

Igor Plazl

List of Publications by Year in descending order

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48
papers

1,283
citations

331670

21
h-index

361022

35
g-index

49
all docs

49
docs citations

49
times ranked

1327
citing authors

#	ARTICLE	IF	CITATIONS
1	Microscale technology and biocatalytic processes: opportunities and challenges for synthesis. Trends in Biotechnology, 2015, 33, 302-314.	9.3	167
2	Steroid extraction in a microchannel system—mathematical modelling and experiments. Lab on A Chip, 2007, 7, 883-889.	6.0	113
3	Ionic liquid-based aqueous two-phase extraction within a microchannel system. Separation and Purification Technology, 2012, 97, 172-178.	7.9	90
4	Modelling and experimental studies on lipase-catalyzed isoamyl acetate synthesis in a microreactor. Process Biochemistry, 2009, 44, 1115-1121.	3.7	73
5	Lipase-catalyzed synthesis of isoamyl acetate in an ionic liquid/n-heptane two-phase system at the microreactor scale. Lab on A Chip, 2009, 9, 3385.	6.0	64
6	Influence of carrier type on nitrification in the moving-bed biofilm process. Water Science and Technology, 2009, 59, 875-882.	2.5	47
7	Separation and purification of biomacromolecules based on microfluidics. Green Chemistry, 2020, 22, 4391-4410.	9.0	47
8	Modelling of laccase-catalyzed L-DOPA oxidation in a microreactor. Chemical Engineering Journal, 2009, 149, 383-388.	12.7	45
9	Development of a miniaturized packed bed reactor with 1% -transaminase immobilized in LentiKats Â®. Process Biochemistry, 2017, 52, 63-72.	3.7	45
10	Theoretical and experimental study of enzyme kinetics in a microreactor system with surface-immobilized biocatalyst. Chemical Engineering Journal, 2017, 313, 374-381.	12.7	40
11	L-Malic acid production within a microreactor with surface immobilised fumarase. Microfluidics and Nanofluidics, 2011, 10, 627-635.	2.2	37
12	Evaluation of Diffusion Coefficient Determination using a Microfluidic Device. Chemical and Biochemical Engineering Quarterly, 2014, 28, 215-223.	0.9	35
13	Parallel flow of immiscible liquids in a microreactor: modeling and experimental study. Microfluidics and Nanofluidics, 2012, 12, 307-316.	2.2	33
14	Integrated system of a microbioreactor and a miniaturized continuous separator for enzyme catalyzed reactions. Chemical Engineering Journal, 2012, 189-190, 376-382.	12.7	32
15	Online oxygen measurements inside a microreactor with modeling of transport phenomena. Microfluidics and Nanofluidics, 2013, 14, 565-574.	2.2	31
16	Experimental studies and modeling of Î±-amylase aqueous two-phase extraction within a microfluidic device. Microfluidics and Nanofluidics, 2015, 19, 75-83.	2.2	30
17	Microfluidic droplet-based liquid-liquid extraction: online model validation. Lab on A Chip, 2015, 15, 2233-2239.	6.0	26
18	Dechlorination of polychlorinated phenols on bimetallic Pd/Fe catalyst in a magnetically stabilized fluidized bed. Chemical Engineering Journal, 2015, 274, 50-60.	12.7	23

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19	Laminar to Turbulent Transition and Heat Transfer in a Microreactor: Mathematical Modeling and Experiments. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 7447-7455.	3.7	22
20	Development of a continuous steroid biotransformation process and product extraction within microchannel system. <i>Catalysis Today</i> , 2010, 157, 315-320.	4.4	22
21	The influence of β -cyclodextrin on the kinetics of progesterone transformation by <i>Rhizopus nigricans</i> . <i>Biocatalysis and Biotransformation</i> , 2005, 23, 299-305.	2.0	21
22	Modeling of temperature distributions in canned tomato based dip during industrial pasteurization. <i>Journal of Food Engineering</i> , 2006, 75, 400-406.	5.2	20
23	Batch and continuous transformation of progesterone by <i>Rhizopus nigricans</i> pellets in the presence of β -cyclodextrin. <i>Biocatalysis and Biotransformation</i> , 2007, 25, 16-23.	2.0	20
24	Continuous steroid biotransformations in microchannel reactors. <i>New Biotechnology</i> , 2012, 29, 227-234.	4.4	20
25	Characterization of an enzymatic packed-bed microreactor: Experiments and modeling. <i>Chemical Engineering Journal</i> , 2018, 350, 541-550.	12.7	20
26	From calorimetry to thermal risk assessment: γ -Valerolactone production from the hydrogenation of alkyl levulinates. <i>Chemical Engineering Research and Design</i> , 2020, 144, 32-41.	5.6	17
27	Ni-containing CeO ₂ rods for dry reforming of methane: Activity tests and a multiscale lattice Boltzmann model analysis in two model geometries. <i>Chemical Engineering Journal</i> , 2021, 413, 127498.	12.7	16
28	Optimization of a Thermal Lens Microscope for Detection in a Microfluidic Chip. <i>International Journal of Thermophysics</i> , 2014, 35, 2011-2022.	2.1	15
29	Theoretical and experimental study of iron catalyst preparation by chemical vapor deposition of ferrocene in air. <i>Chemical Engineering Journal</i> , 2014, 242, 306-312.	12.7	12
30	Development of an electrically responsive hydrogel for programmable <i>in situ</i> immobilization within a microfluidic device. <i>Soft Matter</i> , 2021, 17, 6751-6764.	2.7	12
31	Microwave Drying of Expanded Perlite Insulation Board. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 3314-3321.	3.7	10
32	Time scale analysis & characteristic times in microscale-based chemical and biochemical processes: Part I – Concepts and origins. <i>Chemical Engineering Science</i> , 2021, 238, 116502.	3.8	10
33	Sintering Behavior of Expanded Perlite Thermal Insulation Board: Modeling and Experiments. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 10244-10249.	3.7	9
34	Modeling and finite difference numerical analysis of reaction-diffusion dynamics in a microreactor. <i>Acta Chimica Slovenica</i> , 2010, 57, 100-9.	0.6	9
35	The finite differences method for solving systems on irregular shapes. <i>Computers and Chemical Engineering</i> , 2008, 32, 2891-2896.	3.8	8
36	Time scale analysis & characteristic times in microscale-based bio-chemical processes: Part II – Bioreactors with immobilized cells, and process flowsheet analysis. <i>Chemical Engineering Science</i> , 2021, 236, 116499.	3.8	8

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37	Assessment of Physical Leaching Processes of Some Elements in Soil upon Ingestion by Continuous Leaching and Modeling. <i>Environmental Science & Technology</i> , 2010, 44, 6242-6248.	10.0	6
38	Process Intensification and Miniaturization of Chemical and Biochemical Processes. <i>Computer Aided Chemical Engineering</i> , 2019, , 1801-1806.	0.5	6
39	Kinetics of colloidal alkylketene dimer particles deposition on pulp fibers. <i>Colloid and Polymer Science</i> , 2007, 285, 907-914.	2.1	5
40	Inertial focusing of neutrally buoyant particles in heterogenous suspensions. <i>Journal of Molecular Liquids</i> , 2021, 328, 115410.	4.9	5
41	Feasibility of Carbon Nanofiber Catalyst Support for the Heterogeneous Fenton Process. <i>Journal of Environmental Engineering, ASCE</i> , 2016, 142, .	1.4	4
42	A lattice Boltzmann study of 2D steady and unsteady flows around a confined cylinder. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2020, 42, 1.	1.6	4
43	A discrete reactive collision scheme for the lattice Boltzmann method. <i>Journal of Molecular Liquids</i> , 2021, 332, 115871.	4.9	2
44	Thermal Treatment of New Inorganic Thermal Insulation Board Based on Expanded Perlite. <i>Advanced Materials Research</i> , 0, 560-561, 249-253.	0.3	1
45	Lattice Boltzmann Modeling-based Design of a Membrane-free Liquid-liquid Microseparator. <i>Chemical and Biochemical Engineering Quarterly</i> , 2020, 34, 73-78.	0.9	1
46	Modelling Reaction-Diffusion Dynamics in Microsystems. <i>Computer Aided Chemical Engineering</i> , 2016, 38, 1623-1628.	0.5	0
47	Microbioreactors. , 2017, , 414-427.		0
48	Enzymatic packed-bed microreactor: Transport phenomena and kinetics. <i>Journal of Biotechnology</i> , 2018, 280, S14-S15.	3.8	0