

# Qiang Shi

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

69

papers

705

citations

16

h-index

22

g-index

76

ext. papers

930

ext. citations

5

avg, IF

4.34

L-index

#	Paper	IF	Citations
69	Kinetic Perspective on Methanol to Propylene Process via HZSM-5 Catalyst: Balancing between Reaction and Diffusion. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2022</b> , 61, 2055-2067	3.9	0
68	Structural Design and Performance of a Jet-Impinging Type Microbubble Generator. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2022</b> , 61, 4445-4459	3.9	0
67	Modeling and Control of COVID-19 Transmission from a Perspective of Polymerization Reaction Dynamics. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2021</b> , 60, 17650-17662	3.9	1
66	Synthesis of Weakly Entangled Ultra-High-Molecular-Weight Polyethylene with a Fine Particle Size. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2021</b> , 60, 3354-3362	3.9	3
65	The Intermittent Dormancy of Ethylene Polymerization with the Assistance of Nitrogen Microbubbles. <i>Macromolecules</i> , <b>2021</b> , 54, 9418-9426	5.5	3
64	Optimal Design of a Subambient Membrane Separation System with Work and Heat Integration for CO <sub>2</sub> Capture. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2021</b> , 60, 15194-15207	3.9	0
63	Revealing the Dynamic Behaviors of Tetrahydrofuran for Tailoring the Active Species of Ziegler-Natta Catalysts. <i>ACS Catalysis</i> , <b>2021</b> , 11, 4411-4421	13.1	5
62	Effect of the Scale-Up Process on the Reactor Performance within the Riser: Simulation Using Ozone Decomposition. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2021</b> , 60, 11479-11489	3.9	1
61	Performance Evaluation and Scale-Up Behavior of an Engineered In-Line Mixer for 3D Printing. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2021</b> , 60, 11568-11578	3.9	4
60	Evolution and fluidization behaviors of wet agglomerates based on formation-fragmentation competition mechanism. <i>Chemical Engineering Science</i> , <b>2021</b> , 247, 116933	4.4	0
59	Bubble breakup in a swirl-venturi microbubble generator. <i>Chemical Engineering Journal</i> , <b>2021</b> , 403, 126397	14.7	19
58	A volatile spray zone model and experimentation in a gas-solid fluidized bed with liquid injection. <i>Chemical Engineering Science</i> , <b>2021</b> , 231, 116306	4.4	3
57	The screened waveguide for intrusive acoustic emission detection and its application in circulating fluidized bed. <i>AIChE Journal</i> , <b>2021</b> , 67, e17118	3.6	1
56	Pore plugging effects on the performance of ZSM-5 catalyst in MTP reaction using a discrete model. <i>Chinese Journal of Chemical Engineering</i> , <b>2021</b> , 32, 253-263	3.2	
55	Efficient Strategy for the Synthesis of Work and Heat Exchange Networks. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2021</b> , 60, 1756-1773	3.9	3
54	A 3D-printed continuous flow platform for the synthesis of methylaluminoxane. <i>Green Chemistry</i> , <b>2021</b> , 23, 4087-4094	10	3
53	Simultaneous Optimization for Organic Rankine Cycle Design and Heat Integration. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 20455-20471	3.9	3

52	Efficient Synthesis of Low-Polydispersity UHMWPE by Elevating Active Sites on Anchored POSS Molecules. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 19964-19971	3.9	1
51	Leveraging 3D Printing for the Design of High-Performance Venturi Microbubble Generators. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 8447-8455	3.9	9
50	Targeting and Design of Work and Heat Exchange Networks. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 12471-12486	3.9	7
49	Performance comparison of swirl-venturi bubble generator and conventional venturi bubble generator. <i>Chemical Engineering and Processing: Process Intensification</i> , <b>2020</b> , 154, 108022	3.7	10
48	Simultaneous Design of Hydrogen Allocation Networks and PSA Inside Refineries. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 4712-4720	3.9	16
47	Electrostatic effects on hydrodynamics in the riser of the circulating fluidized bed for polypropylene. <i>AIChE Journal</i> , <b>2020</b> , 66, e16916	3.6	2
46	Simultaneous Optimization of a Heat Exchanger Network and Operating Conditions of Organic Rankine Cycle. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 11596-11609	3.9	11
45	Classification and identification of gas-liquid dispersion states in a jet bubbling reactor. <i>AIChE Journal</i> , <b>2020</b> , 66, e16778	3.6	8
44	Experimental characterization of liquid film behavior during droplets-polyethylene particle collision. <i>AIChE Journal</i> , <b>2020</b> , 66, e16909	3.6	4
43	Selective distribution and contribution of nickel based pre-catalyst in the multisite catalyst for the synthesis of desirable bimodal polyethylene. <i>European Polymer Journal</i> , <b>2020</b> , 135, 109878	5.2	4
42	Evolution and Interaction Characteristics of Liquid Flow and Bubbles in a Jet Bubbling Column. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 21217-21230	3.9	1
41	Experimental and Modeling Investigation of Liquid-Induced Agglomeration in a Gas-Solid Fluidized Bed with Liquid Spray. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 11810-11822	3.9	8
40	Dispersion Trajectory and Dynamics of Particles Injected from the Sidewall in the Gas-Solid Fluidized Bed. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 18705-18716	3.9	
39	Bubble Size Distribution and Rise Velocity in a Jet Bubbling Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 19271-19279	3.9	10
38	Entanglement Formation Mechanism in the POSS Modified Heterogeneous Ziegler-Natta Catalysts. <i>Macromolecules</i> , <b>2019</b> , 52, 7593-7602	5.5	18
37	A novel two-step method to design inter-plant hydrogen network. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 5686-5695	6.7	25
36	Electrostatic Distribution in the Riser of the Multizone Circulating Fluidized Bed for Polypropylene. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 12301-12311	3.9	3
35	Simulation-Based Multiobjective Optimization of the Product Separation Process within an MTP Plant. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 12166-12178	3.9	3

34	Thermal-Stability Analysis of Ethylene-Polymerization Fluidized-Bed Reactors under Condensed-Mode Operation through a TPMBBM Integrated Model. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 9486-9499	3.9	5
33	Balancing between risk and profit in refinery hydrogen networks: A Worst-Case Conditional Value-at-Risk approach. <i>Chemical Engineering Research and Design</i> , <b>2019</b> , 146, 201-210	5.5	17
32	Indirect Heat Integration across Plants: Novel Representation of Intermediate Fluid Circles. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 7233-7246	3.9	3
31	Characterization of the bubble swarm trajectory in a jet bubbling reactor. <i>AIChE Journal</i> , <b>2019</b> , 65, e165656	5.6	17
30	Systematic Design and Optimization of a Membrane-Cryogenic Hybrid System for CO <sub>2</sub> Capture. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2019</b> , 7, 17186-17197	8.3	9
29	Molecular reconstruction: Recent progress toward composition modeling of petroleum fractions. <i>Chemical Engineering Journal</i> , <b>2019</b> , 357, 761-775	14.7	30
28	Modelling and simulation of two-bed PSA process for separating H <sub>2</sub> from methane steam reforming. <i>Chinese Journal of Chemical Engineering</i> , <b>2019</b> , 27, 1870-1878	3.2	29
27	Methanol to Propylene over Foam SiC-Supported ZSM-5 Catalyst: Performance of Multiple Reaction-Regeneration Cycles. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 27-33	3.9	13
26	Facile high-temperature synthesis of weakly entangled polyethylene using a highly activated Ziegler-Natta catalyst. <i>Journal of Catalysis</i> , <b>2018</b> , 360, 145-151	7.3	30
25	Stability Analysis of Ethylene Polymerization in a Liquid-Containing Gas-Solid Fluidized Bed Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 5616-5629	3.9	9
24	Optimal design of hybrid cryogenic flash and membrane system. <i>Chemical Engineering Science</i> , <b>2018</b> , 179, 13-31	4.4	7
23	Energy and Water Management for Industrial Large-Scale Water Networks: A Systematic Simultaneous Optimization Approach. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 2269-2282	8.3	28
22	Heat Transfer Blocks Diagram: A Novel Tool for Targeting and Design of Heat Exchanger Networks Inside Heat Integrated Water Allocation Networks. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 2704-2715	8.3	20
21	Solvents Molecular Mobility in Coked Catalyst ZSM-5 Studied by NMR Relaxation and Pulsed Field Gradient Techniques. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 6647-6653	3.9	4
20	Investigating Agglomeration Behaviors in High Temperature Gas-Solid Fluidized Beds with Liquid Injection. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 5482-5494	3.9	15
19	Effects of DC electric fields on meso-scale structures in electrostatic gas-solid fluidized beds. <i>Chemical Engineering Journal</i> , <b>2018</b> , 332, 293-302	14.7	11
18	Hydrodynamics in a jet bubbling reactor: Experimental research and mathematical modeling. <i>AIChE Journal</i> , <b>2018</b> , 64, 1814-1827	3.6	11
17	Enhanced Reaction Performances for Light Olefin Production from Butene through Cofeeding Reaction with Methanol. <i>Energy &amp; Fuels</i> , <b>2018</b> , 32, 787-795	4.1	1

16	Critical comparison of electrostatic effects on hydrodynamics and heat transfer in a bubbling fluidized bed with a central jet. <i>Chemical Engineering Science</i> , <b>2018</b> , 191, 156-168	4.4	3
15	New Insights into T <sub>H</sub> /H <sub>B</sub> Diagrams for Synthesis of Heat Exchanger Networks inside Heat Integrated Water Allocation Networks. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 9323-9328	3.9	6
14	CFD-DEM investigation of particle elutriation with electrostatic effects in gas-solid fluidized beds. <i>Powder Technology</i> , <b>2017</b> , 308, 422-433	5.2	40
13	Modeling Agglomeration Behavior in High Temperature Gas-Solid Fluidized Beds via Monte Carlo Method. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2017</b> , 56, 1112-1121	3.9	3
12	Optimal process design for recovering effluent gas at subambient temperature. <i>Journal of Cleaner Production</i> , <b>2017</b> , 144, 130-141	10.3	9
11	Kinetic and regenerator modeling of the coke combustion in the moving bed MTP process. <i>Chemical Engineering Research and Design</i> , <b>2017</b> , 122, 52-62	5.5	9
10	Automatic Design of Multi-Impurity Refinery Hydrogen Networks Using Mixing Potential Concept. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2017</b> , 56, 6703-6710	3.9	15
9	New transshipment type MINLP model for heat exchanger network synthesis. <i>Chemical Engineering Science</i> , <b>2017</b> , 173, 537-559	4.4	16
8	Novel graphical tool for the design of the heat integrated water allocation networks. <i>AIChE Journal</i> , <b>2016</b> , 62, 670-686	3.6	18
7	Numerical Study of the Scaling Rules for Riser with Consideration of Cluster Effect. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2016</b> , 55, 9533-9543	3.9	1
6	Realization and control of multiple temperature zones in liquid-containing gas-solid fluidized bed reactor. <i>AIChE Journal</i> , <b>2016</b> , 62, 1454-1466	3.6	27
5	Strategy of effluent recovery technology selection in polyolefin plants. <i>Chemical Engineering Research and Design</i> , <b>2016</b> , 103, 405-412	5.5	4
4	Experimental investigation of electrostatic effect on bubble behaviors in gas-solid fluidized bed. <i>AIChE Journal</i> , <b>2015</b> , 61, 1160-1171	3.6	31
3	Energy configuration and operation optimization of refinery fuel gas networks. <i>Applied Energy</i> , <b>2015</b> , 139, 365-375	10.7	10
2	Experimental investigation of electrostatic effect on particle motions in gas-solid fluidized beds. <i>AIChE Journal</i> , <b>2015</b> , 61, 3628-3638	3.6	24
1	Methanol to Propylene Process in a Moving Bed Reactor with Byproducts Recycling: Kinetic Study and Reactor Simulation. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2014</b> , 53, 4623-4632	3.9	34