Mingheng Li

List of Publications by Year
in descending order

76 papers	2,017 citations	279487 23 h-index	243296 44 g-index
80 all docs	80 docs citations	80 times ranked	1408 citing authors

#	ARTICLE	IF	CITATIONS
1	Hydrothermal Synthesis of Nanomaterials. Journal of Nanomaterials, 2020, 2020, 1-3.	1.5	249
2	Predictive control of particle size distribution in particulate processes. Chemical Engineering Science, 2006, 61, 268-281.	1.9	186
3	Multi-scale modeling and analysis of an industrial HVOF thermal spray process. Chemical Engineering Science, 2005, 60, 3649-3669.	1.9	127
4	Reducing specific energy consumption in Reverse Osmosis (RO) water desalination: An analysis from first principles. Desalination, 2011, 276, 128-135.	4.0	107
5	Computational study of particle in-flight behavior in the HVOF thermal spray process. Chemical Engineering Science, 2006, 61, 6540-6552.	1.9	103
6	Modeling and Control of High-Velocity Oxygen-Fuel (HVOF) Thermal Spray: A Tutorial Review. Journal of Thermal Spray Technology, 2009, 18, 753-768.	1.6	88
7	Model-based control of particulate processes. Chemical Engineering Science, 2008, 63, 1156-1172.	1.9	70
8	Diamond Jet Hybrid HVOF Thermal Spray:Â Gas-Phase and Particle Behavior Modeling and Feedback Control Design. Industrial & Engineering Chemistry Research, 2004, 43, 3632-3652.	1.8	60
9	Modeling and control of HVOF thermal spray processing of WCâ€"Co coatings. Powder Technology, 2005, 156, 177-194.	2.1	60
10	Optimal plant operation of brackish water reverse osmosis (BWRO) desalination. Desalination, 2012, 293, 61-68.	4.0	60
11	Three-dimensional CFD analysis of hydrodynamics and concentration polarization in an industrial RO feed channel. Desalination, 2016, 397, 194-204.	4.0	58
12	Minimization of Energy in Reverse Osmosis Water Desalination Using Constrained Nonlinear Optimization. Industrial & Engineering Chemistry Research, 2010, 49, 1822-1831.	1.8	54
13	Optimal control of diffusion-convection-reaction processes using reduced-order models. Computers and Chemical Engineering, 2008, 32, 2123-2135.	2.0	52
14	Modeling and analysis of HVOF thermal spray process accounting for powder size distribution. Chemical Engineering Science, 2003, 58, 849-857.	1.9	49
15	Diamond Jet Hybrid HVOF Thermal Spray:Â Rule-Based Modeling of Coating Microstructure. Industrial & Engineering Chemistry Research, 2004, 43, 3653-3665.	1.8	45
16	Li-ion dynamics and state of charge estimation. Renewable Energy, 2017, 100, 44-52.	4.3	37
17	Control of particulate processes: Recent results and future challenges. Powder Technology, 2007, 175, 1-7.	2.1	35
18	Validation of model-based optimization of brackish water reverse osmosis (BWRO) plant operation. Desalination, 2012, 304, 20-24.	4.0	32

#	Article	IF	Citations
19	Feedback control of HVOF thermal spray process accounting for powder size distribution. Journal of Thermal Spray Technology, 2004, 13, 108-120.	1.6	29
20	A Unified Model-Based Analysis and Optimization of Specific Energy Consumption in BWRO and SWRO. Industrial & Engineering Chemistry Research, 2013, 52, 17241-17248.	1.8	29
21	Adsorption enhanced steam reforming of methanol for hydrogen generation in conjunction with fuel cell: Process design and reactor dynamics. Chemical Engineering Science, 2012, 67, 26-33.	1.9	25
22	Computational fluid dynamic modeling of tin oxide deposition in an impinging chemical vapor deposition reactor. Thin Solid Films, 2006, 515, 1400-1410.	0.8	24
23	Thermodynamic analysis of adsorption enhanced reforming of ethanol. International Journal of Hydrogen Energy, 2009, 34, 9362-9372.	3.8	24
24	Energy Consumption in Spiral-Wound Seawater Reverse Osmosis at the Thermodynamic Limit. Industrial & Engineering Chemistry Research, 2014, 53, 3293-3299.	1.8	23
25	Reducing specific energy consumption of seawater desalination: Staged RO or RO-PRO?. Desalination, 2017, 422, 124-133.	4.0	23
26	Model-based estimation and control of particle velocity and melting in HVOF thermal spray. Chemical Engineering Science, 2004, 59, 5647-5656.	1.9	22
27	Collection Efficiency of Nanosize Particles in a Two-Stage Electrostatic Precipitator. Industrial & Engineering Chemistry Research, 2006, 45, 8484-8491.	1.8	22
28	Dynamics of CO_2 adsorption on sodium oxide promoted alumina in a packed-bed reactor. Chemical Engineering Science, 2011, 66, 5938-5944.	1.9	22
29	Analysis and optimization of pressure retarded osmosis for power generation. AICHE Journal, 2015, 61, 1233-1241.	1.8	22
30	Dynamic Operation of Batch Reverse Osmosis and Batch Pressure Retarded Osmosis. Industrial & Engineering Chemistry Research, 2020, 59, 3097-3108.	1.8	21
31	An input/output approach to the optimal transition control of a class of distributed chemical reactors. Chemical Engineering Science, 2007, 62, 2979-2988.	1.9	19
32	A hybrid modeling approach for optimal design of non-woven membrane channels in brackish water reverse osmosis process with high-throughput computation. Desalination, 2020, 489, 114463.	4.0	19
33	Development of a high-efficiency hydrogen generator for fuel cells for distributed power generation. International Journal of Hydrogen Energy, 2010, 35, 8962-8969.	3.8	16
34	Optimization of Multitrain Brackish Water Reverse Osmosis (BWRO) Desalination. Industrial & Engineering Chemistry Research, 2012, 51, 3732-3739.	1.8	16
35	Systematic analysis and optimization of power generation in pressure retarded osmosis: Effect of multistage design. AICHE Journal, 2018, 64, 144-152.	1.8	16
36	Optimization of multi-stage hybrid RO-PRO membrane processes at the waterâ€"energy nexus. Chemical Engineering Research and Design, 2018, 137, 1-9.	2.7	16

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37	Equilibrium Calculation of Gaseous Reactive Systems with Simultaneous Species Adsorption. Industrial & Engineering Chemistry Research, 2008, 47, 9263-9271.	1.8	14
38	Effects of finite flux and flushing efficacy on specific energy consumption in semi-batch and batch reverse osmosis processes. Desalination, 2020, 496, 114646.	4.0	12
39	Theoretical studies of displacement deposition of nickel into porous silicon with ultrahigh aspect ratio. Electrochimica Acta, 2007, 52, 3901-3909.	2.6	11
40	Predictive modeling of a commercial spiral wound seawater reverse osmosis module. Chemical Engineering Research and Design, 2019, 148, 440-450.	2.7	11
41	A novel simulation for gasification of Shenmu Coal in an entrained flow gasifier. Chemical Engineering Research and Design, 2020, 160, 454-464.	2.7	11
42	Modeling of pressure drop in reverse osmosis feed channels using multilayer artificial neural networks. Chemical Engineering Research and Design, 2020, 159, 146-156.	2.7	10
43	Residence time distribution in RO channel. Desalination, 2021, 506, 115000.	4.0	9
44	A spatiotemporal model for dynamic RO simulations. Desalination, 2021, 516, 115229.	4.0	9
45	A Hierarchical Optimization Method for Reaction Path Synthesis. Industrial & Engineering Chemistry Research, 2000, 39, 4315-4319.	1.8	7
46	Bacterial aerosol neutralization by aerodynamic shocks using a novel impactor system: Design and computation. Chemical Engineering Science, 2009, 64, 1953-1967.	1.9	6
47	Chemical Vapor Deposition of Bi-Te-Ni-Fe on Magnesium Oxide Substrate and Its Seebeck Effect. Coatings, 2017, 7, 164.	1.2	6
48	Batch reverse osmosis: a new research direction in water desalination. Science Bulletin, 2020, 65, 1705-1708.	4.3	6
49	Dynamics Of Axially Dispersed Reactors. Industrial & Engineering Chemistry Research, 2008, 47, 4797-4806.	1.8	5
50	Bacterial aerosol neutralization by aerodynamic shocks using an impactor system: Experimental results for B. atropheus spores. Chemical Engineering Science, 2010, 65, 4803-4815.	1.9	5
51	Novel dynamic and cyclic designs for ultra-high recovery waste and brackish water RO desalination. Chemical Engineering Research and Design, 2022, 179, 473-483.	2.7	5
52	Seawater Corrosion of Copper and Its Alloy Coated with Hydrothermal Carbon. Coatings, 2022, 12, 798.	1.2	5
53	MULTISCALE MODELING OF HVOF THERMAL SPRAY PROCESS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 327-332.	0.4	4
54	Bacterial aerosol neutralization by aerodynamic shocks using an impactor system: Experimental results for E. coli and analysis. Chemical Engineering Science, 2010, 65, 1490-1502.	1.9	3

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55	Reaction path synthesis for a mass closed-cycle system. Computers and Chemical Engineering, 2000, 24, 1215-1221.	2.0	2
56	An Input/Output Approach to the Optimal Transition Control of a Class of Distributed Chemical Reactors. Proceedings of the American Control Conference, 2007, , .	0.0	2
57	The Optimal Product Transition In Glass Furnaces. Industrial & Engineering Chemistry Research, 2009, 48, 2598-2604.	1.8	2
58	Gold Catalyst-Assisted Metal Organic Chemical Vapor Deposition of Bi-Te-Ni-Cu-Au Complex Thermoelectric Materials on Anodic Aluminum Oxide Nanoporous Template. Coatings, 2018, 8, 166.	1.2	2
59	Catalytic production of diesel-like oils from plastic wastes. Journal of Renewable and Sustainable Energy, 2021, 13, .	0.8	2
60	Feedback control of HVOF thermal spray process: A study of the effect of process disturbances on closed-loop performance. Computer Aided Chemical Engineering, 2003, 15, 1193-1198.	0.3	1
61	Adsorption and Desorption of Carbon Dioxide on Sodium Oxide Impregnated Alumina. Industrial & Engineering Chemistry Research, 2020, 59, 2642-2647.	1.8	1
62	Feedback Control of Particle Size Distribution in Nanoparticle Synthesis and Processing. , 2012, , 7-44.		1
63	Control of Particulate Processes. The Electrical Engineering Handbook, 2010, , 14-1-14-21.	0.2	1
64	Optimization and Plant Validation of BWRO Operation. , 2020, , 1-42.		1
65	Feedback control of nanostructured coatings processing accounting for powder size distribution. , 2002, , .		0
66	Modeling and control of an experimental HVOF thermal spray process. , 0, , .		0
67	OPTIMAL TRANSITION CONTROL OF DIFFUSION-CONVECTION-REACTION PROCESSES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 135-140.	0.4	0
68	On-line Bayesian-based Model-set Management Method with Case Study of Steam Reforming Prediction under Various Feed Compositions. Computer Aided Chemical Engineering, 2018, , 523-528.	0.3	0
69	Optimization of Membrane Processes at the Water-Energy Nexus. Computer Aided Chemical Engineering, 2018, , 1891-1896.	0.3	0
70	Osmotic heat engine (OHE). , 2022, , 83-125.		0
71	Quasi-2D Predictive Modeling of an RO Module from Experimental Data. , 2020, , 1-20.		0
72	Systematic Analysis and Optimization of Pressure Retarded Osmosis for Power Generation. , 2020, , 1-40.		0

#	ARTICLE	IF	CITATIONS
73	Batch Operation of RO and PRO. , 2020, , 1-24.		0
74	Model-based Optimization of Specific Energy Consumption in Seawater RO. , 2020, , 1-56.		0
75	Hybrid RO-PRO for Energy-Efficient Desalination. , 2020, , 1-32.		0
76	Three-Dimensional CFD Analysis of Hydrodynamics and Mass Transfer in Spacer-Filled RO Channels. , 2020, , 1-26.		0