

# Qiang Liu

## List of Publications by Year in descending order

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Version: 2024-02-01

46  
papers

3,096  
citations

126907

33  
h-index

233421

45  
g-index

46  
all docs

46  
docs citations

46  
times ranked

678  
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  | Modeling of rheological fracture behavior of rock cracks subjected to hydraulic pressure and far field stresses. Theoretical and Applied Fracture Mechanics, 2019, 101, 59-66.   | 4.7 | 227       |
| 3  | Effects of air volume ratio parameters on air curtain dust suppression in a rock tunnel'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  | The preparation of a novel hydrogel based on crosslinked polymers for suppressing coal dusts. Journal of Cleaner Production, 2020, 249, 119343.  | 9.3 | 135       |
| 7  | 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       |
| 8  | 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       |
| 9  | 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        |
| 10 | 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        |
| 11 | 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        |
| 12 | 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        |
| 13 | 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        |
| 14 | 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        |
| 15 | 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        |
| 16 | Modelling of ventilation and dust control effects during tunnel construction. International Journal of Mechanical Sciences, 2019, 160, 358-371.  | 6.7 | 75        |
| 17 | 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        |
| 18 | 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        |

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|----|---|-----|-----------|
| 19 | Research on mine dust suppression by spraying: Development of an air-assisted PM10 control device based on CFD technology. <i>Advanced Powder Technology</i> , 2019, 30, 2588-2599.                                   | 4.1 | 72        |
| 20 | Effect of wind curtain on dust extraction in rock tunnel working face: CFD and field measurement analysis. <i>Energy</i> , 2020, 197, 117214.   | 8.8 | 66        |
| 21 | Research on multi-radial swirling flow for optimal control of dust dispersion and pollution at a fully mechanized tunnelling face. <i>Tunnelling and Underground Space Technology</i> , 2018, 79, 293-303.            | 6.2 | 64        |
| 22 | The effects of the pressure outlet's position on the diffusion and pollution of dust in tunnel using a shield tunneling machine. <i>Energy and Buildings</i> , 2018, 176, 232-245.                                    | 6.7 | 62        |
| 23 | Numerical simulation study on the coupling mechanism of composite-source airflow's dust field in a fully mechanized caving face. <i>Powder Technology</i> , 2019, 356, 443-457.                                       | 4.2 | 59        |
| 24 | Long-duct forced and short-duct exhaust ventilation system in tunnels: Formation and dust control analysis of pressure ventilation air curtain. <i>Chemical Engineering Research and Design</i> , 2019, 132, 367-377. | 5.6 | 56        |
| 25 | CFD modeling of coal dust migration in an 8.8-meter-high fully mechanized mining face. <i>Energy</i> , 2020, 212, 118616.   | 8.8 | 48        |
| 26 | The optimization of a dust suppression and clean production scheme in a TBM-constructed tunnel based on an orthogonal experiment. <i>Chemical Engineering Research and Design</i> , 2020, 136, 353-370.               | 5.6 | 43        |
| 27 | CFD simulations of air curtain dust removal effect by ventilation parameters during tunneling. <i>Advanced Powder Technology</i> , 2020, 31, 2456-2468.   | 4.1 | 43        |
| 28 | Optimization of dust removal performance of ventilation system in tunnel constructed using shield tunneling machine. <i>Building and Environment</i> , 2020, 173, 106745.   | 6.9 | 42        |
| 29 | Comparative study of dust pollution and air quality of tunnelling anchor integrated machine working face with different ventilation. <i>Tunnelling and Underground Space Technology</i> , 2022, 122, 104377.          | 6.2 | 41        |
| 30 | Numerical simulation of the multi-index orthogonal experiments on the spray dust-settling devices. <i>Powder Technology</i> , 2020, 371, 217-230.   | 4.2 | 38        |
| 31 | Research on the blowing-spraying synergistic dust removal technology for clean environment in large-scale mechanization coal mine. <i>Fuel</i> , 2022, 324, 124508.   | 6.4 | 37        |
| 32 | Investigation of efficient dust control strategy for construction tunnels: Ventilation System's implications for cleaner production. <i>Building and Environment</i> , 2020, 180, 107032.                             | 6.9 | 35        |
| 33 | An assessment of the dust suppression performance of a hybrid ventilation system during the tunnel excavation process: Numerical simulation. <i>Chemical Engineering Research and Design</i> , 2021, 152, 304-317.    | 5.6 | 33        |
| 34 | Research on negative pressure jet dust-removal water curtain technology for coal mine cleaner production. <i>Fuel</i> , 2022, 310, 122378.  | 6.4 | 30        |
| 35 | Determining the optimal airflow rate to minimize air pollution in tunnels. <i>Chemical Engineering Research and Design</i> , 2022, 157, 115-130.  | 5.6 | 29        |
| 36 | A Synthesis of a Dust Suppressant Using the Cellulose Extracted from Maize Straw. <i>Starch/Staerke</i> , 2020, 72, 1900187.  | 2.1 | 22        |

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|----|---|-----|-----------|
| 37 | Research on environmental dust pollution: ventilation and dust space-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        |
| 38 | 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        |
| 39 | Distribution characteristics of an airflow-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        |
| 40 | 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        |
| 41 | Numerical Analysis of the Mud Inflow Model of Fractured Rock Mass Based on Particle Flow. Geofluids, 2021, 2021, 1-16.  | 0.7 | 7         |
| 42 | Study on dust-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         |
| 43 | 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         |
| 44 | 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         |
| 45 | Experimental Studies on Cracking and Local Strain Behaviors of Rock-Like Materials with a Single Hole before and after Reinforcement under Biaxial Compression. Geofluids, 2021, 2021, 1-15.                                | 0.7 | 5         |
| 46 | Coupled Hydraulic-Thermal Modelling and Related Numerical Analysis on Rock Fractures. Geofluids, 2020, 2020, 1-9.   | 0.7 | 0         |