

Baochang Sun

List of Publications by Year in descending order

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Version: 2024-02-01

115
papers

2,947
citations

147566

31
h-index

205818

48
g-index

115
all docs

115
docs citations

115
times ranked

1278
citing authors

#	ARTICLE	IF	CITATIONS
1	Gas-liquid Effective Interfacial Area in a Rotating Packed Bed. Industrial & Engineering Chemistry Research, 2012, 51, 16320-16325.	1.8	112
2	Degradation of phenol by ozone in the presence of Fenton reagent in a rotating packed bed. Chemical Engineering Journal, 2013, 229, 404-411.	6.6	111
3	Liquid flow pattern transition, droplet diameter and size distribution in the cavity zone of a rotating packed bed: A visual study. Chemical Engineering Science, 2017, 158, 429-438.	1.9	107
4	Determination of the effective interfacial area in rotating packed bed. Chemical Engineering Journal, 2011, 168, 1377-1382.	6.6	102
5	A noninvasive X-ray technique for determination of liquid holdup in a rotating packed bed. Chemical Engineering Science, 2015, 138, 244-255.	1.9	96
6	Mass Transfer Studies in a Rotating Packed Bed with Novel Rotors: Chemisorption of CO ₂ . Industrial & Engineering Chemistry Research, 2012, 51, 9164-9172.	1.8	85
7	Synthesis of nano-CaCO ₃ by simultaneous absorption of CO ₂ and NH ₃ into CaCl ₂ solution in a rotating packed bed. Chemical Engineering Journal, 2011, 168, 731-736.	6.6	75
8	Characteristics of a two-stage counter-current rotating packed bed for continuous distillation. Chemical Engineering and Processing: Process Intensification, 2012, 52, 55-62.	1.8	74
9	Mass transfer intensification in a rotating packed bed with surface-modified nickel foam packing. Chemical Engineering Journal, 2016, 285, 236-242.	6.6	71
10	Can Masks Be Reused After Hot Water Decontamination During the COVID-19 Pandemic?. Engineering, 2020, 6, 1115-1121.	3.2	71
11	CFD modeling of gas-liquid mass transfer process in a rotating packed bed. Chemical Engineering Journal, 2016, 294, 111-121.	6.6	68
12	Investigation of effective interfacial area in a rotating packed bed with structured stainless steel wire mesh packing. Chemical Engineering Science, 2017, 170, 347-354.	1.9	67
13	Ozonation of azo dye Acid Red 14 in a microporous tube-in-tube microchannel reactor: Decolorization and mechanism. Chemosphere, 2012, 89, 190-197.	4.2	63
14	Removal of hydrogen sulfide from coke oven gas by catalytic oxidative absorption in a rotating packed bed. Fuel, 2017, 204, 47-53.	3.4	59
15	3D numerical simulation of a rotating packed bed with structured stainless steel wire mesh packing. Chemical Engineering Science, 2017, 170, 365-377.	1.9	56
16	Distillation studies in a two-stage counter-current rotating packed bed. Separation and Purification Technology, 2013, 102, 62-66.	3.9	53
17	Polytetrafluoroethylene Wire Mesh Packing in a Rotating Packed Bed: Mass-Transfer Studies. Industrial & Engineering Chemistry Research, 2016, 55, 11606-11613.	1.8	53
18	Ozonation of Phenol with O ₃ /Fe(II) in Acidic Environment in a Rotating Packed Bed. Industrial & Engineering Chemistry Research, 2012, 51, 10509-10516.	1.8	51

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19	Micromixing Efficiency Enhancement in a Rotating Packed Bed Reactor with Surface-Modified Nickel Foam Packing. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 1697-1702.	1.8	51
20	Simultaneous Absorption of CO ₂ and NH ₃ into Water in a Rotating Packed Bed. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 11175-11180.	1.8	50
21	Liquid jet impaction on the single-layer stainless steel wire mesh in a rotating packed bed reactor. <i>AIChE Journal</i> , 2019, 65, e16597.	1.8	49
22	Modeling and experimental studies of mass transfer in the cavity zone of a rotating packed bed. <i>Chemical Engineering Science</i> , 2017, 170, 355-364.	1.9	46
23	Absorption of SO ₂ with Ammonia-Based Solution in a Cocurrent Rotating Packed Bed. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 15731-15737.	1.8	44
24	Visual study of liquid flow in a rotor-stator reactor. <i>Chemical Engineering Science</i> , 2015, 134, 521-530.	1.9	41
25	Mass-Transfer Characteristics of the CO ₂ Absorption Process in a Rotating Packed Bed. <i>Energy & Fuels</i> , 2016, 30, 4215-4220.	2.5	38
26	Simultaneous Absorption of H ₂ S and CO ₂ into the MDEA + PZ Aqueous Solution in a Rotating Packed Bed. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 8295-8303.	1.8	38
27	Absorption of Nitrogen Oxides into Sodium Hydroxide Solution in a Rotating Packed Bed with Preoxidation by Ozone. <i>Energy & Fuels</i> , 2017, 31, 11019-11025.	2.5	37
28	A hydrophobic wire mesh for better liquid dispersion in air. <i>Chemical Engineering Science</i> , 2017, 170, 204-212.	1.9	35
29	Removal of SO ₂ with Sodium Sulfite Solution in a Rotating Packed Bed. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 2329-2335.	1.8	35
30	Intensification of CO ₂ capture using aqueous diethylenetriamine (DETA) solution from simulated flue gas in a rotating packed bed. <i>Fuel</i> , 2018, 234, 1518-1527.	3.4	34
31	Mass transfer in a rotating packed bed reactor with a mesh-pin rotor: Modeling and experimental studies. <i>Chemical Engineering Journal</i> , 2019, 369, 600-610.	6.6	33
32	Liquid flow behavior in a multiliquid-inlet rotating packed bed reactor with three-dimensional printed packing. <i>Chemical Engineering Journal</i> , 2020, 386, 121537.	6.6	33
33	Liquid microflow inside the packing of a rotating packed bed reactor: Computational, observational and experimental studies. <i>Chemical Engineering Journal</i> , 2020, 386, 121134.	6.6	32
34	Gas-Side Mass Transfer in a Rotating Packed Bed with Structured Nickel Foam Packing. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 4743-4747.	1.8	30
35	Simultaneous Absorption of NO _x and SO ₂ into Na ₂ SO ₃ Solution in a Rotating Packed Bed with Preoxidation by Ozone. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 8332-8341.	1.8	29
36	A three-zone mass transfer model for a rotating packed bed. <i>AIChE Journal</i> , 2019, 65, e16595.	1.8	27

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37	Mass-Transfer Performance for CO ₂ Absorption by 2-(2-Aminoethylamino)ethanol Solution in a Rotating Packed Bed. Energy & Fuels, 2017, 31, 14053-14059.	2.5	26
38	Feasibility studies of micromixing and mass-transfer in an ultrasonic assisted rotating packed bed reactor. Chemical Engineering Journal, 2018, 331, 510-516.	6.6	26
39	Dispersion behaviors of droplet impacting on wire mesh and process intensification by surface micro/nano-structure. Chemical Engineering Science, 2020, 219, 115593.	1.9	24
40	Gas Flow Characteristics in a Rotating Packed Bed by Particle Image Velocimetry Measurement. Industrial & Engineering Chemistry Research, 2017, 56, 14350-14361.	1.8	23
41	Effective Mass Transfer Area Measurement Using a CO ₂ -NaOH System: Impact of Different Sources of Kinetics Models and Physical Properties. Industrial & Engineering Chemistry Research, 2019, 58, 11082-11092.	1.8	23
42	Novel Wire Mesh Packing with Controllable Cross-Sectional Area in a Rotating Packed Bed: Mass Transfer Studies. Industrial & Engineering Chemistry Research, 2020, 59, 16043-16051.	1.8	22
43	The Advanced Oxidation Process of Phenol Solution by O ₃ /H ₂ O ₂ in a Rotating Packed Bed. Ozone: Science and Engineering, 2013, 35, 101-108.	1.4	21
44	Determination of Mass-Transfer Coefficient of CO ₂ in NH ₃ and CO ₂ Absorption by Materials Balance in a Rotating Packed Bed. Industrial & Engineering Chemistry Research, 2012, 51, 10949-10954.	1.8	20
45	Preparation of basic magnesium carbonate by simultaneous absorption of NH ₃ and CO ₂ into MgCl ₂ solution in an RPB. Powder Technology, 2015, 284, 57-62.	2.1	20
46	Mass Transfer Study of Dehydration by Triethylene Glycol in Rotating Packed Bed for Natural Gas Processing. Industrial & Engineering Chemistry Research, 2018, 57, 5394-5400.	1.8	20
47	Mass transfer study of water deoxygenation in a rotor-stator reactor based on principal component regression method. Chemical Engineering Research and Design, 2018, 132, 677-685.	2.7	19
48	Visual Study of Liquid Flow in a Spinning Disk Reactor with a Hydrophobic Surface. Industrial & Engineering Chemistry Research, 2018, 57, 7692-7699.	1.8	19
49	CFD Simulation and High-Speed Photography of Liquid Flow in the Outer Cavity Zone of a Rotating Packed Bed Reactor. Industrial & Engineering Chemistry Research, 2019, 58, 5280-5290.	1.8	19
50	Initial liquid dispersion and mass transfer performance in a rotating packed bed. Chemical Engineering and Processing: Process Intensification, 2019, 140, 136-141.	1.8	18
51	Using dielectric barrier discharge and rotating packed bed reactor for NO _x removal. Separation and Purification Technology, 2020, 235, 116141.	3.9	18
52	Carbon dioxide capture by non-aqueous blend in rotating packed bed reactor: Absorption and desorption investigation. Separation and Purification Technology, 2021, 269, 118714.	3.9	18
53	Absorption of ammonia into water-in-oil microemulsion in a rotor-stator reactor. Chemical Engineering and Processing: Process Intensification, 2015, 87, 68-74.	1.8	17
54	Mass-Transfer Performance of CO ₂ Absorption with Aqueous Diethylenetriamine-Based Solutions in a Packed Column with Dixon Rings. Industrial & Engineering Chemistry Research, 2016, 55, 10788-10793.	1.8	17

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55	Ozonation of Acid Red 14 in the Presence of Inorganic Salts in a Microporous Tube-in-Tube Microchannel Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 19071-19076.	1.8	15
56	Oxidation of ammonium sulfite by oxygen in a microporous tube-in-tube microchannel reactor. <i>Chemical Engineering Journal</i> , 2014, 253, 258-263.	6.6	15
57	SO ₂ Removal in a Pilot Scale Rotating Packed Bed. <i>Environmental Engineering Science</i> , 2015, 32, 806-815.	0.8	15
58	High water content silk protein-based hydrogels with tunable elasticity fabricated via a Ru(II) mediated photochemical cross-linking method. <i>Fibers and Polymers</i> , 2017, 18, 1831-1840.	1.1	15
59	Study on phenol sulfonation by concentrated sulfuric acid: Kinetics and process optimization. <i>Chemical Engineering Science</i> , 2019, 202, 15-25.	1.9	15
60	Low-Concentration CO ₂ Capture from Natural Gas Power Plants Using a Rotating Packed Bed Reactor. <i>Energy & Fuels</i> , 2019, 33, 1713-1721.	2.5	15
61	A study on the absorption of ammonia into water in a rotor-stator reactor. <i>Canadian Journal of Chemical Engineering</i> , 2015, 93, 116-120.	0.9	14
62	Treatment of wastewater containing o-phenylenediamine by ozone in a rotor-stator reactor. <i>Water Science and Technology</i> , 2016, 73, 1357-1363.	1.2	14
63	Microwave-assisted fast and efficient dissolution of silkworm silk for constructing fibroin-based biomaterials. <i>Chemical Engineering Science</i> , 2018, 189, 286-295.	1.9	14
64	Controllable wettability on stainless steel substrates with highly stable coatings. <i>Chemical Engineering Science</i> , 2019, 195, 791-800.	1.9	14
65	Preparation of lithium carbonate by thermal decomposition in a rotating packed bed reactor. <i>Chemical Engineering Journal</i> , 2019, 377, 119929.	6.6	14
66	NOx removal in a rotating packed bed: Oxidation and enhanced absorption process optimization. <i>Separation and Purification Technology</i> , 2019, 227, 115682.	3.9	13
67	Three-dimensional large eddy simulation of wave characteristics of liquid film flow in a spinning disk reactor. <i>AIChE Journal</i> , 2020, 66, e16894.	1.8	13
68	An Evaluation of Metronidazole Degradation in a Plasma-Assisted Rotating Disk Reactor Coupled with TiO ₂ in Aqueous Solution. <i>Engineering</i> , 2021, 7, 1603-1610.	3.2	13
69	Study on the removal of fine particles by using water in a rotating packed bed. <i>Canadian Journal of Chemical Engineering</i> , 2017, 95, 1063-1068.	0.9	12
70	Enhancement of CO ₂ Absorption into K ₂ CO ₃ Solution by Cyclohexane in a High-Shear Reactor. <i>Energy & Fuels</i> , 2019, 33, 6628-6633.	2.5	12
71	Wetting Behavior of the Stainless Steel Wire Mesh with Al ₂ O ₃ Coatings and Mass Transfer Intensification in a Rotating Packed Bed. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 1374-1382.	1.8	12
72	Liquid droplet dispersion in a rotating packed bed: Experimental and numerical studies. <i>Chemical Engineering Science</i> , 2021, 240, 116675.	1.9	12

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73	Study on the hydrodynamic characteristics of a rotor-stator reactor by electrical conductance and response time technique. <i>Chemical Engineering and Processing: Process Intensification</i> , 2016, 109, 158-163.	1.8	11
74	Synthesis of Nano-Ni by Liquid Reduction Method in a Combined Reactor of Rotating Packed Bed and Stirred Tank Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 3908-3913.	1.8	11
75	Desulfurization of Offshore Natural Gas by Chelated Iron Solution in a HiGee Reactor: A Feasibility Study. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 10629-10634.	1.8	11
76	Rapid and continuous polymer dissolution by rotating packed bed for enhanced oil recovery. <i>Chemical Engineering and Processing: Process Intensification</i> , 2020, 153, 107952.	1.8	11
77	Scale-Up of a Rotating Packed Bed Reactor with a Mesh-Pin Rotor: (II) Mass Transfer and Application. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 5124-5132.	1.8	11
78	Flow behavior in a rotating packed bed reactor with single-layer mesh: Effect of fiber cross-sectional shape. <i>Chemical Engineering Science</i> , 2022, 248, 117147.	1.9	11
79	Synthesis of nano-Ce _{0.5} Zr _{0.5} O ₂ by absorption of ammonia into water-in-oil microemulsion in a rotor-stator reactor. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	0.8	10
80	Numerical simulation for mass transfer characteristics of CO ₂ capture in a rotating packed bed. <i>Chemical Engineering and Processing: Process Intensification</i> , 2016, 109, 68-79.	1.8	10
81	Synthesis of heavy alkyl benzene sulfonate in a rotating packed bed combined with a stirred tank reactor. <i>Chemical Engineering and Processing: Process Intensification</i> , 2016, 110, 123-127.	1.8	10
82	Mass Transfer Characteristics in a Rotor-Stator Reactor. <i>Chemical Engineering and Technology</i> , 2017, 40, 1078-1083.	0.9	10
83	Study on the Removal of Fine Particles from Gas Steam Using Water in a Rotating Packed Bed Combined with a Charged Device. <i>Energy & Fuels</i> , 2017, 31, 1764-1770.	2.5	10
84	Scale-Up of a Rotating Packed Bed Reactor with a Mesh-Pin Rotor: (I) Hydrodynamic Studies. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 5114-5123.	1.8	10
85	Process Intensification of Quasi-Homogeneous Catalytic Hydrogenation in a Rotating Packed Bed Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 1383-1392.	1.8	10
86	Intensification of micromixing efficiency in a spinning disk reactor: Experimental investigation. <i>Chemical Engineering and Processing: Process Intensification</i> , 2021, 166, 108500.	1.8	10
87	Hydrothermal controllable synthesis of hollow carbon particles: Reaction-growth mechanism. <i>Chemical Engineering Science</i> , 2020, 225, 115787.	1.9	8
88	Preparation of cordierite monolithic catalyst for α -methylstyrene hydrogenation in a rotating packed bed reactor. <i>Chemical Engineering and Processing: Process Intensification</i> , 2020, 150, 107882.	1.8	8
89	Investigation on Designing Meltblown Fibers for the Filtering Layer of a Mask by Cross-Scale Simulations. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 1962-1971.	1.8	8
90	Oxygen mass transfer intensification in an inner-loop rotor-stator reactor: Production of sodium gluconate as an example. <i>Chemical Engineering and Processing: Process Intensification</i> , 2021, 160, 108290.	1.8	8

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91	Synthesis of ZSM-5 by hydrothermal method with pre-mixing in a stirred-tank reactor. Canadian Journal of Chemical Engineering, 2019, 97, 3063-3073.	0.9	7
92	Efficient Coating Method via Matching Rough Surface of Stainless Steel with Al ₂ O ₃ Particles. Industrial & Engineering Chemistry Research, 2019, 58, 1848-1856.	1.8	7
93	Experimental investigation of effective gas-liquid specific interfacial area in a rotor-stator reactor. Chemical Engineering and Processing: Process Intensification, 2020, 148, 107801.	1.8	7
94	Process intensification of 2,3,6-trimethylphenol oxidation in a rotating packed bed reactor. Chemical Engineering and Processing: Process Intensification, 2020, 149, 107842.	1.8	7
95	Kinetic study of SO ₂ with sodium lactate based deep eutectic solvents and modelling of desulfurization intensification in rotating packed bed reactor. Chemical Engineering Science, 2022, 248, 117197.	1.9	7
96	Dispersion and hydrogenation property of nano-Ni in ethanol solution in a stirring tank reactor. Chemical Engineering Journal, 2019, 377, 119826.	6.6	6
97	Modeling for Temperature Distribution of Water in a Multiwaveguide Microwave Reactor. Industrial & Engineering Chemistry Research, 2020, 59, 4762-4774.	1.8	6
98	Enhanced Regeneration of Triethylene Glycol Solution by Rotating Packed Bed for Offshore Natural Gas Dehydration Process: Experimental and Modeling Study. Chemical Engineering and Processing: Process Intensification, 2021, 168, 108562.	1.8	6
99	Porous PdO-Flower Induced by Nanomicrostructure on Monolith with Traditional Immersion-Pyrolysis Technique for Hydrogenation. Industrial & Engineering Chemistry Research, 2019, 58, 14646-14654.	1.8	5
100	Study on the Effective Mass Transfer Area and the Local Gas-Side Mass Transfer Coefficient in a Rotor-Stator Reactor. Industrial & Engineering Chemistry Research, 2022, 61, 1523-1530.	1.8	5
101	Feasibility study on micromixing intensification in a spinning disk reactor utilizing heterogeneous surface wettability. Chemical Engineering and Processing: Process Intensification, 2022, 170, 108707.	1.8	4
102	Study on the Synthesis of 2,3,5-Trimethyl-1,4-Benzoquinone by an RSR+STR Tandem Process. Industrial & Engineering Chemistry Research, 2018, 57, 13381-13386.	1.8	3
103	Synthesis of carbon materials with different morphologies by solvothermal method with premixing. Canadian Journal of Chemical Engineering, 2019, 97, 2447-2452.	0.9	3
104	Characterization of petroleum sulfonate synthesized via gas-phase SO ₃ sulfonation in rotating packed bed and its application in enhanced oil recovery. Chemical Engineering Science, 2021, 230, 116216.	1.9	3
105	Controllable and high-throughput preparation of microdroplet using an ultra-high speed rotating packed bed. Chinese Journal of Chemical Engineering, 2022, 48, 116-124.	1.7	3
106	Desulfurization performance in a HiGee reactor with packing containing different fiber cross-sectional shapes. Separation and Purification Technology, 2022, 287, 120536.	3.9	3
107	Sulfur recycle in biogas production: Novel Hige desulfurization process using natural amino acid salts. Chemosphere, 2022, 297, 134215.	4.2	3
108	Study on the synthesis of organized mesoporous alumina in a rotating packed bed. Materials Research Bulletin, 2013, 48, 290-294.	2.7	2

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109	Flue Gas Desulfurization by Using a HiGee Electric Field Device. <i>Chemical Engineering and Technology</i> , 2018, 41, 860-866.	0.9	2
110	Plasma-Assisted Rotating Disk Reactor toward Disinfection of Aquatic Microorganisms. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 13977-13986.	1.8	2
111	Intensified regeneration performance of spent caustic from LPG sweetening by HiGee reactor. <i>Chemical Engineering Research and Design</i> , 2020, 156, 281-288.	2.7	2
112	Improved H_2SO_4 -catalyzed alkylation reaction in a rotating packed bed reactor by adding additives. <i>Canadian Journal of Chemical Engineering</i> , 2022, 100, 3395-3407.	0.9	2
113	Polymerization of Isobutylene in a Rotating Packed Bed Reactor: Experimental and Modeling Studies. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 10194.	1.3	1
114	Mechanism of Liquid Dispersion Enhancement by the Hydrophobic Wire Mesh at Macro- and Micro-Scale. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 8927-8934.	1.8	0
115	Highly Dispersed and Confined Ni/ MMO Catalyst Synthesized in a Rotating Packed Bed for Hydrogenation of Maleic Anhydride. <i>AIChE Journal</i> , 0, , e17509.	1.8	0