Daniele L. Marchisio

List of Publications by Year
in descending order

204 papers	8,740 citations	47 h-index	82 g-index
		47006	58581
211 all docs	211 docs citations	211 times ranked	4853 citing authors

#	Article	IF	Citations
1	Population Balance Models for Particulate Flows in Porous Media: Breakage and Shear-Induced Events. Transport in Porous Media, 2023, 146, 197-222.	2.6	3
2	Automatic control of a freeze-drying process: Detection of the end point of primary drying. Drying Technology, 2022, 40, 140-157.	3.1	20
3	Implementation of CHyQMOM in OpenFOAM for the simulation of non-equilibrium gas-particle flows under one-way and two-way coupling. Powder Technology, 2022, 396, 765-784.	4.2	3
4	CFD-PBE modelling of continuous Ni-Mn-Co hydroxide co-precipitation for Li-ion batteries. Chemical Engineering Research and Design, 2022, 177, 461-472.	5.6	15
5	Life cycle assessment and life cycle costing of advanced anaerobic digestion of organic fraction municipal solid waste. Chemosphere, 2022, 289, 133058.	8.2	15
6	Analysis of particles size distributions in Mg(OH)2 precipitation from highly concentrated MgCl2 solutions. Powder Technology, 2022, 398, 117106.	4.2	14
7	Molecular modeling of the interface of an egg yolk protein-based emulsion. Physics of Fluids, 2022, 34, .	4.0	11
8	10.1063/5.0079883.1. , 2022, , .		0
9	ColHySE: An advanced column hydrodynamic-based model for solvent extraction. Chemical Engineering Research and Design, 2022, 179, 188-200.	5.6	1
10	Combining Mathematical Modeling and Thermal Infrared Data in the Freezing of Pharmaceutical Liquid Formulations. Industrial & Engineering Chemistry Research, 2022, 61, 4379-4389.	3.7	5
11	From Computational Fluid Dynamics to Structure Interpretation via Neural Networks: An Application to Flow and Transport in Porous Media. Industrial & Engineering Chemistry Research, 2022, 61, 8530-8541.	3.7	19
12	An open-source workflow for open-cell foams modelling: Geometry generation and CFD simulations for momentum and mass transport. Chemical Engineering Science, 2022, 255, 117583.	3.8	12
13	QEEFoam: A Quasi-Eulerian-Eulerian model for polydisperse turbulent gas-liquid flows. Implementation in OpenFOAM, verification and validation. International Journal of Multiphase Flow, 2021, 136, 103544.	3.4	9
14	Effect of turbulent kinetic energy dissipation rate on the prediction of droplet size distribution in stirred tanks. International Journal of Multiphase Flow, 2021, 136, 103547.	3.4	23
15	Simulation of high Schmidt number fluids with dissipative particle dynamics: Parameter identification and robust viscosity evaluation. Physics of Fluids, 2021, 33, .	4.0	13
16	A computational workflow to study particle transport and filtration in porous media: Coupling CFD and deep learning. Chemical Engineering Journal, 2021, 417, 128936.	12.7	48
17	Numerical and Experimental Analysis of theÂDaughter Distribution in Liquidâ€Liquid Stirred Tanks. Chemical Engineering and Technology, 2021, 44, 1994.	1.5	2
18	Numerical simulation of bubble columns: LES turbulence model and interphase forces blending approach. Chemical Engineering Research and Design, 2021, 173, 1-14.	5.6	3

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19	Validation of the Diffusion Mixture Model for the simulation of bubbly flows and implementation in OpenFOAM. Computers and Fluids, 2021, 227, 105026.	2.5	4
20	A detailed CFD analysis of flow patterns and single-phase velocity variations in spiral jet mills affected by caking phenomena. Chemical Engineering Research and Design, 2021, 174, 234-253.	5.6	2
21	Effect of different good solvents in flash nano-precipitation via multi-scale population balance modeling-CFD coupling approach. Chemical Engineering Science, 2021, 245, 116833.	3.8	11
22	Investigation of the Freezing Phenomenon in Vials Using an Infrared Camera. Pharmaceutics, 2021, 13, 1664.	4.5	11
23	twoWayGPBEFoam: An open-source Eulerian QBMM solver for monokinetic bubbly flows. Computer Physics Communications, 2020, 250, 107036.	7.5	9
24	A Computational Workflow to Study Particle Transport in Porous Media: Coupling CFD and Deep Learning. Computer Aided Chemical Engineering, 2020, 48, 1759-1764.	0.5	4
25	A meshless Radial Basis Method (RBM) for solving the detailed population balance equation. Chemical Engineering Science, 2020, 228, 115973.	3.8	5
26	<scp>GRICU</scp> 2019 special issue section preface. Canadian Journal of Chemical Engineering, 2020, 98, 1866-1867.	1.7	2
27	A <scp>CFDâ€ĐEM</scp> approach to study the breakup of fractal agglomerates in an internal mixer. Canadian Journal of Chemical Engineering, 2020, 98, 1880-1892.	1.7	19
28	Spray Freeze-Drying as a Solution to Continuous Manufacturing of Pharmaceutical Products in Bulk. Processes, 2020, 8, 709.	2.8	59
29	A review of transport of nanoparticles in porous media. , 2020, , 351-381.		11
30	A novel finite-volume TVD scheme to overcome non-realizability problem in quadrature-based moment methods. Journal of Computational Physics, 2020, 409, 109337.	3.8	9
31	A new mathematical model for monitoring the temporal evolution of the ice crystal size distribution during freezing in pharmaceutical solutions. European Journal of Pharmaceutics and Biopharmaceutics, 2020, 148, 148-159.	4.3	20
32	<scp>MARTINI</scp> coarseâ€grained model for polyâ€îµâ€caprolactone in acetoneâ€water mixtures. Canadian Journal of Chemical Engineering, 2020, 98, 1868-1879.	1.7	5
33	Numerical Methods for the Solution of Population Balance Equations Coupled with Computational Fluid Dynamics. Annual Review of Chemical and Biomolecular Engineering, 2020, 11, 339-366.	6.8	36
34	Zero-flux approximations for multivariate quadrature-based moment methods. Journal of Computational Physics, 2019, 398, 108879.	3.8	2
35	Comparison of Eulerian QBMM and classical Eulerianâ€“Eulerian method for the simulation of polydisperse bubbly flows. AICHE Journal, 2019, 65, e16732.	3.6	12
36	Bio-Functional Textiles: Combining Pharmaceutical Nanocarriers with Fibrous Materials for Innovative Dermatological Therapies. Pharmaceutics, 2019, 11, 403.	4.5	32

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37	Tuning, measurement and prediction of the impact of freezing on product morphology: A step toward improved design of freeze-drying cycles. Drying Technology, 2019, 37, 579-599.	3.1	26
38	An experimental rheological phase diagram of a tri-block co-polymer in water validated against dissipative particle dynamics simulations. Soft Matter, 2019, 15, 1396-1404.	2.7	25
39	Achieving continuous manufacturing in lyophilization: Technologies and approaches. European Journal of Pharmaceutics and Biopharmaceutics, 2019, 142, 265-279.	4.3	47
40	Using the full turbulence spectrum for describing droplet coalescence and breakage in industrial liquid-liquid systems: Experiments and modeling. Chemical Engineering Journal, 2019, 374, 1420-1432.	12.7	27
41	Simulation of Mixing in Structured Fluids with Dissipative Particle Dynamics and Validation with Experimental Data. Chemical Engineering and Technology, 2019, 42, 1654.	1.5	4
42	Population balance modelling of bubble columns under the heterogeneous flow regime. Chemical Engineering Journal, 2019, 372, 590-604.	12.7	31
43	A molecular dynamics approach to nanostructuring of particles produced via aerosol cationic photopolymerization. Chemical Engineering Science, 2019, 195, 1021-1027.	3.8	5
44	A multi-scale computational framework for modeling the freeze-drying of microparticles in packed-beds. Powder Technology, 2019, 343, 834-846.	4.2	13
45	Multiphase flow in small-gap geometry: A combined numerical and experimental study. Progress in Nuclear Energy, 2019, 112, 107-122.	2.9	1
46	From Batch to Continuous: Freeze-Drying of Suspended Vials for Pharmaceuticals in Unit-Doses. Industrial & Engineering Chemistry Research, 2019, 58, 1635-1649.	3.7	45
47	A numerically robust method of moments with number density function reconstruction and its application to soot formation, growth and oxidation. Journal of Aerosol Science, 2019, 128, 34-49.	3.8	26
48	Fine and ultrafine particle deposition in packed-bed catalytic reactors. Chemical Engineering Science, 2019, 198, 290-304.	3.8	26
49	Use of microreactors and freeze-drying in the manufacturing process of chitosan coated PCL nanoparticles. European Journal of Pharmaceutical Sciences, 2018, 119, 135-146.	4.0	8
50	Bridging the gap across scales: Coupling CFD and MD/GCMC in polyurethane foam simulation. Chemical Engineering Science, 2018, 178, 39-47.	3.8	15
51	On the Production of Chitosan-Coated Polycaprolactone Nanoparticles in a Confined Impinging Jet Reactor. Journal of Pharmaceutical Sciences, 2018, 107, 1157-1166.	3.3	7
52	Nanoparticles obtained by confined impinging jet mixer: poly(lactide-co-glycolide) vs. Poly-lµ-caprolactone. Drug Development and Industrial Pharmacy, 2018, 44, 934-941.	2.0	12
53	Extended Charge-On-Particle Optimized Potentials for Liquid Simulation Acetone Model: The Case of Acetoneâ€“Water Mixtures. Journal of Physical Chemistry B, 2018, 122, 5234-5241.	2.6	10
54	Process analytical technology for monitoring pharmaceuticals freeze-drying â€“ A comprehensive review. Drying Technology, 2018, 36, 1839-1865.	3.1	47

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55	Hydrodynamics and bubble size in bubble columns: Effects of contaminants and spargers. Chemical Engineering Science, 2018, 184, 93-102.	3.8	33
56	Dissipative particle dynamics simulations of tri-block co-polymer and water: Phase diagram validation and microstructure identification. Journal of Chemical Physics, 2018, 149, 184903.	3.0	26
57	Overcoming the Limits of Flash Nanoprecipitation: Effective Loading of Hydrophilic Drug into Polymeric Nanoparticles with Controlled Structure. Polymers, 2018, 10, 1092.	4.5	41
58	Use of computational fluid dynamics for improving freeze-dryers design and process understanding. Part 1: Modelling the lyophilisation chamber. European Journal of Pharmaceutics and Biopharmaceutics, 2018, 129, 30-44.	4.3	23
59	Computational Fluid Dynamics data for improving freeze-dryers design. Data in Brief, 2018, 19, 1181-1213.	1.0	13
60	CFD-based scale-up of hydrodynamics and mixing in bubble columns. Chemical Engineering Research and Design, 2018, 136, 846-858.	5.6	34
61	Description of droplet coalescence and breakup in emulsions through a homogeneous population balance model. Chemical Engineering Journal, 2018, 354, 1197-1207.	12.7	25
62	Functionalization of Cotton Fabrics with Polycaprolactone Nanoparticles for Transdermal Release of Melatonin. Journal of Functional Biomaterials, 2018, 9, 1.	4.4	73
63	Use of computational fluid dynamics for improving freeze-dryers design and process understanding. Part 2: Condenser duct and valve modelling. European Journal of Pharmaceutics and Biopharmaceutics, 2018, 129, 45-57.	4.3	13
64	Simulation of Turbulent Coalescence and Breakage of Bubbles and Droplets in the Presence of Surfactants, Salts, and Contaminants. Advances in Chemical Engineering, 2018, 52, 125-188.	0.9	15
65	Production of mentholâ€loaded nanoparticles by solvent displacement. Canadian Journal of Chemical Engineering, 2017, 95, 1690-1706.	1.7	18
66	Investigation of droplet breakup in liquidâ€“liquid dispersions by CFDâ€“PBM simulations: The influence of the surfactant type. Chinese Journal of Chemical Engineering, 2017, 25, 1369-1380.	3.5	25
67	PUFoam : A novel open-source CFD solver for the simulation of polyurethane foams. Computer Physics Communications, 2017, 217, 138-148.	7.5	18
68	On the robustness of the soft sensors used to monitor a vial freeze-drying process. Drying Technology, 2017, 35, 1085-1097.	3.1	8
69	Simulation of a reacting gasâ€“liquid bubbly flow with CFD and PBM: Validation with experiments. Applied Mathematical Modelling, 2017, 44, 43-60.	4.2	27
70	Nano-structured polymeric microparticles produced via cationic aerosol photopolymerization. Journal of Photochemistry and Photobiology A: Chemistry, 2017, 346, 364-371.	3.9	6
71	A novel multiscale model for the simulation of polymer flash nano-precipitation. Chemical Engineering Science, 2017, 171, 485-494.	3.8	21
72	Droplet breakage and coalescence in liquidâ€“liquid dispersions: Comparison of different kernels with EQMOM and QMOM. AICHE Journal, 2017, 63, 2293-2311.	3.6	46

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73	Detailed particle nucleation modeling in a sooting ethylene flame using a Conditional Quadrature Method of Moments (CQMOM). Proceedings of the Combustion Institute, 2017, 36, 771-779.	3.9	18
74	Reacting Flows and the Interaction between Turbulence and Chemistry. , 2016, , .		0
75	On the implementation of moment transport equations in OpenFOAM: Boundedness and realizability. International Journal of Multiphase Flow, 2016, 85, 223-235.	3.4	19
76	Multiscale Modeling of Expanding Polyurethane Foams via Computational Fluid Dynamics and Population Balance Equation. Macromolecular Symposia, 2016, 360, 108-122.	0.7	18
77	Recirculation zones induce non-Fickian transport in three-dimensional periodic porous media. Physical Review E, 2016, 94, 053118.	2.1	38
78	Multi-scale modelling of expanding polyurethane foams: Coupling macro- and bubble-scales. Chemical Engineering Science, 2016, 148, 55-64.	3.8	31
79	Simplified volume-averaged models for liquidâ€“liquid dispersions: Correct derivation and comparison with other approaches. Chemical Engineering Science, 2016, 153, 382-393.	3.8	28
80	Empirical drag closure for polydisperse gasâ€“liquid systems in bubbly flow regime: Bubble swarm and micro-scale turbulence. Chemical Engineering Research and Design, 2016, 113, 284-303.	5.6	27
81	Bivariate extensions of the Extended Quadrature Method of Moments (EQMOM) to describe coupled droplet evaporation and heat-up. Journal of Aerosol Science, 2016, 92, 53-69.	3.8	12
82	Simulation of droplet breakage in turbulent liquidâ€“liquid dispersions with CFD-PBM: Comparison of breakage kernels. Chemical Engineering Science, 2016, 142, 277-288.	3.8	59
83	Limitations of simple mass transfer models in polydisperse liquidâ€“liquid dispersions. Chemical Engineering Journal, 2016, 296, 112-121.	12.7	13
84	Modeling of turbulent drop coalescence in the presence of electrostatic forces. Chemical Engineering Research and Design, 2016, 108, 30-41.	5.6	11
85	Simulation of macromolecule self-assembly in solution: A multiscale approach. AIP Conference Proceedings, 2015, , .	0.4	2
86	A Baseline Model for the Simulation of Polyurethane Foams via the Population Balance Equation. Macromolecular Theory and Simulations, 2015, 24, 291-300.	1.4	19
87	An extended and total flux normalized correlation equation for predicting single-collector efficiency. Journal of Colloid and Interface Science, 2015, 446, 185-193.	9.4	46
88	Validation of a novel open-source work-flow for the simulation of packed-bed reactors. Chemical Engineering Journal, 2015, 279, 809-820.	12.7	101
89	Design of a Robust Soft-Sensor to Monitor In-Line a Freeze-Drying Process. Drying Technology, 2015, 33, 1039-1050.	3.1	20
90	Cotton fabric functionalisation with menthol/PCL micro- and nano-capsules for comfort improvement. Journal of Microencapsulation, 2015, 32, 650-660.	2.8	9

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91	Non-Invasive Temperature Monitoring in Freeze Drying: Control of Freezing as a Case Study. Drying Technology, 2015, 33, 1621-1630.	3.1	29
92	On the Use of tert-Butanol/Water Cosolvent Systems in Production and Freeze-Drying of Poly-Îµ-Caprolactone Nanoparticles. Journal of Pharmaceutical Sciences, 2015, 104, 178-190.	3.3	14
93	Photochemical synthesis of perfluoropolyether (PFPE) nanocomposites containing PFPE oligomer stabilized magnetite nanoparticles. Colloid and Polymer Science, 2014, 292, 3003-3011.	2.1	6
94	Surface modification of iron oxide (Fe₂O₃) pigment particles with amino-functional polysiloxane for improved dispersion stability and hydrophobicity. Pigment and Resin Technology, 2014, 43, 219-227.	0.9	24
95	Use of soft sensors to monitor a pharmaceuticals freeze-drying process in vials. Pharmaceutical Development and Technology, 2014, 19, 148-159.	2.4	22
96	Modeling and simulation of turbulent polydisperse gas-liquid systems via the generalized population balance equation. Reviews in Chemical Engineering, 2014, 30, .	4.4	44
97	Sputtered thermocouple array for vial temperature mapping. , 2014, , .		14
98	A New Method Based on the Regression of Step Response Data for Monitoring a Freeze-Drying Cycle. Journal of Pharmaceutical Sciences, 2014, 103, 1756-1765.	3.3	13
99	Transfer of a nanoparticle product between different mixers using latent variable model inversion. AICHE Journal, 2014, 60, 123-135.	3.6	11
100	Microscale simulation of particle deposition in porous media. Journal of Colloid and Interface Science, 2014, 417, 227-237.	9.4	55
101	Flow field simulation and mixing efficiency assessment of the multi-inlet vortex mixer for molybdenum sulfide nanoparticle precipitation. Chemical Engineering Journal, 2014, 238, 66-77.	12.7	28
102	Development of a CFDâ€“PBE coupled model for the simulation of the drops behaviour in a pulsed column. Canadian Journal of Chemical Engineering, 2014, 92, 220-233.	1.7	26
103	Solvent Structuring and Its Effect on the Polymer Structure and Processability: The Case of Waterâ€“Acetone Poly-Îµ-caprolactone Mixtures. Journal of Physical Chemistry B, 2014, 118, 13258-13267.	2.6	26
104	Size Control in Production and Freeze-Drying of Poly-Îµ-Caprolactone Nanoparticles. Journal of Pharmaceutical Sciences, 2014, 103, 1839-1850.	3.3	17
105	Dynamic Light Scattering and X-ray Photoelectron Spectroscopy Characterization of PEGylated Polymer Nanocarriers: Internal Structure and Surface Properties. Langmuir, 2014, 30, 8326-8335.	3.5	9
106	Pore-scale simulation of fluid flow and solute dispersion in three-dimensional porous media. Physical Review E, 2014, 90, 013032.	2.1	78
107	Efficient simulation of gasâ€“liquid pipe flows using a generalized population balance equation coupled with the algebraic slip model. Applied Mathematical Modelling, 2014, 38, 4277-4290.	4.2	10
108	In-Line and Off-Line Optimization of Freeze-Drying Cycles for Pharmaceutical Products. Drying Technology, 2013, 31, 905-919.	3.1	37

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109	Quality by Design: Scale-Up of Freeze-Drying Cycles in Pharmaceutical Industry. AAPS PharmSciTech, 2013, 14, 1137-1149.	3.3	43
110	Fast freeze-drying cycle design and optimization using a PAT based on the measurement of product temperature. European Journal of Pharmaceutics and Biopharmaceutics, 2013, 85, 253-262.	4.3	31
111	Simulation of coalescence, break-up and mass transfer in a gasâ€“liquid stirred tank with CQMOM. Chemical Engineering Journal, 2013, 228, 1182-1194.	12.7	71
112	Assessment of gel formation in colloidal dispersions during mixing in turbulent jets. AICHE Journal, 2013, 59, 4567-4581.	3.6	3
113	Freeze-Drying Monitoring Using a New Process Analytical Technology: Toward a â€œZero Defectâ€• Process. Drying Technology, 2013, 31, 1744-1755.	3.1	20
114	Inert Thermocouple With Nanometric Thickness for Lyophilization Monitoring. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 1276-1283.	4.7	21
115	Extension of the Darcyâ€“Forchheimer Law for Shear-Thinning Fluids and Validation via Pore-Scale Flow Simulations. Transport in Porous Media, 2013, 96, 1-20.	2.6	66
116	Multivariate Quadrature-Based Moments Methods for turbulent polydisperse gasâ€“liquid systems. International Journal of Multiphase Flow, 2013, 50, 41-57.	3.4	78
117	Actinides oxalate precipitation in emulsion modeling: From the drop scale to the industrial process. Chemical Engineering Research and Design, 2013, 91, 660-669.	5.6	12
118	Simulation of polydisperse multiphase systems using population balances and example application to bubbly flows. Chemical Engineering Research and Design, 2013, 91, 1859-1875.	5.6	50
119	Identification of nucleation rate parameters with MD and validation of the CFD model for polymer particle precipitation. Chemical Engineering Research and Design, 2013, 91, 2275-2290.	5.6	19
120	Use of a soft sensor for the fast estimation of dried cake resistance during a freeze-drying cycle. International Journal of Pharmaceutics, 2013, 451, 23-33.	5.2	38
121	CFD modelling of condensers for freeze-drying processes. Sadhana - Academy Proceedings in Engineering Sciences, 2013, 38, 1219-1239.	1.3	18
122	Equilibrium-Eulerian LES Model for Turbulent Poly-dispersed Particle-laden Flow. International Journal of Nonlinear Sciences and Numerical Simulation, 2013, 14, 139-158.	1.0	3
123	Nanospheres and nanocapsules of amphiphilic copolymers constituted by methoxypolyethylene glycol cyanoacrylate and hexadecyl cyanoacrylate units. EXPRESS Polymer Letters, 2013, 7, 2-20.	2.1	13
124	Supporting the transfer of products between different equipment through latent variable model inversion. Computer Aided Chemical Engineering, 2013, 32, 511-516.	0.5	1
125	Mixing atoms and coarse-grained beads in modelling polymer melts. Journal of Chemical Physics, 2012, 137, 164111.	3.0	29
126	Quality by Design in the Secondary Drying Step of a Freeze-Drying Process. Drying Technology, 2012, 30, 1307-1316.	3.1	30

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127	Model validation for precipitation in solvent-displacement processes. Chemical Engineering Science, 2012, 84, 671-683.	3.8	33
128	Nanoprecipitation in confined impinging jets mixers: Production, characterization and scale-up of pegylated nanospheres and nanocapsules for pharmaceutical use. Chemical Engineering Science, 2012, 77, 217-227.	3.8	59
129	Quadrature-based moment closures for non-equilibrium flows: Hard-sphere collisions and approach to equilibrium. Journal of Computational Physics, 2012, 231, 7431-7449.	3.8	9
130	Enzymatic Hydrolysis of Lignocellulosic Biomasses via CFD and Experiments. Industrial & Engineering Chemistry Research, 2012, 51, 7518-7525.	3.7	20
131	A Model-Based Framework to Optimize Pharmaceuticals Freeze Drying. Drying Technology, 2012, 30, 946-958.	3.1	32
132	Production of PEGylated Nanocapsules through Solvent Displacement in Confined Impinging Jet Mixers. Journal of Pharmaceutical Sciences, 2012, 101, 2490-2501.	3.3	9
133	New quadratureâ€based moment method for the mixing of inert polydisperse fluidized powders in commercial CFD codes. AICHE Journal, 2012, 58, 3054-3069.	3.6	37
134	Multidimensional population balance model for the simulation of turbulent gasâ€“liquid systems in stirred tank reactors. Chemical Engineering Science, 2012, 70, 31-44.	3.8	101
135	A computational fluid dynamics study of supercritical antisolvent precipitation: Mixing effects on particle size. AICHE Journal, 2012, 58, 385-398.	3.6	43
136	Reduction of Nitrate and Ammonium Adsorption Using Microscale Iron Particles and Zeolitite. Water, Air, and Soil Pollution, 2012, 223, 1079-1089.	2.4	21
137	Quantification of mixing efficiency in turbulent supercritical water hydrothermal reactors. Chemical Engineering Science, 2011, , .	3.8	1
138	Preparation of polymer nanoparticles loaded with doxorubicin for controlled drug delivery. Chemical Engineering Research and Design, 2011, 89, 2410-2419.	5.6	34
139	Validation of LES predictions for turbulent flow in a Confined Impinging Jets Reactor. Applied Mathematical Modelling, 2011, 35, 1591-1602.	4.2	37
140	Quantification of mixing efficiency in turbulent supercritical water hydrothermal reactors. Chemical Engineering Science, 2011, 66, 1576-1589.	3.8	48
141	On the Use of Mathematical Models to Build the Design Space for the Primary Drying Phase of a Pharmaceutical Lyophilization Process. Journal of Pharmaceutical Sciences, 2011, 100, 311-324.	3.3	99
142	Preparation of Poly(MePEGCA-co-HDCA) Nanoparticles with Confined Impinging Jets Reactor: Experimental and Modeling Study. Journal of Pharmaceutical Sciences, 2011, 100, 2391-2405.	3.3	25
143	Advanced approach to build the design space for the primary drying of a pharmaceutical freezeâ€drying process. Journal of Pharmaceutical Sciences, 2011, 100, 4922-4933.	3.3	102
144	Investigation of the flow field in a three-dimensional Confined Impinging Jets Reactor by means of microPIV and DNS. Chemical Engineering Journal, 2011, 166, 294-305.	12.7	62

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145	A comparative study for nanoparticle production with passive mixers via solvent-displacement: Use of CFD models for optimization and design. Chemical Engineering and Processing: Process Intensification, 2011, 50, 356-368.	3.6	49
146	Scale-up and Process Transfer of Freeze-Drying Recipes. Drying Technology, 2011, 29, 1673-1684.	3.1	33
147	Synthesis, characterization, and photocatalytic application of novel TiO2 nanoparticles. Chemical Engineering Journal, 2010, 157, 45-51.	12.7	183
148	Bubble size distribution modeling in stirred gasâ€“liquid reactors with QMOM augmented by a new correction algorithm. AICHE Journal, 2010, 56, 36-53.	3.6	81
149	On the Use of a Dual-Scale Model to Improve Understanding of a Pharmaceutical Freeze-Drying Process. Journal of Pharmaceutical Sciences, 2010, 99, 4337-4350.	3.3	44
150	Numerical simulation of soot filtration and combustion within diesel particulate filters. Chemical Engineering Science, 2010, 65, 357-363.	3.8	95
151	Turbulent precipitation in micromixers: CFD simulation and flow field validation. Chemical Engineering Research and Design, 2010, 88, 1182-1193.	5.6	39
152	Model-Based Monitoring and Control of Industrial Freeze-Drying Processes: Effect of Batch Nonuniformity. Drying Technology, 2010, 28, 577-590.	3.1	67
153	Direct Quadrature Method of Moments for the Mixing of Inert Polydisperse Fluidized Powders and the Role of Numerical Diffusion. Industrial & Engineering Chemistry Research, 2010, 49, 5141-5152.	3.7	27
154	On the Methods Based on the Pressure Rise Test for Monitoring a Freeze-Drying Process. Drying Technology, 2010, 29, 73-90.	3.1	77
155	Development of a High Gain Observer for In-Line Monitoring of Sublimation in Vial Freeze Drying. Drying Technology, 2010, 28, 256-268.	3.1	30
156	Modelling of diesel particulate filtration in wall-flow traps. Chemical Engineering Journal, 2009, 154, 211-218.	12.7	93
157	Investigation of soot formation in turbulent flames with a pseudo-bivariate population balance model. Chemical Engineering Science, 2009, 64, 294-303.	3.8	25
158	Controlled release of vancomycin from PCL microcapsules for an ophthalmic application. Chemical Engineering Research and Design, 2009, 87, 859-866.	5.6	17
159	Experimental investigation of soot deposition in diesel particulate filters. Catalysis Today, 2009, 147, S295-S300.	4.4	65
160	Production of TiO2 nanoparticles with controlled characteristics by means of a Vortex Reactor. Chemical Engineering Journal, 2009, 146, 456-465.	12.7	30
161	Monitoring of the primary drying of a lyophilization process in vials. Chemical Engineering and Processing: Process Intensification, 2009, 48, 408-423.	3.6	97
162	On the use of bi-variate population balance equations for modelling barium titanate nanoparticle precipitation. Chemical Engineering Science, 2009, 64, 697-708.	3.8	16

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163	Smart mixers and reactors for the production of pharmaceutical nanoparticles: Proof of concept. Chemical Engineering Research and Design, 2009, 87, 543-549.	5.6	56
164	In-line monitoring of the primary drying phase of the freeze-drying process in vial by means of a Kalman filter based observer. Chemical Engineering Research and Design, 2009, 87, 1409-1419.	5.6	44
165	Large Eddy Simulation of mixing and reaction in a Confined Impinging Jets Reactor. Computers and Chemical Engineering, 2009, 33, 408-420.	3.8	49
166	EFFECT OF DRAG MODELING ON THE PREDICTION OF CRITICAL REGIME TRANSITIONS IN AGITATED GAS-LIQUID REACTORS WITH BUBBLE SIZE DISTRIBUTION MODELING. Multiphase Science and Technology, 2009, 21, 95-106.	0.5	8
167	Development of simplified models for the freeze-drying process and investigation of the optimal operating conditions. Chemical Engineering Research and Design, 2008, 86, 9-22.	5.6	148
168	Strategies to control the particle size distribution of poly-Î¡-caprolactone nanoparticles for pharmaceutical applications. Journal of Colloid and Interface Science, 2008, 322, 505-515.	9.4	197
169	In-Line Control of a Freeze-Drying Process in Vials. Drying Technology, 2008, 26, 685-694.	3.1	37
170	Effect of Mixing and Other Operating Parameters in Solâ"Gel Processes. Industrial & Engineering Chemistry Research, 2008, 47, 7202-7210.	3.7	49
171	Dynamic Parameters Estimation Method: Advanced Manometric Temperature Measurement Approach for Freeze-Drying Monitoring of Pharmaceutical Solutions. Industrial & Engineering Chemistry Research, 2008, 47, 8445-8457.	3.7	72
172	Sensitivity Testing Revisited: The Case of Sol-Gel Transition. , 2008, , .		0
173	Validation of bivariate DQMOM for nanoparticle processes simulation. AICHE Journal, 2007, 53, 918-931.	3.6	57
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