Wen Nie

List of Publications by Year
in descending order

103	5,456	53794 45	85541 71
papers	citations	h-index	g-index

103	103	103	984
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Research on tunnel ventilation systems: Dust Diffusion and Pollution Behaviour by air curtains based on CFD technology and field measurement. Building and Environment, 2019, 147, 444-460.	6.9	250
2	Effect of air flowrate on pollutant dispersion pattern of coal dust particles at fully mechanized mining face based on numerical simulation. Fuel, 2019, 239, 623-635.	6.4	190
3	Effects of air volume ratio parameters on air curtain dust suppression in a rock tunnelâ€™s fully-mechanized working face. Advanced Powder Technology, 2018, 29, 230-244.	4.1	173
4	Multi-factor numerical simulation study on spray dust suppression device in coal mining process. Energy, 2019, 182, 544-558.	8.8	173
5	Numerical simulation study on dust pollution characteristics and optimal dust control air flow rates during coal mine production. Journal of Cleaner Production, 2020, 248, 119197.	9.3	156
6	Effects of spraying pressure and installation angle of nozzles on atomization characteristics of external spraying system at a fully-mechanized mining face. Powder Technology, 2019, 343, 754-764.	4.2	142
7	The preparation of a novel hydrogel based on crosslinked polymers for suppressing coal dusts. Journal of Cleaner Production, 2020, 249, 119343.	9.3	135
8	The effects of the installation position of a multi-radial swirling air-curtain generator on dust diffusion and pollution rules in a fully-mechanized excavation face: A case study. Powder Technology, 2018, 329, 371-385.	4.2	120
9	Study of the microscopic mechanism of lauryl glucoside wetting coal dust: Environmental pollution prevention and control. Journal of Hazardous Materials, 2021, 412, 125223.	12.4	112
10	A novel spraying/negative-pressure secondary dust suppression device used in fully mechanized mining face: A case study. Chemical Engineering Research and Design, 2016, 103, 126-135.	5.6	108
11	Transient CFD modelling of space-time evolution of dust pollutants and air-curtain generator position during tunneling. Journal of Cleaner Production, 2019, 239, 117924.	9.3	108
12	Determining the effect of the non-ionic surfactant AEO9 on lignite adsorption and wetting via molecular dynamics (MD) simulation and experiment comparisons. Fuel, 2020, 278, 118339.	6.4	106
13	Preparation and experimental dust suppression performance characterization of a novel guar gum-modification-based environmentally-friendly degradable dust suppressant. Powder Technology, 2018, 339, 314-325.	4.2	100
14	Research and practice on fluctuation water injection technology at low permeability coal seam. Safety Science, 2012, 50, 851-856.	4.9	99
15	Solidifying dust suppressant based on modified chitosan and experimental study on its dust suppression performance. Adsorption Science and Technology, 2018, 36, 640-654.	3.2	98
16	Pattern characterization concerning spatial and temporal evolution of dust pollution associated with two typical ventilation methods at fully mechanized excavation faces in rock tunnels. Powder Technology, 2018, 334, 117-131.	4.2	97
17	The diffusion of dust in a fully-mechanized mining face with a mining height of 7â€¯m and the application of wet dust-collecting nets. Journal of Cleaner Production, 2018, 205, 463-476.	9.3	96
18	Effect of spraying on coal dust diffusion in a coal mine based on a numerical simulation. Environmental Pollution, 2020, 264, 114717.	7.5	96

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19	Simulation experiments on the controllability of dust diffusion by means of multi-radial vortex airflow. Advanced Powder Technology, 2018, 29, 835-847.	4.1	95
20	The effects of ventilation parameters on the migration behaviors of head-on dusts in the heading face. Tunnelling and Underground Space Technology, 2017, 70, 400-408.	6.2	94
21	Diffusion and pollution of multi-source dusts in a fully mechanized coal face. Chemical Engineering Research and Design, 2018, 118, 93-105.	5.6	93
22	The effects of the spraying pressure and nozzle orifice diameter on the atomizing rules and dust suppression performances of an external spraying system in a fully-mechanized excavation face. Powder Technology, 2019, 350, 62-80.	4.2	87
23	Preparation and performance study of a novel polymeric spraying dust suppression agent with enhanced wetting and coagulation properties for coal mine. Powder Technology, 2020, 364, 901-914.	4.2	87
24	The development and application of a novel multi-radial-vortex-based ventilation system for dust removal in a fully mechanized tunnelling face. Tunnelling and Underground Space Technology, 2020, 98, 103253.	6.2	83
25	The development and testing of a novel external-spraying injection dedusting device for the heading machine in a fully-mechanized excavation face. Chemical Engineering Research and Design, 2017, 109, 716-731.	5.6	80
26	Preparation and characterization of a novel environmentally friendly coal dust suppressant. Journal of Applied Polymer Science, 2019, 136, 47354.	2.6	78
27	The dust diffusion modeling and determination of optimal airflow rate for removing the dust generated during mine tunneling. Building and Environment, 2020, 178, 106846.	6.9	77
28	Modelling of ventilation and dust control effects during tunnel construction. International Journal of Mechanical Sciences, 2019, 160, 358-371.	6.7	75
29	A study on the dust control effect of the dust extraction system in TBM construction tunnels based on CFD computer simulation technology. Advanced Powder Technology, 2019, 30, 2059-2075.	4.1	73
30	Development of a novel wind-assisted centralized spraying dedusting device for dust suppression in a fully mechanized mining face. Environmental Science and Pollution Research, 2019, 26, 3292-3307.	5.3	73
31	Research on mine dust suppression by spraying: Development of an air-assisted PM10 control device based on CFD technology. Advanced Powder Technology, 2019, 30, 2588-2599.	4.1	72
32	The diffusion and pollution mechanisms of airborne dusts in fully-mechanized excavation face at mesoscopic scale based on CFD-DEM. Chemical Engineering Research and Design, 2016, 104, 240-253.	5.6	70
33	Effects of Oxygen Element and Oxygen-Containing Functional Groups on Surface Wettability of Coal Dust with Various Metamorphic Degrees Based on XPS Experiment. Journal of Analytical Methods in Chemistry, 2015, 2015, 1-8.	1.6	69
34	Effect of wind curtain on dust extraction in rock tunnel working face: CFD and field measurement analysis. Energy, 2020, 197, 117214.	8.8	66
35	Research on multi-radial swirling flow for optimal control of dust dispersion and pollution at a fully mechanized tunnelling face. Tunnelling and Underground Space Technology, 2018, 79, 293-303.	6.2	64
36	The effects of the pressure outlet's position on the diffusion and pollution of dust in tunnel using a shield tunneling machine. Energy and Buildings, 2018, 176, 232-245.	6.7	62

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37	Numerical simulation study on the coupling mechanism of composite-source airflowâ€“dust field in a fully mechanized caving face. Powder Technology, 2019, 356, 443-457.	4.2	59
38	Development of Environmental Friendly Dust Suppressant Based on the Modification of Soybean Protein Isolate. Processes, 2019, 7, 165.	2.8	57
39	A synthesis and performance evaluation of a highly efficient ecological dust depressor based on the sodium lignosulfonateâ€“acrylic acid graft copolymer. RSC Advances, 2018, 8, 11498-11508.	3.6	56
40	Long-duct forced and short-duct exhaust ventilation system in tunnels: Formation and dust control analysis of pressure ventilation air curtain. Chemical Engineering Research and Design, 2019, 132, 367-377.	5.6	56
41	Synthesis and performance measurement of environmentâ€friendly solidified dust suppressant for open pit coalmine. Journal of Applied Polymer Science, 2018, 135, 46505.	2.6	53
42	Technological aspects for underground coal gasification in steeply inclined thin coal seams at Zhongliangshan coal mine in China. Fuel, 2017, 191, 486-494.	6.4	51
43	Behavior of diesel particulate matter transport from subsidiary transportation vehicle in mine. Environmental Pollution, 2021, 270, 116264.	7.5	49
44	CFD modeling of coal dust migration in an 8.8-meter-high fully mechanized mining face. Energy, 2020, 212, 118616.	8.8	48
45	A study of the spray atomization and suppression of tunnel dust pollution based on a CFD-based simulation. Journal of Cleaner Production, 2020, 276, 123632.	9.3	46
46	Preparation and characterization of a binaryâ€graftâ€based, waterâ€absorbing dust suppressant for coal transportation. Journal of Applied Polymer Science, 2019, 136, 47065.	2.6	45
47	Dynamic dispersion and high-rise release of coal dust in the working surface of a large-scale mine and application of a new wet dust reduction technology. Journal of Cleaner Production, 2022, 351, 131356.	9.3	45
48	The optimization of a dust suppression and clean production scheme in a TBM-constructed tunnel based on an orthogonal experiment. Chemical Engineering Research and Design, 2020, 136, 353-370.	5.6	43
49	CFD simulations of air curtain dust removal effect by ventilation parameters during tunneling. Advanced Powder Technology, 2020, 31, 2456-2468.	4.1	43
50	Experimental and molecular dynamics simulation study of the effect of different surfactants on the wettability of low-rank coal. Journal of Environmental Chemical Engineering, 2021, 9, 105986.	6.7	43
51	Synthesis and performance measurement of a modified polymer dust suppressant. Advanced Powder Technology, 2020, 31, 792-803.	4.1	42
52	Optimization of dust removal performance of ventilation system in tunnel constructed using shield tunneling machine. Building and Environment, 2020, 173, 106745.	6.9	42
53	Development and characterization of a dust suppression spray agent based on an adhesive NaAlgâ^'glnâ^'poly/polysaccharide polymer. Science of the Total Environment, 2021, 785, 147192.	8.0	42
54	Comparative study of dust pollution and air quality of tunnelling anchor integrated machine working face with different ventilation. Tunnelling and Underground Space Technology, 2022, 122, 104377.	6.2	41

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55	Optimization of external spray negative-pressure mist-curtain dust suppression devices for roadheaders based on a multi-factor orthogonal experiment. Journal of Cleaner Production, 2020, 275, 123603.	9.3	38
56	Numerical simulation of the multi-index orthogonal experiments on the spray dust-settling devices. Powder Technology, 2020, 371, 217-230.	4.2	38
57	Flame retardant, thermal, and mechanical properties of glass fiber/nanoclay reinforced phenol-urea-formaldehyde foam. Polymer Composites, 2016, 37, 2323-2332.	4.6	37
58	Research on the blowing-spraying synergistic dust removal technology for clean environment in large-scale mechanization coal mine. Fuel, 2022, 324, 124508.	6.4	37
59	Behavior of the particulate matter (PM) emitted by trackless rubber-tyred vehicle (TRTV) at an idle speed under different movement conditions and ventilation optimization. Science of the Total Environment, 2021, 783, 147008.	8.0	36
60	Investigation of efficient dust control strategy for construction tunnels: Ventilation System's implications for cleaner production. Building and Environment, 2020, 180, 107032.	6.9	35
61	Study on the air curtain dust control technology with a dust purifying fan for fully mechanized mining face. Powder Technology, 2020, 374, 507-521.	4.2	35
62	Synthesis and characterization of phenolâ€ureaâ€formaldehyde foaming resin used to block air leakage in mining. Polymer Composites, 2014, 35, 2056-2066.	4.6	33
63	An assessment of the dust suppression performance of a hybrid ventilation system during the tunnel excavation process: Numerical simulation. Chemical Engineering Research and Design, 2021, 152, 304-317.	5.6	33
64	Effect of suppressing dust by multi-direction whirling air curtain on fully mechanized mining face. International Journal of Mining Science and Technology, 2016, 26, 629-635.	10.3	32
65	Development and performance detection of higher precision optical sensor for coal dust concentration measurement based on Mie scattering theory. Optics and Lasers in Engineering, 2021, 144, 106642.	3.8	32
66	Research on negative pressure jet dust-removal water curtain technology for coal mine cleaner production. Fuel, 2022, 310, 122378.	6.4	30
67	Optimization of spraying dust reduction technology of continuous miner machine and the dust environment in a tunnel, based on computational fluid dynamics (CFD) technology. Powder Technology, 2022, 398, 117044.	4.2	30
68	Experimental and molecular dynamics simulation research on compound dust suppressant based on locust bean gum. Advanced Powder Technology, 2022, 33, 103485.	4.1	30
69	Determining the optimal airflow rate to minimize air pollution in tunnels. Chemical Engineering Research and Design, 2022, 157, 115-130.	5.6	29
70	Optimization of spray dust suppression device in return air tunnel of a coal mine based on CFD technology. Building and Environment, 2021, 203, 108059.	6.9	26
71	Synthesis and characterization of a temperatureâ€sensitive hydrogel based on sodium alginate and Nâ€isopropylacrylamide. Polymers for Advanced Technologies, 2015, 26, 1340-1345.	3.2	25
72	Prediction of dispersion behavior of typical exhaust pollutants from hydraulic support transporters based on numerical simulation. Environmental Science and Pollution Research, 2022, 29, 38110-38125.	5.3	25

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73	A Synthesis of a Dust Suppressant Using the Cellulose Extracted from Maize Straw. Starch/Staerke, 2020, 72, 1900187.	2.1	22
74	Research on environmental dust pollution: ventilation and dust spaceâ€“time evolution law of a fully mechanized mining face with 7-m mining height. Environmental Science and Pollution Research, 2022, 29, 33627-33644.	5.3	21
75	A multi-indicator orthogonal investigation into the dust suppression effect of a shearer-mounted negative-pressure spraying device. Powder Technology, 2022, 399, 117135.	4.2	19
76	A Model of Lignite Macromolecular Structures and Its Effect on the Wettability of Coal: A Case Study. Energy & Fuels, 2017, 31, 13834-13841.	5.1	18
77	Research on the control law of dust in the main ventilation system in excavated tunnels for cleaner production. Building and Environment, 2021, 205, 108282.	6.9	16
78	Research Status of Pathogenesis of Pneumoconiosis and Dust Control Technology in Mineâ€”A Review. Applied Sciences (Switzerland), 2021, 11, 10313.	2.5	16
79	Research on air curtain dust control technology for environmental protection at fully mechanized working faces. Environmental Science and Pollution Research, 2022, 29, 43371-43384.	5.3	16
80	Distribution characteristics of an airflowâ€“dust mixture and quantitative analysis of the dust absorption effect during tunnel sub-regional coal cutting. Chemical Engineering Research and Design, 2022, 164, 319-334.	5.6	15
81	Analytical research on dynamic temperature field of overburden in goaf fire-area under piecewise-linear third boundary condition. International Journal of Heat and Mass Transfer, 2015, 90, 812-824.	4.8	14
82	The control effect of 3D spiral wind-curtain generator on respirable dust pollution during tunnelling process. Environmental Science and Pollution Research, 2021, 28, 68212-68228.	5.3	13
83	Numerical simulation and disaster prevention for catastrophic fire airflow of main air-intake belt roadway in coal mineâ€”A case study. Journal of Central South University, 2015, 22, 2359-2368.	3.0	12
84	Design and application of a dust suppression technology of the forcing air curtain in fully mechanized rock tunnelling faces. Environmental Science and Pollution Research, 2022, 29, 34943-34954.	5.3	11
85	Performance evaluation of Mn-Ce/cordierite catalyst modified by green surfactant to remove NOx in underground mines at low temperatures. Journal of Environmental Chemical Engineering, 2021, 9, 106499.	6.7	9
86	The Novel Monolithic Pr1-xCexCo0.5Mn0.5O3 Oxides Catalysts for the Selective Catalytic Reduction of NOx by NH3. Catalysis Letters, 2022, 152, 3642-3654.	2.6	9
87	Onboard air curtain dust removal method for longwall mining: Environmental pollution prevention. Journal of Environmental Chemical Engineering, 2021, 9, 106387.	6.7	8
88	Study on dustâ€“gas coupling pollution law and selection of optimal purification distance of air duct during tunneling process. Environmental Science and Pollution Research, 2022, 29, 74097-74117.	5.3	7
89	Effects of press-in airflow rate and the distance between the pressure duct and the side wall on ventilation dust suppression performance in an excavating tunnel. Environmental Science and Pollution Research, 2021, , 1.	5.3	6
90	Study on Airflow Migration and Rock Dust Pollution Behavior in TBM Construction Tunnel. Arabian Journal for Science and Engineering, 2020, 45, 8785-8801.	3.0	5

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91	Research on Eddy Air-Curtain Dust Controlled Flow Field in Hard Rock Mechanized Driving Face. Journal of Networks, 2013, 8, .	0.4	5
92	Green surfactant-modified TiO2 nanoparticles doped with La-Cr bimetal for NOx removal. Environmental Science and Pollution Research, 2022, 29, 77711-77723.	5.3	4
93	Simulation on dissolute and dust dispersion in comprehensive mechanized heading face with forced-exhaust ventilation. Science in China Series A: Mathematics, 2011, 17, 298-304.	0.2	3
94	Microscopic characterization and mesoscopic simulation of the interaction between chemically grafted copolymer and coal dust in an open-pit coal mining environment. Sustainable Chemistry and Pharmacy, 2021, 22, 100470.	3.3	3
95	Dust Simulation and Application of Forced and Exhausted Mixed Ventilation System in Half Coal-Rock Fully-Mechanized Excavation Face. Advanced Materials Research, 0, 524-527, 285-291.	0.3	1
96	Experiment and Research on the Mechanism of Foam Dedusting Agent. Advanced Materials Research, 0, 955-959, 977-980.	0.3	1
97	The Research and Application of Efficient Dust Control System for Whole-Rock Comprehensive Mechanization Driving Face. Advanced Materials Research, 0, 955-959, 1020-1023.	0.3	1
98	Experimental Study on Dynamic Evolution Mechanism during Coal and Gas Outburst. IOP Conference Series: Earth and Environmental Science, 2020, 570, 042027.	0.3	1
99	Estimation of areas of experimental rainfall-eroded soil slope based on moving average time series models. , 2016, , 471-475.		1
100	Numerical Simulation of Eddy Air-Curtain Dust Controlled Flow Field in Hard Rock Mechanized Driving Face. Applied Mechanics and Materials, 0, 214, 440-444.	0.2	0
101	Numerical Simulation Study on Air-Flow Migration Law about Vortex Air Curtain of Plane Wall Fan Drum. Applied Mechanics and Materials, 0, 241-244, 1285-1292.	0.2	0
102	Numerical simulation of seepage pressure field of coal seam water-injection in high and low pressure with one-way and bi-directional drilling holes. WIT Transactions on Engineering Sciences, 2014, , .	0.0	0
103	Numerical simulation of peak strength reduction in rock under uniaxial cyclical compression. , 2016, , 281-285.		0