

# Thomas Edward Rufford

## List of Publications by Year in descending order

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91  
papers

5,331  
citations

109321

35  
h-index

82547

72  
g-index

93  
all docs

93  
docs citations

93  
times ranked

7312  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of microporous layer on electrolyte flooding in gas diffusion electrodes and selectivity of CO <sub>2</sub> electrolysis to CO. Journal of Power Sources, 2022, 522, 230998.	7.8	31
2	Integrating a Top-Gas Recycling and CO <sub>2</sub> Electrolysis Process for H <sub>2</sub> -Rich Gas Injection and Reduce CO <sub>2</sub> Emissions from an Ironmaking Blast Furnace. Materials, 2022, 15, 2008.	2.9	4
3	Regulating the reaction zone of electrochemical CO <sub>2</sub> reduction on gas-diffusion electrodes by distinctive hydrophilic-hydrophobic catalyst layers. Applied Catalysis B: Environmental, 2022, 310, 121362.	20.2	21
4	Unveiling the effects of dimensionality of tin oxide-derived catalysts on CO <sub>2</sub> reduction by using gas-diffusion electrodes. Reaction Chemistry and Engineering, 2021, 6, 345-352.	3.7	20
5	The role of electrode wettability in electrochemical reduction of carbon dioxide. Journal of Materials Chemistry A, 2021, 9, 19369-19409.	10.3	95
6	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
7	Understanding the Effects of Anion Interactions with Ag Electrodes on Electrochemical CO <sub>2</sub> Reduction in Choline Halide Electrolytes. ChemSusChem, 2021, 14, 2601-2611.	6.8	5
8	Cobalt Electrochemical Recovery from Lithium Cobalt Oxides in Deep Eutectic Choline Chloride+Urea Solvents. ChemSusChem, 2021, 14, 2972-2983.	6.8	33
9	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
10	Catalyst-Electrolyte Interactions in Aqueous Reline Solutions for Highly Selective Electrochemical CO <sub>2</sub> Reduction. ChemSusChem, 2020, 13, 304-311.	6.8	29
11	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
12	Modeling and cost analysis of helium recovery using combined-membrane process configurations. Separation and Purification Technology, 2020, 236, 116269.	7.9	13
13	Advances and challenges in electrochemical CO <sub>2</sub> reduction processes: an engineering and design perspective looking beyond new catalyst materials. Journal of Materials Chemistry A, 2020, 8, 1511-1544.	10.3	305
14	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
15	Catalyst-Electrolyte Interactions in Aqueous Reline Solutions for Highly Selective Electrochemical CO <sub>2</sub> Reduction. ChemSusChem, 2020, 13, 282-282.	6.8	2
16	Modulated Sn Oxidation States over a Cu <sub>2</sub> O-Derived Substrate for Selective Electrochemical CO <sub>2</sub> Reduction. ACS Applied Materials & Interfaces, 2020, 12, 22760-22770.	8.0	36
17	Toward Excellence of Transition Metal-Based Catalysts for CO <sub>2</sub> Electrochemical Reduction: An Overview of Strategies and Rationales. Small Methods, 2020, 4, 2000033.	8.6	60
18	Modifying Catalyst-Electrolyte Interactions for Enhanced Electrochemical CO <sub>2</sub> Reduction. ECS Meeting Abstracts, 2020, MA2020-01, 1518-1518.	0.0	0

#	ARTICLE	IF	CITATIONS
19	Effect of oxidation and silane surface treatments of coal powders on relative permeability in packed coal beds. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 69, 102931.	4.4	5
20	Characteristics of counter-current gas-liquid two-phase flow and its limitations in vertical annuli. <i>Experimental Thermal and Fluid Science</i> , 2019, 109, 109899.	2.7	21
21	Emission Characteristics of Polymer Additive Mixed Diesel-Sunflower Biodiesel Fuel. <i>Energy Procedia</i> , 2019, 156, 59-64.	1.8	10
22	Emission characteristics of waste tallow and waste cooking oil based ternary biodiesel fuels. <i>Energy Procedia</i> , 2019, 160, 842-847.	1.8	30
23	A flexible graphene-carbon fiber composite electrode with high surface area-normalized capacitance. <i>Sustainable Energy and Fuels</i> , 2019, 3, 1827-1832.	4.9	10
24	Gas storage potential and electrohydraulic discharge (EHD) stimulation of coal seam interburden from the Surat Basin. <i>International Journal of Coal Geology</i> , 2019, 208, 24-36.	5.0	14
25	Measurements of helium adsorption on natural clinoptilolite at temperatures from (123.15 to 423.15) K and pressures up to 35 MPa. <i>Separation and Purification Technology</i> , 2019, 223, 1-9.	7.9	11
26	Carbon Monoliths by Assembling Carbon Spheres for Gas Adsorption. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 4957-4969.	3.7	14
27	Anisotropic coal permeability estimation by determining cleat compressibility using mercury intrusion porosimetry and stress-strain measurements. <i>International Journal of Coal Geology</i> , 2019, 205, 75-86.	5.0	31
28	Characterisation and evaluation of shockwave generation in water conditions for coal fracturing. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 66, 255-264.	4.4	22
29	A phase inversion polymer coating to prevent swelling and spalling of clay fines in coal seam gas wells. <i>International Journal of Coal Science and Technology</i> , 2018, 5, 179-190.	6.0	4
30	A reduced graphene oxide-NiO composite electrode with a high and stable capacitance. <i>Sustainable Energy and Fuels</i> , 2018, 2, 673-678.	4.9	18
31	A preliminary study of oxidant stimulation for enhancing coal seam permeability: Effects of sodium hypochlorite oxidation on subbituminous and bituminous Australian coals. <i>International Journal of Coal Geology</i> , 2018, 200, 36-44.	5.0	31
32	Mitigating the Failure of Downhole Pumps Due to Gas Interference in Coal Seam Gas Wells. , 2018, , .		0
33	Techno-economic evaluation of multistage membrane combinations using three different materials to recover helium from natural gas. <i>Computer Aided Chemical Engineering</i> , 2018, 44, 1201-1206.	0.5	6
34	Permeability enhancement of coal by chemical-free fracturing using high-voltage electrohydraulic discharge. <i>Journal of Natural Gas Science and Engineering</i> , 2018, 57, 1-10.	4.4	28
35	Effect of rheological properties of mesophase pitch and coal mixtures on pore development in activated carbon discs with high compressive strength. <i>Fuel Processing Technology</i> , 2018, 177, 219-227.	7.2	19
36	Nitrogen-doped Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXene electrodes for high-performance supercapacitors. <i>Nano Energy</i> , 2017, 38, 368-376.	16.0	528

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37	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
38	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
39	Gate opening effect of zeolitic imidazolate framework ZIF-7 for adsorption of CH <sub>4</sub> and CO <sub>2</sub> from N <sub>2</sub> . Journal of Materials Chemistry A, 2017, 5, 21389-21399.	10.3	67
40	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
41	Experimental Study of Impact of Dewatering Induced Coal Fines on Coal Permeability. , 2017, , .		0
42	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
43	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
44	Gravimetric adsorption measurements of helium on natural clinoptilolite and synthetic molecular sieves at pressures up to 3500 kPa. Microporous and Mesoporous Materials, 2017, 244, 218-225.	4.4	13
45	The preparation of activated carbon discs from tar pitch and coal powder for adsorption of CO <sub>2</sub> , CH <sub>4</sub> and N <sub>2</sub> . Microporous and Mesoporous Materials, 2017, 238, 19-26.	4.4	45
46	Surface-etched halloysite nanotubes in mixed matrix membranes for efficient gas separation. Separation and Purification Technology, 2017, 173, 63-71.	7.9	50
47	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
48	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
49	Control over the morphology and phase of MnO <sub>x</sub> formed in the modified Hummers' method and impact on the electrocapacitive properties of MnO <sub>x</sub> @graphite oxide composite electrodes. RSC Advances, 2016, 6, 44717-44722.	3.6	13
50	Nitrogen-Doped Carbon Foams Synthesized from Banana Peel and Zinc Complex Template for Adsorption of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> . Energy & Fuels, 2016, 30, 7298-7309.	5.1	52
51	Screening of Nanoparticles to Control Clay Swelling in Coal Bed Methane Wells. , 2016, , .		3
52	Smart, Porous Polymer Coatings to Bind Clay Minerals in Coal Bed Methane Wells. , 2016, , .		0
53	Nitrogen and Phosphorous Co-Doped Graphene Monolith for Supercapacitors. ChemSusChem, 2016, 9, 513-520.	6.8	90
54	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

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55	Activated carbon monoliths with hierarchical pore structure from tar pitch and coal powder for the adsorption of CO <sub>2</sub> , CH <sub>4</sub> and N <sub>2</sub> . Carbon, 2016, 103, 115-124.	10.3	116
56	Mechanistic Modelling of Counter-Current Slug Flows in Vertical Annuli. , 2015, , .		1
57	The Effect of Rank and Lithotype on Coal Wettability and its Application to Coal Relative Permeability Models. , 2015, , .		9
58	Low-temperature Synthesis of Hierarchical Amorphous Basic Nickel Carbonate Particles for Water Oxidation Catalysis. ChemSusChem, 2015, 8, 2193-2197.	6.8	11
59	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
60	Capture of low grade methane from nitrogen gas using dual-reflux pressure swing adsorption. Chemical Engineering Journal, 2015, 281, 739-748.	12.7	84
61	An experimental and simulation study of binary adsorption in metal-organic frameworks. Separation and Purification Technology, 2015, 146, 136-142.	7.9	6
62	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
63	Synthesis and characterization of three amino-functionalized metal-organic frameworks based on the 2-aminoterephthalic ligand. Dalton Transactions, 2015, 44, 8190-8197.	3.3	72
64	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
65	In Situ Tetraethoxysilane-templated Porous Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> Perovskite for the Oxygen Evolution Reaction. ChemElectroChem, 2015, 2, 200-203.	3.4	35
66	Comparison of melamine resin and melamine network as precursors for carbon electrodes. Carbon, 2015, 81, 239-250.	10.3	29
67	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
68	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
69	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
70	Capacity and kinetic measurements of methane and nitrogen adsorption on H <sup>+</sup> -mordenite at 243-303 K and pressures to 900 kPa using a dynamic column breakthrough apparatus. Adsorption, 2013, 19, 1165-1180.	3.0	20
71	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
72	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

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73	The removal of CO <sub>2</sub> and N <sub>2</sub> from natural gas: A review of conventional and emerging process technologies. <i>Journal of Petroleum Science and Engineering</i> , 2012, 94-95, 123-154.	4.2	511
74	Thiol functionalized mesoporous silicas for selective adsorption of precious metals. <i>Minerals Engineering</i> , 2012, 35, 20-26.	4.3	36
75	A dynamic column breakthrough apparatus for adsorption capacity measurements with quantitative uncertainties. <i>Adsorption</i> , 2012, 18, 251-263.	3.0	19
76	Volumetric Adsorption Measurements of N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , and a CO <sub>2</sub> + CH <sub>4</sub> Mixture on a Natural Chabazite from (5 to 3000) kPa. <i>Journal of Chemical &amp; Engineering Data</i> , 2012, 57, 93-101.	1.9	38
77	Screening Zeolites for Gas Separation Applications Involving Methane, Nitrogen, and Carbon Dioxide. <i>Journal of Chemical &amp; Engineering Data</i> , 2012, 57, 106-113.	1.9	105
78	Catalytic reduction of NO by CO over copper-oxide supported mesoporous silica. <i>Applied Catalysis A: General</i> , 2011, 409-410, 55-65.	4.3	56
79	Selective catalytic reduction of NO by CO over CuO supported on SBA-15: Effect of CuO loading on the activity of catalysts. <i>Catalysis Today</i> , 2011, 166, 188-193.	4.4	46
80	A comparison study of catalytic oxidation and acid oxidation to prepare carbon nanotubes for filling with Ru nanoparticles. <i>Carbon</i> , 2011, 49, 2022-2032.	10.3	38
81	KOH catalysed preparation of activated carbon aerogels for dye adsorption. <i>Journal of Colloid and Interface Science</i> , 2011, 357, 157-162.	9.4	41
82	Studies on mechanism of carbon nanotube and manganese oxide nanosheet self-sustained thin film for electrochemical capacitor. <i>Solid State Ionics</i> , 2010, 181, 1690-1696.	2.7	22
83	Microstructure and electrochemical double-layer capacitance of carbon electrodes prepared by zinc chloride activation of sugar cane bagasse. <i>Journal of Power Sources</i> , 2010, 195, 912-918.	7.8	475
84	A comparative study of chemical treatment by FeCl <sub>3</sub> , MgCl <sub>2</sub> , and ZnCl <sub>2</sub> on microstructure, surface chemistry, and double-layer capacitance of carbons from waste biomass. <i>Journal of Materials Research</i> , 2010, 25, 1451-1459.	2.6	76
85	Double-layer capacitance of waste coffee ground activated carbons in an organic electrolyte. <i>Electrochemistry Communications</i> , 2009, 11, 974-977.	4.7	144
86	Electrochemical behavior of carbon-nanotube/cobalt oxyhydroxide nanoflake multilayer films. <i>Journal of Power Sources</i> , 2009, 193, 930-934.	7.8	35
87	Influence of calcination temperatures of Feitknecht compound precursor on the structure of Ni-Al <sub>2</sub> O <sub>3</sub> catalyst and the corresponding catalytic activity in methane decomposition to hydrogen and carbon nanofibers. <i>Applied Catalysis A: General</i> , 2009, 362, 1-7.	4.3	46
88	Empirical Analysis of the Contributions of Mesopores and Micropores to the Double-Layer Capacitance of Carbons. <i>Journal of Physical Chemistry C</i> , 2009, 113, 19335-19343.	3.1	70
89	Kinetic- and thermodynamic-based improvements of lithium borohydride incorporated into activated carbon. <i>Acta Materialia</i> , 2008, 56, 6257-6263.	7.9	132
90	Nanoporous carbon electrode from waste coffee beans for high performance supercapacitors. <i>Electrochemistry Communications</i> , 2008, 10, 1594-1597.	4.7	435

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91	High-performance cobalt-tungsten-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