Thomas Edward Rufford

List of Publications by Year
in descending order

91	5,331	109321 35	82547 72
papers	citations	h-index	g-index

93	93	93	7312
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nitrogen-doped Ti 3 C 2 T x MXene electrodes for high-performance supercapacitors. Nano Energy, 2017, 38, 368-376.	16.0	528
2	The removal of CO2 and N2 from natural gas: A review of conventional and emerging process technologies. Journal of Petroleum Science and Engineering, 2012, 94-95, 123-154.	4.2	511
3	Microstructure and electrochemical double-layer capacitance of carbon electrodes prepared by zinc chloride activation of sugar cane bagasse. Journal of Power Sources, 2010, 195, 912-918.	7.8	475
4	Nanoporous carbon electrode from waste coffee beans for high performance supercapacitors. Electrochemistry Communications, 2008, 10, 1594-1597.	4.7	435
5	Advances and challenges in electrochemical CO₂reduction processes: an engineering and design perspective looking beyond new catalyst materials. Journal of Materials Chemistry A, 2020, 8, 1511-1544.	10.3	305
6	Double-layer capacitance of waste coffee ground activated carbons in an organic electrolyte. Electrochemistry Communications, 2009, 11, 974-977.	4.7	144
7	Kinetic- and thermodynamic-based improvements of lithium borohydride incorporated into activated carbon. Acta Materialia, 2008, 56, 6257-6263.	7.9	132
8	High-performance cobaltâ€“tungstenâ€“boron catalyst supported on Ni foam for hydrogen generation from alkaline sodium borohydride solution. International Journal of Hydrogen Energy, 2008, 33, 4405-4412.	7.1	127
9	A critical review of flow maps for gas-liquid flows in vertical pipes and annuli. Chemical Engineering Journal, 2017, 326, 350-377.	12.7	118
10	Activated carbon monoliths with hierarchical pore structure from tar pitch and coal powder for the adsorption of CO2, CH4 and N2. Carbon, 2016, 103, 115-124.	10.3	116
11	Screening Zeolites for Gas Separation Applications Involving Methane, Nitrogen, and Carbon Dioxide. Journal of Chemical & Engineering Data, 2012, 57, 106-113.	1.9	105
12	A Review of Conventional and Emerging Process Technologies for the Recovery of Helium from Natural Gas. Adsorption Science and Technology, 2014, 32, 49-72.	3.2	104
13	The role of electrode wettability in electrochemical reduction of carbon dioxide. Journal of Materials Chemistry A, 2021, 9, 19369-19409.	10.3	95
14	Nitrogen and Phosphorous Coâ€Đoped Graphene Monolith for Supercapacitors. ChemSusChem, 2016, 9, 513-520.	6.8	90
15	Capture of low grade methane from nitrogen gas using dual-reflux pressure swing adsorption. Chemical Engineering Journal, 2015, 281, 739-748.	12.7	84
16	A comparative study of chemical treatment by FeCl₃, MgCl₂, and ZnCl₂ on microstructure, surface chemistry, and double-layercapacitance of carbons from waste biomass. Journal of Materials Research, 2010, 25, 1451-1459.	2.6	76
17	Synthesis and characterization of three amino-functionalized metalâ€“organic frameworks based on the 2-aminoterephthalic ligand. Dalton Transactions, 2015, 44, 8190-8197.	3.3	72
18	Empirical Analysis of the Contributions of Mesopores and Micropores to the Double-Layer Capacitance of Carbons. Journal of Physical Chemistry C, 2009, 113, 19335-19343.	3.1	70

#	Article	IF	Citations
19	Adsorption Equilibria and Kinetics of Methane + Nitrogen Mixtures on the Activated Carbon Norit RB3. Industrial & Engineering Chemistry Research, 2013, 52, 14270-14281.	3.7	68
20	Gate opening effect of zeolitic imidazolate framework ZIF-7 for adsorption of CH₄ and CO₂ from N₂. Journal of Materials Chemistry A, 2017, 5, 21389-21399.	10.3	67
21	Toward Excellence of Transition Metalâ€Based Catalysts for CO₂ Electrochemical Reduction: An Overview of Strategies and Rationales. Small Methods, 2020, 4, 2000033.	8.6	60
22	Catalytic reduction of NO by CO over copper-oxide supported mesoporous silica. Applied Catalysis A: General, 2011, 409-410, 55-65.	4.3	56
23	Nitrogen-Doped Carbon Foams Synthesized from Banana Peel and Zinc Complex Template for Adsorption of CO₂, CH₄, and N₂. Energy & Fuels, 2016, 30, 7298-7309.	5.1	52
24	Surface-etched halloysite nanotubes in mixed matrix membranes for efficient gas separation. Separation and Purification Technology, 2017, 173, 63-71.	7.9	50
25	Experimental investigation on the impact of coal fines generation and migration on coal permeability. Journal of Petroleum Science and Engineering, 2017, 159, 257-266.	4.2	49
26	Influence of calcination temperatures of Feitknecht compound precursor on the structure of Niâ€“Al2O3 catalyst and the corresponding catalytic activity in methane decomposition to hydrogen and carbon nanofibers. Applied Catalysis A: General, 2009, 362, 1-7.	4.3	46
27	Selective catalytic reduction of NO by CO over CuO supported on SBA-15: Effect of CuO loading on the activity of catalysts. Catalysis Today, 2011, 166, 188-193.	4.4	46
28	A facile method to synthesize boron-doped Ni/Fe alloy nano-chains as electrocatalyst for water oxidation. Journal of Power Sources, 2017, 349, 68-74.	7.8	45
29	The preparation of activated carbon discs from tar pitch and coal powder for adsorption of CO 2 , CH 4 and N 2. Microporous and Mesoporous Materials, 2017, 238, 19-26.	4.4	45
30	Selective catalytic reduction of NO with CO using different metal-oxides incorporated in MCM-41. Chemical Engineering Journal, 2014, 255, 437-444.	12.7	43
31	KOH catalysed preparation of activated carbon aerogels for dye adsorption. Journal of Colloid and Interface Science, 2011, 357, 157-162.	9.4	41
32	A comparison study of catalytic oxidation and acid oxidation to prepare carbon nanotubes for filling with Ru nanoparticles. Carbon, 2011, 49, 2022-2032.	10.3	38
33	Volumetric Adsorption Measurements of N₂, CO₂, CH₄, and a CO₂ + CH₄ Mixture on a Natural Chabazite from (5 to 3000) kPa. Journal of Chemical & Engineering Data, 2012, 57, 93-101.	1.9	38
34	Structure Control of Nitrogen-Rich Graphene Nanosheets Using Hydrothermal Treatment and Formaldehyde Polymerization for Supercapacitors. ACS Applied Materials & Interfaces, 2016, 8, 18051-18059.	8.0	38
35	The effect of rank, lithotype and roughness on contact angle measurements in coal cleats. International Journal of Coal Geology, 2017, 179, 302-315.	5.0	37
36	Thiol functionalized mesoporous silicas for selective adsorption of precious metals. Minerals Engineering, 2012, 35, 20-26.	4.3	36

#	Article	IF	Citations
37	Modulated Sn Oxidation States over a Cu₂O-Derived Substrate for Selective Electrochemical CO₂ Reduction. ACS Applied Materials & Interfaces, 2020, 12, 22760-22770.	8.0	36
38	Electrochemical behavior of carbon-nanotube/cobalt oxyhydroxide nanoflake multilayer films. Journal of Power Sources, 2009, 193, 930-934.	7.8	35
39	In Situ Tetraethoxysilaneâ€Templated Porous Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3â^'Î´} Perovskite for the Oxygen Evolution Reaction. ChemElectroChem, 2015, 2, 200-203.	3.4	35
40	Cobalt Electrochemical Recovery from Lithium Cobalt Oxides in Deep Eutectic Choline Chloride+Urea Solvents. ChemSusChem, 2021, 14, 2972-2983.	6.8	33
41	A preliminary study of oxidant stimulation for enhancing coal seam permeability: Effects of sodium hypochlorite oxidation on subbituminous and bituminous Australian coals. International Journal of Coal Geology, 2018, 200, 36-44.	5.0	31
42	Anisotropic coal permeability estimation by determining cleat compressibility using mercury intrusion porosimetry and stressâ€“strain measurements. International Journal of Coal Geology, 2019, 205, 75-86.	5.0	31
43	Effects of microporous layer on electrolyte flooding in gas diffusion electrodes and selectivity of CO2 electrolysis to CO. Journal of Power Sources, 2022, 522, 230998.	7.8	31
44	Emission characteristics of waste tallow and waste cooking oil based ternary biodiesel fuels. Energy Procedia, 2019, 160, 842-847.	1.8	30
45	Comparison of melamine resin and melamine network as precursors for carbon electrodes. Carbon, 2015, 81, 239-250.	10.3	29
46	Catalystâ€“Electrolyte Interactions in Aqueous Reline Solutions for Highly Selective Electrochemical CO₂ Reduction. ChemSusChem, 2020, 13, 304-311.	6.8	29
47	Permeability enhancement of coal by chemical-free fracturing using high-voltage electrohydraulic discharge. Journal of Natural Gas Science and Engineering, 2018, 57, 1-10.	4.4	28
48	Efficient water oxidation with amorphous transition metal boride catalysts synthesized by chemical reduction of metal nitrate salts at room temperature. RSC Advances, 2017, 7, 32923-32930.	3.6	27
49	Activity of mesoporous-MnOx (m-MnOx) and CuO/m-MnOx for catalytic reduction of NO with CO. Catalysis Today, 2013, 212, 38-44.	4.4	26
50	Creation of microchannels in Bowen Basin coals using UV laser and reactive ion etching. International Journal of Coal Geology, 2015, 144-145, 48-57.	5.0	25
51	Structural sensitivity of mesoporous alumina for copper catalyst loading used for NO reduction in presence of CO. Chemical Engineering Research and Design, 2015, 101, 27-43.	5.6	24
52	Effect of sonication and hydrogen peroxide oxidation of carbon nanotube modifiers on the microstructure of pitch-derived activated carbon foam discs. Carbon, 2017, 124, 142-151.	10.3	24
53	Studies on mechanism of carbon nanotube and manganese oxide nanosheet self-sustained thin film for electrochemical capacitor. Solid State Ionics, 2010, 181, 1690-1696.	2.7	22
54	Characterisation and evaluation of shockwave generation in water conditions for coal fracturing. Journal of Natural Gas Science and Engineering, 2019, 66, 255-264.	4.4	22

#	Article	IF	Citations
55	Characteristics of counter-current gas-liquid two-phase flow and its limitations in vertical annuli. Experimental Thermal and Fluid Science, 2019, 109, 109899.	2.7	21
56	Regulating the reaction zone of electrochemical CO2 reduction on gas-diffusion electrodes by distinctive hydrophilic-hydrophobic catalyst layers. Applied Catalysis B: Environmental, 2022, 310, 121362.	20.2	21
57	Capacity and kinetic measurements of methane and nitrogen adsorption on H+-mordenite at 243â€“303ÂK and pressures to 900ÂkPa using a dynamic column breakthrough apparatus. Adsorption, 2013, 19, 1165-1180.	3.0	20
58	Developing new mechanistic models for predicting pressure gradient in coal bed methane wells. Journal of Natural Gas Science and Engineering, 2016, 33, 961-972.	4.4	20
59	Use of pressure signal analysis to characterise counter-current two-phase flow regimes in annuli. Chemical Engineering Research and Design, 2020, 153, 547-561.	5.6	20
60	Unveiling the effects of dimensionality of tin oxide-derived catalysts on CO₂ reduction by using gas-diffusion electrodes. Reaction Chemistry and Engineering, 2021, 6, 345-352.	3.7	20
61	A dynamic column breakthrough apparatus for adsorption capacity measurements with quantitative uncertainties. Adsorption, 2012, 18, 251-263.	3.0	19
62	Effect of rheological properties of mesophase pitch and coal mixtures on pore development in activated carbon discs with high compressive strength. Fuel Processing Technology, 2018, 177, 219-227.	7.2	19
63	A reduced graphene oxideâ€“NiO composite electrode with a high and stable capacitance. Sustainable Energy and Fuels, 2018, 2, 673-678.	4.9	18
64	Gas storage potential and electrohydraulic discharge (EHD) stimulation of coal seam interburden from the Surat Basin. International Journal of Coal Geology, 2019, 208, 24-36.	5.0	14
65	Carbon Monoliths by Assembling Carbon Spheres for Gas Adsorption. Industrial & Engineering Chemistry Research, 2019, 58, 4957-4969.	3.7	14
66	Control over the morphology and phase of MnO_x formed in the modified Hummers' method and impact on the electrocapacitive properties of MnO_xâ€“graphite oxide composite electrodes. RSC Advances, 2016, 6, 44717-44722.	3.6	13
67	Gravimetric adsorption measurements of helium on natural clinoptilolite and synthetic molecular sieves at pressures up to 3500ÂkPa. Microporous and Mesoporous Materials, 2017, 244, 218-225.	4.4	13
68	Modeling and cost analysis of helium recovery using combined-membrane process configurations. Separation and Purification Technology, 2020, 236, 116269.	7.9	13
69	Characterization of fines produced during drainage of coalbed methane reservoirs in the Linfen block, Ordos Basin. Energy Exploration and Exploitation, 2020, 38, 1664-1679.	2.3	12
70	Lowâ€Temperature Synthesis of Hierarchical Amorphous Basic Nickel Carbonate Particles for Water Oxidation Catalysis. ChemSusChem, 2015, 8, 2193-2197.	6.8	11
71	Measurements of helium adsorption on natural clinoptilolite at temperatures from (123.15 to 423.15) K and pressures up to 35â€MPa. Separation and Purification Technology, 2019, 223, 1-9.	7.9	11
72	Effects of structural properties of silicon carbide-derived carbons on their electrochemical double-layer capacitance in aqueous and organic electrolytes. Journal of Solid State Electrochemistry, 2014, 18, 703-711.	2.5	10

#	Article	IF	Citations
73	Emission Characteristics of Polymer Additive Mixed Diesel-Sunflower Biodiesel Fuel. Energy Procedia, 2019, 156, 59-64.	1.8	10
74	A flexible grapheneâ€“carbon fiber composite electrode with high surface area-normalized capacitance. Sustainable Energy and Fuels, 2019, 3, 1827-1832.	4.9	10
75	The Effect of Rank and Lithotype on Coal Wettability and its Application to Coal Relative Permeability Models. , 2015, , .		9
76	Integration of hybrid membrane-distillation processes to recover helium from pre-treated natural gas in liquefied natural gas plants. Separation and Purification Technology, 2021, 263, 118355.	7.9	9
77	Evaluation of Flowsheet Design Approaches to Improve Energy Efficiency in Multistage Membrane Processes to Recover Helium. Industrial & Engineering Chemistry Research, 2021, 60, 2588-2599.	3.7	7
78	An experimental and simulation study of binary adsorption in metalâ€“organic frameworks. Separation and Purification Technology, 2015, 146, 136-142.	7.9	6
79	Techno-economic evaluation of multistage membrane combinations using three different materials to recover helium from natural gas. Computer Aided Chemical Engineering, 2018, 44, 1201-1206.	0.5	6
80	Effect of oxidation and silane surface treatments of coal powders on relative permeability in packed coal beds. Journal of Natural Gas Science and Engineering, 2019, 69, 102931.	4.4	5
81	Understanding the Effects of Anion Interactions with Ag Electrodes on Electrochemical CO 2 Reduction in Choline Halide Electrolytes. ChemSusChem, 2021, 14, 2601-2611.	6.8	5
82	A phase inversion polymer coating to prevent swelling and spalling of clay fines in coal seam gas wells. International Journal of Coal Science and Technology, 2018, 5, 179-190.	6.0	4
83	Integrating a Top-Gas Recycling and CO2 Electrolysis Process for H2-Rich Gas Injection and Reduce CO2 Emissions from an Ironmaking Blast Furnace. Materials, 2022, 15, 2008.	2.9	4
84	Screening of Nanoparticles to Control Clay Swelling in Coal Bed Methane Wells. , 2016, , .		3
85	Catalystâ€“Electrolyte Interactions in Aqueous Reline Solutions for Highly Selective Electrochemical CO 2 Reduction. ChemSusChem, 2020, 13, 282-282.	6.8	2
86	Mechanistic Modelling of Counter-Current Slug Flows in Vertical Annuli. , 2015, , .		1
87	Poly(vinylidene fluoride) as a porogen to prepare nitrogen-enriched porous carbon electrode materials from pyrolysis of melamine resin. Materials Today Communications, 2015, 3, 36-42.	1.9	1
88	Smart, Porous Polymer Coatings to Bind Clay Minerals in Coal Bed Methane Wells. , 2016, , .		0
89	Experimental Study of Impact of Dewatering Induced Coal Fines on Coal Permeability. , 2017, , .		0
90	Mitigating the Failure of Downhole Pumps Due to Gas Interference in Coal Seam Gas Wells. , 2018, , .		0

#	Article	IF	Citations
91	Modifying Catalyst-Electrolyte Interactions for Enhanced Electrochemical CO2 Reduction. ECS Meeting Abstracts, 2020, MA2020-01, 1518-1518.	0.0	0