

Ka Ming Ng

List of Publications by Year in descending order

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134
papers

3,829
citations

126907

33
h-index

161849

54
g-index

138
all docs

138
docs citations

138
times ranked

3431
citing authors

#	ARTICLE	IF	CITATIONS
1	Li ₇ La ₃ Zr ₂ O ₁₂ ceramic nanofiber-incorporated composite polymer electrolytes for lithium metal batteries. Journal of Materials Chemistry A, 2019, 7, 3391-3398.	10.3	178
2	Product-oriented process synthesis and development: Creams and pastes. AIChE Journal, 2001, 47, 2746-2767.	3.6	128
3	A generalized Blake-Kozeny equation for multisized spherical particles. AIChE Journal, 1991, 37, 1583-1588.	3.6	119
4	Design of formulated products: A systematic methodology. AIChE Journal, 2011, 57, 2431-2449.	3.6	116
5	High Thermoelectric Performance in Crystallographically Textured n-Type Bi ₂ Te ₃ Se ₂ Produced from Asymmetric Colloidal Nanocrystals. ACS Nano, 2018, 12, 7174-7184.	14.6	114
6	New discretization procedure for the breakage equation. AIChE Journal, 1995, 41, 1204-1216.	3.6	113
7	Process Development for the Recycle of Spent Lithium Ion Batteries by Chemical Precipitation. Industrial & Engineering Chemistry Research, 2014, 53, 18245-18259.	3.7	109
8	Statistics of multiple particle breakage. AIChE Journal, 1996, 42, 1600-1611.	3.6	91
9	Crystallographically Textured Nanomaterials Produced from the Liquid Phase Sintering of Bi ₂ Sb ₂ Te ₃ Nanocrystal Building Blocks. Nano Letters, 2018, 18, 2557-2563.	9.1	89
10	Product-centered processing: Manufacture of chemical-based consumer products. AIChE Journal, 2002, 48, 1212-1230.	3.6	76
11	Product design – Molecules, devices, functional products, and formulated products. Computers and Chemical Engineering, 2015, 81, 70-79.	3.8	74
12	Design of integrated crystallization systems. AIChE Journal, 2001, 47, 2474-2492.	3.6	67
13	A single-ion conducting and shear-thinning polymer electrolyte based on ionic liquid-decorated PMMA nanoparticles for lithium-metal batteries. Journal of Materials Chemistry A, 2016, 4, 18543-18550.	10.3	66
14	Synthesis of drowning-out crystallization-based separations. AIChE Journal, 1997, 43, 91-103.	3.6	61
15	Synthesis of reactive crystallization processes. AIChE Journal, 1997, 43, 1737-1750.	3.6	57
16	Unified approach for synthesizing crystallization-based separation processes. AIChE Journal, 2000, 46, 1400-1421.	3.6	57
17	Product-centered processing: Pharmaceutical tablets and capsules. AIChE Journal, 2003, 49, 1193-1215.	3.6	57
18	A grand model for chemical product design. Computers and Chemical Engineering, 2016, 91, 15-27.	3.8	56

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19	Synthesis of an AIE-active fluorogen and its application in cell imaging. <i>Science in China Series B: Chemistry</i> , 2009, 52, 15-19.	0.8	49
20	An integrative approach to product development—A skin-care cream. <i>Computers and Chemical Engineering</i> , 2009, 33, 1097-1113.	3.8	49
21	Design of formulated products: Experimental component. <i>AIChE Journal</i> , 2012, 58, 173-189.	3.6	49
22	High-concentration copper nanoparticles synthesis process for screen-printing conductive paste on flexible substrate. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	1.9	47
23	Critical role of nanoinclusions in silver selenide nanocomposites as a promising room temperature thermoelectric material. <i>Journal of Materials Chemistry C</i> , 2019, 7, 2646-2652.	5.5	47
24	Synthesis of extractive reaction processes. <i>AIChE Journal</i> , 1998, 44, 1363-1381.	3.6	46
25	Bypassing eutectics with extractive crystallization: Design alternatives and tradeoffs. <i>AIChE Journal</i> , 1995, 41, 1456-1470.	3.6	45
26	A break-even analysis of distillation–membrane hybrids. <i>AIChE Journal</i> , 1998, 44, 93-105.	3.6	44
27	Improvement of Lithium-Ion Battery Performance at Low Temperature by Adopting Ionic Liquid-Decorated PMMA Nanoparticles as Electrolyte Component. <i>ACS Applied Energy Materials</i> , 2018, 1, 2664-2670.	5.1	44
28	Separation of quaternary conjugate salt systems by fractional crystallization. <i>AIChE Journal</i> , 1996, 42, 2162-2174.	3.6	39
29	Synthesis of chiral crystallization processes. <i>AIChE Journal</i> , 2001, 47, 369-387.	3.6	39
30	Copper pastes using bimodal particles for flexible printed electronics. <i>Journal of Materials Science</i> , 2016, 51, 1914-1922.	3.7	39
31	Experimental study of reaction in a partially wetted catalytic pellet. <i>AIChE Journal</i> , 1991, 37, 202-214.	3.6	38
32	Fractional crystallization: Design alternatives and tradeoffs. <i>AIChE Journal</i> , 1995, 41, 2427-2438.	3.6	35
33	Design and economic trade-offs of extractive crystallization processes. <i>AIChE Journal</i> , 1991, 37, 437-447.	3.6	34
34	New discretization procedure for the agglomeration equation. <i>AIChE Journal</i> , 1996, 42, 727-741.	3.6	34
35	<i>In situ</i> synthesis of iron sulfide embedded porous carbon hollow spheres for sodium ion batteries. <i>Nanoscale</i> , 2017, 9, 19408-19414.	5.6	34
36	Separation of Ni, Co, and Mn from Spent $\text{LiNi}_{0.5}\text{Mn}_{0.3}\text{Co}_{0.2}\text{O}_2$ Cathode Materials by Ammonia Dissolution. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 12718-12725.	6.7	34

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37	Synthesis of crystallization–distillation hybrid separation processes. <i>AIChE Journal</i> , 1997, 43, 1751-1762.	3.6	33
38	Effect of kinetics and mass transfer on design of extractive reaction processes. <i>AIChE Journal</i> , 1998, 44, 2212-2228.	3.6	33
39	Design of reactive crystallization systems incorporating kinetics and mass-transfer effects. <i>AIChE Journal</i> , 1999, 45, 69-81.	3.6	33
40	Food Product Design: A Hybrid Machine Learning and Mechanistic Modeling Approach. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 16743-16752.	3.7	33
41	Synthesis of various metal stearates and the corresponding monodisperse metal oxide nanoparticles. <i>Powder Technology</i> , 2016, 301, 949-958.	4.2	32
42	Sensitive and Specific Detection of Lactate Using an AIE-Active Fluorophore. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 38153-38158.	8.0	32
43	Process Synthesis: Selective Recovery of Lithium from Lithium-Ion Battery Cathode Materials. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 3118-3130.	3.7	32
44	Chemical product design: Advances in and proposed directions for research and teaching. <i>Computers and Chemical Engineering</i> , 2019, 126, 147-156.	3.8	32
45	Product design: Metal nanoparticle-based conductive inkjet inks. <i>AIChE Journal</i> , 2016, 62, 2740-2753.	3.6	30
46	Synthesis of processing system around a crystallizer. <i>AIChE Journal</i> , 1998, 44, 2240-2251.	3.6	28
47	Effectiveness enhancement and reactant depletion in a partially wetted catalyst. <i>AIChE Journal</i> , 1987, 33, 1448-1465.	3.6	27
48	CoO/CoFe ₂ O ₄ core/shell nanoparticles assembled in carbon sheets as anode materials for lithium ion battery. <i>Journal of Alloys and Compounds</i> , 2019, 808, 151691.	5.5	27
49	Sustainable product design: A life-cycle approach. <i>Chemical Engineering Science</i> , 2020, 217, 115508.	3.8	27
50	Operational issues in solids processing plants: Systems view. <i>AIChE Journal</i> , 2001, 47, 107-125.	3.6	26
51	Tribological behaviors of aligned carbon nanotube/fullerene-epoxy nanocomposites. <i>Polymer Engineering and Science</i> , 2008, 48, 1467-1475.	3.1	26
52	Novel Silicon Doped Tin Oxide–Carbon Microspheres as Anode Material for Lithium Ion Batteries: The Multiple Effects Exerted by Doped Si. <i>Small</i> , 2017, 13, 1702614.	10.0	26
53	Simulation of solids processes accounting for particle-size distribution. <i>AIChE Journal</i> , 1997, 43, 715-726.	3.6	25
54	Synthesis of prepolymerization stage in polycondensation processes. <i>AIChE Journal</i> , 1999, 45, 1808-1829.	3.6	25

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55	Experimental Determination of Solid-Liquid Equilibrium Phase Diagrams for Crystallization-Based Process Synthesis. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 3788-3798.	3.7	25
56	An amine-reactive tetraphenylethylene derivative for protein detection in SDS-PAGE. <i>Analyst, The</i> , 2012, 137, 5592.	3.5	24
57	Development of fluidized catalytic reactors: Screening and scale-up. <i>AIChE Journal</i> , 2002, 48, 1498-1518.	3.6	23
58	A highly elastic and flexible solid-state polymer electrolyte based on ionic liquid-decorated PMMA nanoparticles for lithium batteries. <i>New Journal of Chemistry</i> , 2017, 41, 13096-13103.	2.8	23
59	Tin Diselenide Molecular Precursor for Solution-Processable Thermoelectric Materials. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 17063-17068.	13.8	23
60	Diastereomeric salt crystallization synthesis for chiral resolution of ibuprofen. <i>AIChE Journal</i> , 2007, 53, 429-437.	3.6	22
61	Computer-Aided Polymer Design: Integrating Group Contribution and Molecular Dynamics. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 15542-15552.	3.7	22
62	Representation of high-dimensional solid-liquid phase diagrams of ionic systems. <i>AIChE Journal</i> , 2001, 47, 861-879.	3.6	21
63	Quantitative Non-Covalent Functionalization of Carbon Nanotubes. <i>Journal of Cluster Science</i> , 2006, 17, 599-608.	3.3	21
64	Thermodynamics of salt lake system: Representation, experiments, and visualization. <i>AIChE Journal</i> , 2008, 54, 706-727.	3.6	21
65	Process development of treatment plants for dyeing wastewater. <i>AIChE Journal</i> , 2012, 58, 2726-2742.	3.6	21
66	Design of multistage extractive reaction processes. <i>AIChE Journal</i> , 1998, 44, 2689-2702.	3.6	20
67	Experimental determination of solid-liquid-liquid equilibrium phase diagrams. <i>AIChE Journal</i> , 2007, 53, 1608-1619.	3.6	19
68	Large scale synthesis of nearly monodisperse, variable-shaped In_2O_3 nanocrystals via a one-pot pyrolysis reaction. <i>CrystEngComm</i> , 2014, 16, 9236-9244.	2.6	19
69	Facile synthesis of nearly monodisperse AgCu alloy nanoparticles with synergistic effect against oxidation and electromigration. <i>Journal of Materials Research</i> , 2019, 34, 2095-2104.	2.6	19
70	Synthesis of bulk solids processing systems. <i>AIChE Journal</i> , 1999, 45, 1629-1648.	3.6	18
71	Design of Protein Crystallization Processes Guided by Phase Diagrams. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 8163-8175.	3.7	17
72	Product design: Impact of government policy and consumer preference on company profit and corporate social responsibility. <i>Computers and Chemical Engineering</i> , 2018, 118, 118-131.	3.8	17

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73	Screening procedure for synthesizing isothermal multiphase reactors. <i>AICHE Journal</i> , 1998, 44, 1563-1578.	3.6	16
74	Representation of high-dimensional, molecular solid-liquid phase diagrams. <i>AICHE Journal</i> , 2000, 46, 2435-2455.	3.6	16
75	Visualization of high-dimensional phase diagrams of molecular and ionic mixtures. <i>AICHE Journal</i> , 2002, 48, 991-1000.	3.6	16
76	A systematic iterative procedure for determining granulator operating parameters. <i>AICHE Journal</i> , 2006, 52, 3189-3202.	3.6	16
77	Crystallographically textured SnSe nanomaterials produced from the liquid phase sintering of nanocrystals. <i>Dalton Transactions</i> , 2019, 48, 3641-3647.	3.3	16
78	Improving Product Recovery in Fractional Crystallization Processes: A Retrofit of an Adipic Acid Plant. <i>Industrial & Engineering Chemistry Research</i> , 1999, 38, 823-832.	3.7	15
79	Aggregation-induced emission luminogen-based fluorescence detection of hypoxanthine: a probe for biomedical diagnosis of energy metabolism-related conditions. <i>Journal of Materials Chemistry B</i> , 2018, 6, 4575-4578.	5.8	15
80	An Integrated Approach for the Design of Emulsified Products. <i>AICHE Journal</i> , 2019, 65, 75-86.	3.6	15
81	High copper loading metal organic decomposition paste for printed electronics. <i>Journal of Materials Science</i> , 2017, 52, 5617-5625.	3.7	14
82	Process boundary approach to separations synthesis. <i>AICHE Journal</i> , 1999, 45, 1939-1952.	3.6	13
83	Screening multiphase reactors for nonisothermal multiple reactions. <i>AICHE Journal</i> , 2000, 46, 389-406.	3.6	13
84	Development of Amino Acid Crystallization Processes: L-Glutamic Acid. <i>Industrial & Engineering Chemistry Research</i> , 2007, 46, 2814-2822.	3.7	13
85	Workflow for managing impurities in an integrated crystallization process. <i>AICHE Journal</i> , 2010, 56, 633-649.	3.6	13
86	Product design: A pricing framework accounting for product quality and consumer awareness. <i>AICHE Journal</i> , 2018, 64, 2462-2471.	3.6	13
87	Novel nanosheets of ferrite nanoparticle arrays in carbon matrix from single source precursors: an anode material for lithium-ion batteries. <i>Journal of Materials Science</i> , 2018, 53, 4456-4466.	3.7	13
88	Beyond process design: The emergence of a process development focus. <i>Korean Journal of Chemical Engineering</i> , 2003, 20, 791-798.	2.7	12
89	Separation and Purification of Schisandrin B from Fructus Schisandrae. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 4193-4201.	3.7	12
90	Synthesis and characterization of nearly monodisperse deltoidal icositetrahedral In ₂ O ₃ nanocrystals via one-pot pyrolysis reaction. <i>CrystEngComm</i> , 2013, 15, 8065.	2.6	12

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91	Dual-reductant synthesis of nickel nanoparticles for use in screen-printing conductive paste. Journal of Nanoparticle Research, 2021, 23, 1.	1.9	12
92	Electrodeposition of polyimides from nonaqueous emulsions. Journal of Applied Polymer Science, 1988, 36, 1525-1540.	2.6	11
93	Process engineering research in China: A multiscale, market-driven approach. AIChE Journal, 2005, 51, 2620-2627.	3.6	11
94	Isobenzofulvene-fullerene mono-adducts for organic photovoltaic applications. Journal of Materials Chemistry C, 2015, 3, 977-980.	5.5	11
95	Relationship between maceration and extraction yield in the production of Chinese herbal medicine. Food and Bioprocess Technology, 2016, 9, 236-243.	3.6	11
96	Optimization-based cosmetic formulation: Integration of mechanistic model, surrogate model, and heuristics. AIChE Journal, 2021, 67, .	3.6	11
97	Effectiveness of a partially wetted catalyst for bimolecular reaction kinetics. AIChE Journal, 1988, 34, 1361-1366.	3.6	10
98	High-dimensional solid-liquid phase diagrams involving compounds and polymorphs. AIChE Journal, 2002, 48, 2179-2192.	3.6	10
99	Separation of fullerenes C ₆₀ and C ₇₀ using a crystallization-based process. AIChE Journal, 2010, 56, 1801-1812.	3.6	10
100	Product Design: a Transdermal Patch Containing a Traditional Chinese Medicinal Tincture. Industrial & Engineering Chemistry Research, 2010, 49, 4904-4913.	3.7	10
101	Product Design: A Nanomized Nutraceutical with Enhanced Bioactivity and Bioavailability. Industrial & Engineering Chemistry Research, 2012, 51, 7320-7326.	3.7	10
102	Synthesis and application of non-agglomerated ITO nanocrystals via pyrolysis of indium-tin stearate without using additional organic solvents. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	10
103	Critical assessment of particle quality of commercial LiFePO ₄ cathode material using coin cells as a causal table for lithium-ion battery performance. Journal of Solid State Electrochemistry, 2016, 20, 379-387.	2.5	10
104	Aerobic sludge granulation for simultaneous anaerobic decolorization and aerobic aromatic amines mineralization for azo dye wastewater treatment. Environmental Technology (United Kingdom), 2018, 39, 1368-1375.	2.2	10
105	Facile synthesis of porous carbon spheres embedded with metal nanoparticles and their applications as supercapacitor electrodes. RSC Advances, 2016, 6, 91250-91255.	3.6	9
106	Tin Diselenide Molecular Precursor for Solution-Processable Thermoelectric Materials. Angewandte Chemie, 2018, 130, 17309-17314.	2.0	9
107	Product design: Incorporating make-or-buy analysis and supplier selection. Chemical Engineering Science, 2019, 202, 357-372.	3.8	9
108	Development of liquid-phase agitated reactors: Synthesis, simulation, and scaleup. AIChE Journal, 1999, 45, 2371-2391.	3.6	8

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109	Design of liquid-liquid phase transfer catalytic processes. <i>AIChE Journal</i> , 2001, 47, 1832-1848.	3.6	8
110	Revitalizing digenite Cu _{1.8} S nanoparticles with the localized surface plasmon resonance (LSPR) effect by manganese incorporation. <i>New Journal of Chemistry</i> , 2017, 41, 677-684.	2.8	8
111	Chemical Product Design: Advances in Research and Teaching. <i>Computer Aided Chemical Engineering</i> , 2018, 44, 21-32.	0.5	8
112	Synthesis of highly dispersible IZO and ITO nanocrystals for the fabrication of transparent nanocomposites in UV- and near IR-blocking. <i>Journal of Nanoparticle Research</i> , 2018, 20, 1.	1.9	7
113	Product Design: Enzymatic Biosensors for Body Fluid Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 14284-14294.	3.7	7
114	Formulation of a paste for copper thick film. <i>Journal of Nanoparticle Research</i> , 2021, 23, 1.	1.9	7
115	Quality assurance of Chinese herbal medicines: Procedure for single-herb extraction. <i>AIChE Journal</i> , 2013, 59, 4241-4254.	3.6	6
116	A novel evaporative crystallization column for the purification of fullerene C60. <i>AIChE Journal</i> , 2007, 53, 531-534.	3.6	5
117	Effect of fatty acid on the formation of ITO nanocrystals via one-pot pyrolysis reaction. <i>CrystEngComm</i> , 2015, 17, 1168-1172.	2.6	5
118	Computer-Aided Design of a Perfluorinated Sulfonic Acid Proton Exchange Membrane Using Stochastic Optimization and Molecular Dynamic Method. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 18045-18057.	3.7	5
119	Experimental Study of the Effect of Buffer on Chromatography and Crystallization Hybrid Process. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 8393-8399.	3.7	4
120	Quality assurance of Chinese herbal medicines: Procedure for multiple-herb extraction. <i>AIChE Journal</i> , 2014, 60, 4014-4026.	3.6	4
121	Facile synthesis of WO ₃ nanorods with controlled dimensions and tunable near-infrared absorption. <i>Journal of Nanoparticle Research</i> , 2018, 20, 1.	1.9	4
122	A fluorescent nanoparticle probe based on sugar-substituted tetraphenylethene for label-free detection of galectin-3. <i>Journal of Materials Chemistry B</i> , 2019, 7, 6737-6741.	5.8	4
123	A new route for fast synthesis of copper nanowires and application on flexible transparent conductive films. <i>Journal of Nanoparticle Research</i> , 2021, 23, 1.	1.9	4
124	Development of Reactive Crystallization Processes. , 2005, , 339-358.		3
125	Product Design “From Molecules to Formulations to Devices. <i>Computer Aided Chemical Engineering</i> , 2014, 34, 108-123.	0.5	3
126	Product design: Nanoparticle-loaded polyvinyl butyral interlayer for solar control. <i>AIChE Journal</i> , 2018, 64, 3614-3624.	3.6	3

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127	Product design: Formulation of a screen-printable sintering-type conductive paste. <i>AICHE Journal</i> , 2020, 66, e16272.	3.6	3
128	Hydrometallurgy process for the recovery of valuable metals from LiNi _{0.8} Co _{0.15} Al _{0.05} O ₂ cathode materials. <i>SN Applied Sciences</i> , 2019, 1, 1.	2.9	2
129	Product design: An optimization-based approach for targeting of particulate composite microstructure. <i>Computers and Chemical Engineering</i> , 2020, 140, 106975.	3.8	2
130	Design of homogeneous biphasic catalytic processes. <i>AICHE Journal</i> , 2002, 48, 1991-2005.	3.6	1
131	Influence of solvents on the plasmonic properties of indium-doped zinc oxide nanocrystals. <i>Journal of Materials Science</i> , 2018, 53, 14456-14468.	3.7	1
132	Conceptual design of chemical devices. <i>Journal of Advanced Manufacturing and Processing</i> , 2021, 3, .	2.4	1
133	Facile one-pot synthesis of bimodal-sized nickel nanoparticles in a solvent-directed reaction system. <i>Journal of Nanoparticle Research</i> , 2022, 24, .	1.9	1
134	Computational design of structured chemical products. <i>Frontiers of Chemical Science and Engineering</i> , 2021, 15, 1033-1049.	4.4	0