. <i>Energy & Fuels</i> , 2018, 32, 9551-9558.	2.5	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.	1.3	52
28	Modeling and simulation of coupled pyrolysis and gasification of oily sludge in a rotary kiln. <i>Fuel</i> , 2020, 279, 118152.	3.4	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.	1.3	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.	3.8	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.	2.0	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.	2.6	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.	6.5	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.	4.2	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.	2.2	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.	0.9	41

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37	An overview on control strategies for CO ₂ capture using absorption/stripping system. Chemical Engineering Research and Design, 2019, 147, 319-337.	2.7	40
38	Optimization and Dynamics of Distillation Column Using Aspen Plus®. Procedia Engineering, 2016, 148, 978-984.	1.2	39
39	A state-of-the-art review on spent coffee ground (SCG) pyrolysis for future biorefinery. Chemosphere, 2022, 286, 131730.	4.2	39
40	In situ catalytic fast pyrolysis of paddy husk pyrolysis vapors over MCM-22 and ITQ-2 zeolites. Journal of Analytical and Applied Pyrolysis, 2015, 114, 32-39.	2.6	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. Journal of Cleaner Production, 2019, 236, 117636.	4.6	38
42	Fault detection in distillation column using NARX neural network. Neural Computing and Applications, 2020, 32, 3503-3519.	3.2	37
43	New trends in improving gasoline quality and octane through naphtha isomerization: a short review. Applied Petrochemical Research, 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. Processes, 2020, 8, 74.	1.3	33
45	Off-grid electricity generation using mixed biomass compost: A scenario-based study with sensitivity analysis. Applied Energy, 2017, 201, 363-370.	5.1	32
46	Catalytic Pyrolysis Of Botryococcus Braunii (microalgae) Over Layered and Delaminated Zeolites For Aromatic Hydrocarbon Production. Energy Procedia, 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. Environmental Science and Pollution Research, 2021, 28, 19726-19741.	2.7	32
48	Thermokinetics synergistic effects on co-pyrolysis of coal and rice husk blends for bioenergy production. Fuel, 2022, 318, 123685.	3.4	32
49	Investigating the characterisation, kinetic mechanism, and thermodynamic behaviour of coal-biomass blends in co-pyrolysis process. Chemical Engineering Research and Design, 2022, 163, 645-658.	2.7	32
50	Waste Biomass Gasification Based off-grid Electricity Generation: A Case Study in Pakistan. Energy Procedia, 2016, 103, 406-412.	1.8	30
51	Improved process monitoring using the CUSUM and EWMA-based multiscale PCA fault detection framework. Chinese Journal of Chemical Engineering, 2021, 29, 253-265.	1.7	30
52	Improved project control for sustainable development of construction sector to reduce environment risks. Journal of Cleaner Production, 2019, 240, 118214.	4.6	27
53	Oxidative reaction interaction and synergistic index of emulsified pyrolysis bio-oil/diesel fuels. Renewable Energy, 2019, 136, 223-234.	4.3	27
54	Multiple Fault Diagnosis in Distillation Column Using Multikernel Support Vector Machine. Industrial & Engineering Chemistry Research, 2018, 57, 14689-14706.	1.8	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.	2.1	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.	3.3	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.	2.7	23
59	Free green Cu-terminated MXene as novel electrocatalyst for overall water splitting in alkaline media. <i>International Journal of Energy Research</i> , 2022, 46, 10942-10954.	2.2	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.	2.2	22
61	Agro-industrial residue gasification feasibility in captive power plants: A South-Asian case study. <i>Energy</i> , 2021, 214, 118952.	4.5	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.	1.2	22
63	Performance, Emission and Combustion Characteristics of a Diesel Engine Powered by Macadamia and Grapeseed Biodiesels. <i>Energies</i> , 2020, 13, 2748.	1.6	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.	2.6	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.	2.7	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.	2.2	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.	2.6	18
68	Leak Detection in Gas Mixture Pipelines under Transient Conditions Using Hammerstein Model and Adaptive Thresholds. <i>Processes</i> , 2020, 8, 474.	1.3	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.	2.7	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.	1.6	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.	2.6	16
72	Multiscale Principal Component Analysis-Signed Directed Graph Based Process Monitoring and Fault Diagnosis. <i>ACS Omega</i> , 2022, 7, 9496-9512.	1.6	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.	2.7	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, .	1.2	12
77	Impact Analysis of Large-Scale Wind Farms Integration in Weak Transmission Grid from Technical Perspectives. Energies, 2020, 13, 5513.	1.6	11
78	Synthesis, characterization and catalytic testing of MCM-22 derived catalysts for n-hexane cracking. Scientific Reports, 2020, 10, 21786.	1.6	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.	1.3	10
80	A Molecular Simulation Study of Silica/Polysulfone Mixed Matrix Membrane for Mixed Gas Separation. Polymers, 2021, 13, 2199.	2.0	10
81	Thermodynamic Performance Analysis of Hydrofluoroolefins (HFO) Refrigerants in Commercial Air-Conditioning Systems for Sustainable Environment. Processes, 2020, 8, 187.	1.3	9
82	Prediction of industrial debutanizer column compositions using data-driven ANFIS- and ANN-based approaches. Neural Computing and Applications, 2021, 33, 8375-8387.	3.2	9
83	Torrefaction Thermogravimetric Analysis and Kinetics of Sorghum Distilled Residue for Sustainable Fuel Production. Sustainability, 2021, 13, 4246.	1.6	9
84	Performance Comparison of Industrially Produced Formaldehyde Using Two Different Catalysts. Processes, 2020, 8, 571.	1.3	8
85	Prediction of infinite dilution activity coefficient of alcohol in ionic liquids using group contribution method. Journal of Molecular Liquids, 2021, 324, 114723.	2.3	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.	1.9	8
87	One-Step Biodiesel Production from Waste Cooking Oil Using CaO Promoted Activated Carbon Catalyst from Prunus persica Seeds. Catalysts, 2022, 12, 592.	1.6	8
88	Nano-catalysts for upgrading bio-oil: Catalytic decarboxylation and hydrodeoxygenation. AIP Conference Proceedings, 2017, , .	0.3	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.	0.4	7
90	System Behavior and Predictive Controller Performance Near the Azeotropic Region. Chemical Engineering and Technology, 2018, 41, 806-818.	0.9	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.	0.6	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.	2.4	7
93	Investigation of Biomass Integrated Air Gasification Regenerative Gas Turbine Power Plants. <i>Energies</i> , 2022, 15, 741.	1.6	7
94	Artificial Neural Network for Anomalies Detection in Distillation Column. <i>Communications in Computer and Information Science</i> , 2017, , 302-311.	0.4	6
95	Plant-wide MPC control scheme for CO ₂ absorption/stripping system. <i>Materials Today: Proceedings</i> , 2021, 42, 191-200.	0.9	6
96	Multistage carbon dioxide compressor efficiency enhancement using waste heat powered absorption chillers. <i>Energy Science and Engineering</i> , 2021, 9, 1373-1384.	1.9	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.	1.9	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.	3.4	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.	1.3	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.	1.5	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, .	0.5	4
103	Simulation of steam gasification of halophyte biomass for syngas production using Aspen Plus®. <i>Biomass Conversion and Biorefinery</i> , 0, , 1.	2.9	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.	2.6	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.	0.5	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.	2.2	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, .	0.3	2
110	Intelligent Control of an Industrial Debutanizer Column. Chemical Engineering and Technology, 2022, 45, 667-677.	0.9	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.	1.7	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.	1.9	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.	0.5	1
115	Polyetherimide-Montmorillonite Nano-Hybrid Composite Membranes: CO2 Permeance Study via Theoretical Models. Processes, 2020, 8, 118.	1.3	1