Karen M Steel

List of Publications by Year
in descending order

56 papers	1,797 citations	236925 25 h-index	276875 41 g-index
56 all docs	56 docs citations	56 times ranked	1114 citing authors

#	Article	IF	Citations
1	The production of ultra clean coal by chemical demineralisation. Fuel, 2001, 80, 2019-2023.	6.4	116
2	Recovery of fluoride values from spent pot-lining: Precipitation of an aluminium hydroxyfluoride hydrate product. Separation and Purification Technology, 2008, 61, 182-192.	7.9	109
3	Production of Ultra Clean Coal. Fuel Processing Technology, 2001, 70, 171-192.	7.2	100
4	Interfacial Gas Enrichment at Hydrophobic Surfaces and the Origin of Promotion of Gas Hydrate Formation by Hydrophobic Solid Particles. Journal of Physical Chemistry C, 2017, 121, 3830-3840.	3.1	94
5	Use of FTIR, XPS, NMR to characterize oxidative effects of NaClO on coal molecular structures. International Journal of Coal Geology, 2019, 201, 1-13.	5.0	90
6	Coal structure and reactivity changes induced by chemical demineralisation. Fuel Processing Technology, 2002, 79, 273-279.	7.2	72
7	Acid-induced mineral alteration and its influence on the permeability and compressibility of coal. Journal of Natural Gas Science and Engineering, 2016, 33, 973-987.	4.4	72
8	The production of ultra clean coal by sequential leaching with HF followed by HNO3. Fuel, 2003, 82, 1917-1920.	6.4	67
9	Leaching of spent pot-lining with aluminium nitrate and nitric acid: Effect of reaction conditions and thermodynamic modelling of solution speciation. Hydrometallurgy, 2013, 134-135, 132-143.	4.3	63
10	X-ray Î¼CT investigations of the effects of cleat demineralization by HCl acidizing on coal permeability. Journal of Natural Gas Science and Engineering, 2018, 55, 206-218.	4.4	58
11	Wear behaviour of polymeric materials reinforced with man-made fibres: A comprehensive review about fibre volume fraction influence on wear performance. Journal of Reinforced Plastics and Composites, 2022, 41, 215-241.	3.1	53
12	A study into the effect of cleat demineralisation by hydrochloric acid on the permeability of coal. Journal of Natural Gas Science and Engineering, 2016, 36, 931-942.	4.4	52
13	Production of Ultra Clean Coal. Fuel Processing Technology, 2001, 70, 193-219.	7.2	45
14	Oxidant stimulation for enhancing coal seam permeability: Swelling and solubilisation behaviour of unconfined coal particles in oxidants. Fuel, 2018, 221, 320-328.	6.4	44
15	Leaching of Spent Pot-Lining with Aluminum Anodizing Wastewaters: Fluoride Extraction and Thermodynamic Modeling of Aqueous Speciation. Industrial & Engineering Chemistry Research, 2012, 51, 8366-8377.	3.7	39
16	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
17	Use of rheometry and micro-CT analysis to understand pore structure development in coke. Fuel Processing Technology, 2017, 155, 106-113.	7.2	36
18	Chemical stimulation for enhancing coal seam permeability: Laboratory study into permeability variation and coal structure examination. International Journal of Coal Geology, 2020, 219, 103375.	5.0	36

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19	Combustion behaviour of ultra clean coal obtained by chemical demineralisation. Fuel, 2003, 82, 2145-2151.	6.4	33
20	Demineralization of a UK bituminous coal using HF and ferric ions. Fuel, 2007, 86, 2194-2200.	6.4	32
21	The precipitation and solubility of aluminium hydroxyfluoride hydrate between 30 and 70Â°C. Hydrometallurgy, 2015, 155, 79-87.	4.3	32
22	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
23	Understanding the mechanisms behind coking pressure: Relationship to pore structure. Fuel, 2007, 86, 2167-2178.	6.4	30
24	Examining mechanisms of metallurgical coke fracture using micro-CT imaging and analysis. Fuel Processing Technology, 2017, 155, 183-190.	7.2	27
25	Determination of the Effects Caused by Different Polymers on Coal Fluidity during Carbonization Using High-Temperature ¹H NMR and Rheometry. Energy & Fuels, 2008, 22, 471-479.	5.1	26
26	Influence of thermoplastic properties on coking pressure generation: Part 1 â€“ A study of single coals of various rank. Fuel, 2010, 89, 1590-1599.	6.4	26
27	Treatment of Spent Pot-lining with Aluminum Anodizing Wastewaters: Selective Precipitation of Aluminum and Fluoride as an Aluminum Hydroxyfluoride Hydrate Product. Industrial & Engineering Chemistry Research, 2012, 51, 12712-12722.	3.7	26
28	Use of Rheometry and1H NMR Spectroscopy for Understanding the Mechanisms behind the Generation of Coking Pressure. Energy & Fuels, 2004, 18, 1250-1256.	5.1	25
29	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
30	Influence of coal thermoplastic properties on coking pressure generation: Part 2 â€“ A study of binary coal blends and specific additives. Fuel, 2010, 89, 1600-1615.	6.4	24
31	Conversion of CO2 into mineral carbonates using a regenerable buffer to control solution pH. Fuel, 2013, 111, 40-47.	6.4	22
32	Production of ultra clean coal. Fuel Processing Technology, 2002, 76, 51-59.	7.2	21
33	Re-generation of hydrofluoric acid and selective separation of Si(IV) in a process for producing ultra-clean coal. Fuel Processing Technology, 2004, 86, 179-190.	7.2	21
34	Determination of the Effect of Different Additives in Coking Blends Using a Combination of in Situ High-Temperature1H NMR and Rheometry. Energy & Fuels, 2005, 19, 2423-2431.	5.1	21
35	Pore-Scale Numerical Investigation on Chemical Stimulation in Coal and Permeability Enhancement for Coal Seam Gas Production. Transport in Porous Media, 2017, 116, 335-351.	2.6	20
36	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

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37	The possible role of fissure formation in the prevention of coking pressure generation. Fuel, 2006, 85, 19-24.	6.4	15
38	Interactions between vitrinite and solid additives including inertinite during pyrolysis for coke-making considerations. Fuel Processing Technology, 2020, 201, 106321.	7.2	15
39	Use of high-temperature, high-torque rheometry to study the viscoelastic properties of coal during carbonization. Journal of Rheology, 2007, 51, 895-913.	2.6	12
40	Influence of thermoplastic properties on coking pressure generation: Part IV â€“ Further evidence of the role of bubble coalescence in the mechanism for pressure generation. Fuel, 2014, 129, 102-110.	6.4	12
41	X-ray CT observations of selective damage of mineralised synthetic particles by high voltage pulses. Minerals Engineering, 2019, 143, 106007.	4.3	12
42	Influence of porosity on the reactivity of inertinite and vitrinite toward sodium hypochlorite: Implications for enhancing coal seam gas development. International Journal of Coal Geology, 2021, 237, 103709.	5.0	12
43	Influence of thermoplastic properties on coking pressure generation: Part 3 â€“ Evidence and role of pore coalescence in the mechanism for pressure generation. Fuel, 2013, 103, 711-718.	6.4	11
44	Development of a nickel extraction-mineral carbonation process: Analysis of leaching mechanisms using regenerated acid. Hydrometallurgy, 2020, 197, 105482.	4.3	11
45	Evidence for network formation during the carbonization of coal from the combination of rheometry and 1H NMR techniques. Fuel, 2006, 85, 1821-1830.	6.4	9
46	The Effect of Rank and Lithotype on Coal Wettability and its Application to Coal Relative Permeability Models. , 2015, , .		9
47	Understanding the multiple interactions of inertinite during pyrolysis/carbonisation with vitrinite: A study of two Australian coals of different rank. Fuel Processing Technology, 2021, 217, 106823.	7.2	9
48	Metastable zone width and nucleation threshold of aluminium hydroxyfluoride hydrate. Crystal Research and Technology, 2016, 51, 265-275.	1.3	7
49	Identification of preferential pathways in the pore microstructure of metallurgical coke and links to anisotropic strength properties. Fuel, 2021, 296, 120688.	6.4	6
50	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
51	A regenerable precipitant-solvent system for CO 2 mitigation and metals recovery. International Journal of Greenhouse Gas Control, 2015, 42, 379-387.	4.6	3
52	Analysis of a reactive distillation process to recover tertiary amines and acid for use in a combined nickel extractionâ€“mineral carbonation process. Environmental Progress and Sustainable Energy, 2019, 38, e13141.	2.3	3
53	Use of Oscillatory Shear Rheometry and Thermogravimetric Analysis To Examine the Microstructural Changes during Coal Pyrolysis/Carbonization for the Prediction of IRSID Strength Indices. Energy & Fuels, 2009, 23, 2111-2117.	5.1	2
54	The Influence of Cleat Demineralisation on the Compressibility of Coal. , 2015, , .		0

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55	The Impact of Cleat Connectivity on Coal Seam Gas Geomodelsâ€™ 3D Permeability. , 2019, , .		0
56	Coal permeability stimulation by NaClO oxidation. APPEA Journal, 2019, 59, 846.	0.2	0