Volker Hessel

List of Publications by Year
in descending order

335 papers	22,101 citations	12303 69 h-index	13727 129 g-index
373 all docs	373 docs citations	373 times ranked	12296 citing authors

#	Article	IF	Citations
1	Micromixersâ€"a review on passive and active mixing principles. Chemical Engineering Science, 2005, 60, 2479-2501.	1.9	1,235
2	Chemistry in Microstructured Reactors. Angewandte Chemie - International Edition, 2004, 43, 406-446.	7.2	1,191
3	Applications of Continuous-Flow Photochemistry in Organic Synthesis, Material Science, and Water Treatment. Chemical Reviews, 2016, 116, 10276-10341.	23.0	1,166
4	Novel Process Windows for Enabling, Accelerating, and Uplifting Flow Chemistry. ChemSusChem, 2013, 6, 746-789.	3.6	521
5	Liquid phase oxidation chemistry in continuous-flow microreactors. Chemical Society Reviews, 2016, 45, 83-117.	18.7	421
6	Photochemical Transformations Accelerated in Continuousâ€Flow Reactors: Basic Concepts and Applications. Chemistry - A European Journal, 2014, 20, 10562-10589.	1.7	416
7	Micro-structured reactors for gas phase reactions. Chemical Engineering Journal, 2004, 98, 1-38.	6.6	397
8	Novel Process Windows â€" Gate to Maximizing Process Intensification via Flow Chemistry. Chemical Engineering and Technology, 2009, 32, 1655-1681.	0.9	374
9	Characterization of Mixing in Micromixers by a Test Reaction:Â Single Mixing Units and Mixer Arrays. Industrial & Engineering Chemistry Research, 1999, 38, 1075-1082.	1.8	370
10	An optimised split-and-recombine micro-mixer with uniform â€˜chaoticâ€™ mixing. Lab on A Chip, 2004, 4, 65-69.	3.1	326
11	Direct fluorination of toluene using elemental fluorine in gas/liquid microreactors. Journal of Fluorine Chemistry, 2000, 105, 117-128.	0.9	298
12	Gasâ˜'Liquid and Gasâ˜'Liquidâ˜'Solid Microstructured Reactors:Â Contacting Principles and Applications. Industrial & Engineering Chemistry Research, 2005, 44, 9750-9769.	1.8	269
13	Steam gasification of biomass with subsequent syngas adjustment using shift reaction for syngas production: An Aspen Plus model. Renewable Energy, 2017, 101, 484-492.	4.3	265
14	Plasma N2-fixation: 1900â€"2014. Catalysis Today, 2015, 256, 49-66.	2.2	259
15	Laminar mixing in different interdigital micromixers: I. Experimental characterization. AIChE Journal, 2003, 49, 566-577.	1.8	237
16	Benchmarking of Microreactor Applications. Organic Process Research and Development, 2004, 8, 422-439.	1.3	202
17	Practical Photocatalytic Trifluoromethylation and Hydrotrifluoromethylation of Styrenes in Batch and Flow. Angewandte Chemie - International Edition, 2016, 55, 15549-15553.	7.2	171
18	A convenient numbering-up strategy for the scale-up of gasâ€"liquid photoredox catalysis in flow. Reaction Chemistry and Engineering, 2016, 1, 73-81.	1.9	166

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19	Liquidâ€"liquid slug flow: Hydrodynamics and pressure drop. Chemical Engineering Science, 2011, 66, 42-54.	1.9	165
20	Metalâ€Free Photocatalytic Aerobic Oxidation of Thiols to Disulfides in Batch and Continuousâ€Flow. Advanced Synthesis and Catalysis, 2015, 357, 2180-2186.	2.1	164
21	Flow chemistry using milli- and microstructured reactorsâ€"From conventional to novel process windows. Bioorganic and Medicinal Chemistry, 2010, 18, 3707-3719.	1.4	158
22	Novel process windows â€" Concept, proposition and evaluation methodology, and intensified superheated processing. Chemical Engineering Science, 2011, 66, 1426-1448.	1.9	158
23	Nitrogen Fixation by Gliding Arc Plasma: Better Insight by Chemical Kinetics Modelling. ChemSusChem, 2017, 10, 2145-2157.	3.6	155
24	Low temperature plasma-catalytic NO x synthesis in a packed DBD reactor: Effect of support materials and supported active metal oxides. Applied Catalysis B: Environmental, 2016, 194, 123-133.	10.8	150
25	Rapid Trifluoromethylation and Perfluoroalkylation of Fiveâ€Membered Heterocycles by Photoredox Catalysis in Continuous Flow. ChemSusChem, 2014, 7, 1612-1617.	3.6	145
26	Separation/recycling methods for homogeneous transition metal catalysts in continuous flow. Green Chemistry, 2015, 17, 2012-2026.	4.6	143
27	Utilization of Micromixers for Extraction Processes. Chemical Engineering and Technology, 2001, 24, 11-17.	0.9	141
28	Catalyst preparation and deactivation issues for nitrobenzene hydrogenation in a microstructured falling film reactor. Catalysis Today, 2003, 81, 641-651.	2.2	139
29	Chemical microprocess technologyâ€"from laboratory-scale to production. Chemical Engineering Science, 2004, 59, 4789-4794.	1.9	138
30	Liquidâ€"Liquid Flow in a Capillary Microreactor: Hydrodynamic Flow Patterns and Extraction Performance. Industrial & Engineering Chemistry Research, 2012, 51, 1015-1026.	1.8	136
31	An environmentally benign and selective electrochemical oxidation of sulfides and thiols in a continuous-flow microreactor. Green Chemistry, 2017, 19, 4061-4066.	4.6	133
32	Carbon Dioxide Absorption in a Falling Film Microstructured Reactor:â€‰ Experiments and Modeling. Industrial & Engineering Chemistry Research, 2005, 44, 1742-1751.	1.8	123
33	Liquidâ€"liquid extraction system with microstructured coiled flow inverter and other capillary setups for single-stage extraction applications. Chemical Engineering Journal, 2016, 284, 764-777.	6.6	121
34	Utilization of milli-scale coiled flow inverter in combination with phase separator for continuous flow liquidâ€"liquid extraction processes. Chemical Engineering Journal, 2016, 283, 855-868.	6.6	114
35	Detailed Characterization of Various Porous Alumina-Based Catalyst Coatings Within Microchannels and Their Testing for Methanol Steam Reforming. Chemical Engineering Research and Design, 2003, 81, 721-729.	2.7	113
36	Propane steam reforming in micro-channelsâ€"results from catalyst screening and optimisation. Applied Catalysis A: General, 2004, 277, 155-166.	2.2	113

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37	Fluorinations, chlorinations and brominations of organic compounds in micro reactors. Journal of Fluorine Chemistry, 2004, 125, 1677-1694.	0.9	110
38	A mild and fast photocatalytic trifluoromethylation of thiols in batch and continuous-flow. Chemical Science, 2014, 5, 4768-4773.	3.7	109
39	A Leafâ€Inspired Luminescent Solar Concentrator for Energyâ€Efficient Continuousâ€Flow Photochemistry. Angewandte Chemie - International Edition, 2017, 56, 1050-1054.	7.2	109
40	Potential Analysis of Smart Flow Processing and Micro Process Technology for Fastening Process Development: Use of Chemistry and Process Design as Intensification Fields. Chemical Engineering and Technology, 2012, 35, 1184-1204.	0.9	103
41	Organic Synthesis with Microstructured Reactors. Chemical Engineering and Technology, 2005, 28, 267-284.	0.9	102
42	Microchemical Engineering: Components, Plant Concepts User Acceptance - Part I. Chemical Engineering and Technology, 2003, 26, 13-24.	0.9	100
43	Ionic liquid synthesis in a microstructured reactor for process intensification. Chemical Engineering and Processing: Process Intensification, 2007, 46, 840-845.	1.8	100
44	Numbered-up gasâ€“liquid micro/milli channels reactor with modular flow distributor. Chemical Engineering Journal, 2012, 207-208, 645-655.	6.6	100
45	Synthesis of luminescent carbon quantum dots by microplasma process. Chemical Engineering and Processing: Process Intensification, 2019, 140, 29-35.	1.8	99
46	Hydrodynamics and Mixer-Induced Bubble Formation in Micro Bubble Columns with Single and Multiple-Channels. Chemical Engineering and Technology, 2006, 29, 1015-1026.	0.9	95
47	Sustainability of green solvents â€“ review and perspective. Green Chemistry, 2022, 24, 410-437.	4.6	95
48	Visibleâ€Lightâ€Mediated Selective Arylation of Cysteine in Batch and Flow. Angewandte Chemie - International Edition, 2017, 56, 12702-12707.	7.2	94
49	Fuel processing in integrated micro-structured heat-exchanger reactors. Journal of Power Sources, 2007, 171, 198-204.	4.0	93
50	Experimental studies of nitrobenzene hydrogenation in a microstructured falling film reactor. Chemical Engineering Science, 2004, 59, 3491-3494.	1.9	92
51	Mild and selective base-free Câ€“H arylation of heteroarenes: experiment and computation. Chemical Science, 2017, 8, 1046-1055.	3.7	91
52	The potential of micromixers for contacting of disperse liquid phases. Fresenius' Journal of Analytical Chemistry, 1999, 364, 617-624.	1.5	90
53	Selectivity Gains and Energy Savings for the Industrial Phenyl Boronic Acid Process Using Micromixer/Tubular Reactors. Organic Process Research and Development, 2004, 8, 511-523.	1.3	90
54	Effect of ceria and zirconia promotors on Ni/SBA-15 catalysts for coking and sintering resistant steam reforming of propylene glycol in microreactors. Applied Catalysis B: Environmental, 2017, 203, 859-869.	10.8	89

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55	Batch and Flow Synthesis of Disulfides by Visibleâ€Lightâ€Induced TiO₂ Photocatalysis. ChemSusChem, 2016, 9, 1781-1785.	3.6	88
56	Accelerated gas-liquid visible light photoredox catalysis with continuous-flow photochemical microreactors. Nature Protocols, 2016, 11, 10-21.	5.5	88
57	Recent Progress of Plasma-Assisted Nitrogen Fixation Research: A Review. Processes, 2018, 6, 248.	1.3	88
58	Visible-Light Photocatalytic Decarboxylation of Î±,Î²-Unsaturated Carboxylic Acids: Facile Access to Stereoselective Difluoromethylated Styrenes in Batch and Flow. ACS Catalysis, 2017, 7, 7136-7140.	5.5	87
59	Membrane Microreactors: Gasâ€“Liquid Reactions Made Easy. ChemSusChem, 2013, 6, 405-407.	3.6	86
60	Aqueous Kolbeâ^'Schmitt Synthesis Using Resorcinol in a Microreactor Laboratory Rig under High-p,T Conditions. Organic Process Research and Development, 2005, 9, 479-489.	1.3	85
61	Sustainability through green processing â€“ novel process windows intensify micro and milli process technologies. Energy and Environmental Science, 2008, 1, 467.	15.6	83
62	Synthesis of gold nanoparticles in an interdigital micromixer using ascorbic acid and sodium borohydride as reducers. Chemical Engineering Journal, 2011, 171, 279-290.	6.6	82
63	Aerobic Câ€“H Olefination of Indoles via a Cross-Dehydrogenative Coupling in Continuous Flow. Organic Letters, 2014, 16, 5800-5803.	2.4	75
64	Life Cycle Analysis within Pharmaceutical Process Optimization and Intensification: Case Study of Active Pharmaceutical Ingredient Production. ChemSusChem, 2014, 7, 3521-3533.	3.6	74
65	Co and Ni extraction and separation in segmented micro-flow using a coiled flow inverter. Chemical Engineering Journal, 2017, 307, 1-8.	6.6	74
66	Microchemical Engineering: Components, Plant Concepts, User Acceptance â€“ Part III. Chemical Engineering and Technology, 2003, 26, 531-544.	0.9	72
67	Numbering-up of micro devices: a first liquid-flow splitting unit. Chemical Engineering Journal, 2004, 101, 421-429.	6.6	72
68	High Throughput Kinetic Investigations of Asymmetric Hydrogenations with Microdevices. Advanced Synthesis and Catalysis, 2003, 345, 190-193.	2.1	71
69	Development of Microstructured Reactors to Enable Organic Synthesis Rather than Subduing Chemistry. Current Organic Chemistry, 2005, 9, 765-787.	0.9	70
70	A compact photomicroreactor design for kinetic studies of gasâ€liquid photocatalytic transformations. AIChE Journal, 2015, 61, 2215-2227.	1.8	70
71	Life cycle assessment of multi-step rufinamide synthesis â€“ from isolated reactions in batch to continuous microreactor networks. Green Chemistry, 2016, 18, 1096-1116.	4.6	70
72	A Modular Flow Design for the <i>meta</i>â€Selective Câ^'H Arylation of Anilines. Angewandte Chemie - International Edition, 2017, 56, 7161-7165.	7.2	68

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73	Scale-up of a Luminescent Solar Concentrator-Based Photomicroreactor via Numbering-up. ACS Sustainable Chemistry and Engineering, 2018, 6, 422-429.	3.2	68
74	Microchemical Engineering: Components, Plant Concepts, User Acceptance - Part II. Chemical Engineering and Technology, 2003, 26, 391-408.	0.9	67
75	Micro reactor for electroorganic synthesis in the simulated moving bed-reaction and separation environment. Electrochimica Acta, 2003, 48, 2889-2896.	2.6	67
76	Is there a future for enzymatic biodiesel industrial production in microreactors?. Applied Energy, 2017, 201, 124-134.	5.1	65
77	Packedâ€Bed Microreactor for Continuousâ€Flow Adipic Acid Synthesis from Cyclohexene and Hydrogen Peroxide. Chemical Engineering and Technology, 2013, 36, 1001-1009.	0.9	64
78	Phase-Transfer Catalysis in Segmented Flow in a Microchannel: Fluidic Control of Selectivity and Productivity. Industrial & Engineering Chemistry Research, 2010, 49, 2681-2687.	1.8	63
79	Micromixer-assisted polymerization processes. Chemical Engineering Science, 2011, 66, 1449-1462.	1.9	62
80	Energy, catalyst and reactor considerations for (near)-industrial plasma processing and learning for nitrogen-fixation reactions. Catalysis Today, 2013, 211, 9-28.	2.2	62
81	Plasma Nitrogen Oxides Synthesis in a Milli-Scale Gliding Arc Reactor: Investigating the Electrical and Process Parameters. Plasma Chemistry and Plasma Processing, 2016, 36, 241-257.	1.1	62
82	Copper(I)â€Catalyzed Azideâ€"Alkyne Cycloadditions in Microflow: Catalyst Activity, Highâ€T Operation, and an Integrated Continuous Copper Scavenging Unit. ChemSusChem, 2012, 5, 1703-1707.	3.6	61
83	Industrial applications of plasma, microwave and ultrasound techniques: Nitrogen-fixation and hydrogenation reactions. Chemical Engineering and Processing: Process Intensification, 2013, 71, 19-30.	1.8	61
84	Visible Light Photocatalytic Metal-Free Perfluoroalkylation of Heteroarenes in Continuous Flow. Journal of Flow Chemistry, 2015, 4, 12-17.	1.2	61
85	Design criteria for a barrier-based gasâ€"liquid flow distributor for parallel microchannels. Chemical Engineering Journal, 2012, 181-182, 549-556.	6.6	60
86	Plasma assisted nitrogen oxide production from air: Using pulsed powered gliding arc reactor for a containerized plant. AIChE Journal, 2018, 64, 526-537.	1.8	60
87	Intensification of the Capillary-Based Kolbeâ^'Schmitt Synthesis from Resorcinol by Reactive Ionic Liquids, Microwave Heating, or a Combination Thereof. Organic Process Research and Development, 2009, 13, 970-982.	1.3	59
88	Solventâ€•and Catalystâ€Free Huisgen Cycloaddition to Rufinamide in Flow with a Greener, Less Expensive Dipolarophile. ChemSusChem, 2013, 6, 2220-2225.	3.6	58
89	Pretreatment and fermentation of lignocellulosic biomass: reaction mechanisms and process engineering. Reaction Chemistry and Engineering, 2020, 5, 2017-2047.	1.9	57
90	Cost analysis of enzymatic biodiesel production in small-scaled packed-bed reactors. Applied Energy, 2018, 210, 268-278.	5.1	56

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91	Microfluidic plasmas: Novel technique for chemistry and chemical engineering. Chemical Engineering Journal, 2021, 417, 129355.	6.6	56
92	Numerical simulation of polymerization in interdigital multilamination micromixers. Lab on A Chip, 2005, 5, 966.	3.1	55
93	A complete miniaturized microstructured methanol fuel processor/fuel cell system for low power applications. International Journal of Hydrogen Energy, 2008, 33, 1374-1382.	3.8	55
94	Review on Patents in Microreactor and Micro Process Engineering. Recent Patents on Chemical Engineering, 2008, 1, 1-16.	0.5	55
95	Transfer of the Epoxidation of Soybean Oil from Batch to Flow Chemistry Guided by Cost and Environmental Issues. ChemSusChem, 2012, 5, 300-311.	3.6	55
96	Visible Light-Induced Trifluoromethylation and Perfluoroalkylation of Cysteine Residues in Batch and Continuous Flow. Journal of Organic Chemistry, 2016, 81, 7301-7307.	1.7	55
97	Continuousâ€Flow Multistep Synthesis of Cinnarizine, Cyclizine, and a Buclizine Derivative from Bulk Alcohols. ChemSusChem, 2016, 9, 67-74.	3.6	54
98	Fluidic bus system for chemical process engineering in the laboratory and for small-scale production. Chemical Engineering Journal, 2005, 107, 205-214.	6.6	53
99	Improvement of Dye Properties of the Azo Pigment Yellow 12 Using a Micromixer-Based Process. Organic Process Research and Development, 2005, 9, 188-192.	1.3	52
100	Gas hold-up and liquid film thickness in Taylor flow in rectangular microchannels. Chemical Engineering Journal, 2008, 135, S153-S158.	6.6	51
101	Liquid-liquid extraction for the separation of Co(II) from Ni(II) with Cyanex 272 using a pilot scale Re-entrance flow microreactor. Chemical Engineering Journal, 2018, 332, 131-139.	6.6	51
102	Lipase-Based Biocatalytic Flow Process in a Packed-Bed Microreactor. Industrial & Engineering Chemistry Research, 2013, 52, 10951-10960.	1.8	50
103	Beyond Organometallic Flow Chemistry: The Principles Behind the Use of Continuous-Flow Reactors for Synthesis. Topics in Organometallic Chemistry, 2015, , 1-41.	0.7	50
104	A sensitivity analysis of a numbered-up photomicroreactor system. Reaction Chemistry and Engineering, 2017, 2, 109-115.	1.9	50
105	Synthesis of yttrium oxide nanoparticles via a facile microplasma-assisted process. Chemical Engineering Science, 2018, 178, 157-166.	1.9	50
106	Why turquoise hydrogen will Be a game changer for the energy transition. International Journal of Hydrogen Energy, 2022, 47, 25831-25848.	3.8	50
107	2- and 3-Stage temperature ramping for the direct synthesis of adipic acid in micro-flow packed-bed reactors. Chemical Engineering Journal, 2015, 260, 454-462.	6.6	49
108	Asymmetric catalytic hydrogenations at micro-litre scale in a helicoidal single channel falling film micro-reactor. Catalysis Today, 2005, 110, 179-187.	2.2	48

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109	Cost Analysis for a Continuously Operated Fine Chemicals Production Plant at 10 Kg/Day Using a Combination of Microprocessing and Microwave Heating. Journal of Flow Chemistry, 2011, 1, 74-89.	1.2	48
110	Scale-up and economic analysis of biodiesel production from recycled grease trap waste. Applied Energy, 2018, 229, 142-150.	5.1	48
111	Metallic nanoparticles made in flow and their catalytic applications in organic synthesis. Nanotechnology Reviews, 2014, 3, 65-86.	2.6	47
112	Deciphering the synergy between plasma and catalyst support for ammonia synthesis in a packed dielectric barrier discharge reactor. Journal Physics D: Applied Physics, 2020, 53, 144003.	1.3	47
113	Synthesis of N-doped carbon dots via a microplasma process. Chemical Engineering Science, 2020, 220, 115648.	1.9	47
114	Threonine aldolase immobilization on different supports for engineering of productive, cost-efficient enzymatic microreactors. Chemical Engineering Journal, 2012, 207-208, 564-576.	6.6	46
115	A Mechanistic Investigation of the Visibleâ€•Light Photocatalytic Trifluoromethylation of Heterocycles Using CF₃I in Flow. Chemistry - A European Journal, 2016, 22, 12295-12300.	1.7	46
116	Novel Liquid-Flow Splitting Unit Specifically Made for Numbering-Up of Liquid/Liquid Chemical Microprocessing. Chemical Engineering and Technology, 2003, 26, 1271-1280.	0.9	45
117	Impact of fluid path geometry and operating parameters on l/l-dispersion in interdigital micromixers. Chemical Engineering Science, 2006, 61, 2959-2967.	1.9	45
118	Pseudo 3-D simulation of a falling film microreactor based on realistic channel and film profiles. Chemical Engineering Science, 2008, 63, 5149-5159.	1.9	45
119	Methanol to dimethyl ether conversion over a ZSM-5 catalyst: Intrinsic kinetic study on an external recycle reactor. Chemical Engineering Journal, 2018, 347, 741-753.	6.6	45
120	Practical Photocatalytic Trifluoromethylation and Hydrotrifluoromethylation of Styrenes in Batch and Flow. Angewandte Chemie, 2016, 128, 15778-15782.	1.6	44
121	Flow Chemistry of the Kolbeâ€•Schmitt Synthesis from Resorcinol: Process Intensification by Alternative Solvents, New Reagents and Advanced Reactor Engineering. Chemical Engineering and Technology, 2009, 32, 1774-1789.	0.9	43
122	Design methodology for barrierâ€•based two phase flow distributor. AIChE Journal, 2012, 58, 3482-3493.	1.8	43
123	Flow Synthesis of Diaryliodonium Triflates. Journal of Organic Chemistry, 2017, 82, 11735-11741.	1.7	43
124	Solvent extraction of metals: Role of ionic liquids and microfluidics. Separation and Purification Technology, 2021, 262, 118289.	3.9	43
125	Addition of Secondary Amines to Î±,Î²-Unsaturated Carbonyl Compounds and Nitriles by Using Microstructured Reactors. Organic Process Research and Development, 2006, 10, 1144-1152.	1.3	42
126	The development and evaluation of microstructured reactors for the water gas shift and preferential oxidation reactions in the 5kW range. International Journal of Hydrogen Energy, 2010, 35, 2317-2327.	3.8	42

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127	Potential Analysis of Smart Flow Processing and Micro Process Technology for Fastening Process Development â€“ Use of Chemistry and Process Design as Intensification Fields. Chemie-Ingenieur-Technik, 2012, 84, 660-684.	0.4	42
128	Preparation of zeolite films as catalytic coatings on microreactor channels. Microporous and Mesoporous Materials, 2008, 115, 147-155.	2.2	41
129	Basic Study of Adhesion of Several Alumina-based Washcoats Deposited on Stainless Steel Microchannels. Chemical Engineering and Technology, 2006, 29, 1509-1512.	0.9	40
130	Use of â€˜smart interfacesâ€™ to improve the liquid-sided mass transport in a falling film microreactor. Chemical Engineering Science, 2010, 65, 3557-3566.	1.9	40
131	An atmospheric pressure microplasma process for continuous synthesis of titanium nitride nanoparticles. Chemical Engineering Journal, 2017, 321, 447-457.	6.6	40
132	Plasma Assisted Catalytic Conversion of CO2 and H2O Over Ni/Al2O3 in a DBD Reactor. Plasma Chemistry and Plasma Processing, 2019, 39, 109-124.	1.1	40
133	Environmentally Benign Microreaction Process Design by Accompanying (Simplified) Life Cycle Assessment. Chemical Engineering and Technology, 2009, 32, 1757-1765.	0.9	39
134	Homogeneous Polymerization: Benefits Brought by Microprocess Technologies to the Synthesis and Production of Polymers. Macromolecular Reaction Engineering, 2010, 4, 543-561.	0.9	39
135	A View Through Novel Process Windows. Australian Journal of Chemistry, 2013, 66, 121.	0.5	39
136	Continuous metal scavenging and coupling to one-pot copper-catalyzed azide-alkyne cycloaddition click reaction in flow. Chemical Engineering Journal, 2015, 270, 468-475.	6.6	39
137	Real-time reaction control for solar production of chemicals under fluctuating irradiance. Green Chemistry, 2018, 20, 2459-2464.	4.6	39
138	The role of heterogeneous catalysts in the plasma-catalytic ammonia synthesis. Catalysis Today, 2021, 362, 2-10.	2.2	39
139	Quantitative Sustainability Assessment of Flow Chemistryâ€“From Simple Metrics to Holistic Assessment. ACS Sustainable Chemistry and Engineering, 2021, 9, 9508-9540.	3.2	38
140	Use of micromixers to control the molecular weight distribution in continuous two-stage nitroxide-mediated copolymerizations. Chemical Engineering Journal, 2008, 135, S242-S246.	6.6	37
141	Design, scale-out, and operation of a microchannel reactor with a Cu/CeO2â^'x catalytic coating for preferential CO oxidation. Chemical Engineering Journal, 2010, 160, 923-929.	6.6	37
142	Micro-flow photosynthesis of new dienophiles for inverse-electron-demand Dielsâ€“Alder reactions. Potential applications for pretargeted in vivo PET imaging. Chemical Science, 2017, 8, 1251-1258.	3.7	37
143	Life cycle assessment for the direct synthesis of adipic acid in microreactors and benchmarking to the commercial process. Chemical Engineering Journal, 2013, 234, 300-311.	6.6	36
144	From alcohol to 1,2,3-triazole via a multi-step continuous-flow synthesis of a rufinamide precursor. Green Chemistry, 2016, 18, 4947-4953.	4.6	36

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145	Synthesis of iron oxide nanoparticles in microplasma under atmospheric pressure. Chemical Engineering Science, 2017, 168, 360-371.	1.9	36
146	Kinetic study of hydrogen peroxide decomposition at high temperatures and concentrations in two capillary microreactors. AIChE Journal, 2017, 63, 689-697.	1.8	35
147	A Leafâ€Inspired Luminescent Solar Concentrator for Energyâ€Efficient Continuousâ€Flow Photochemistry. Angewandte Chemie, 2017, 129, 1070-1074.	1.6	35
148	Gas / Liquid Microreactors for Direct Fluorination of Aromatic Compounds Using Elemental Fluorine. , 2000, , 526-540.		34
149	Microfluidic fabrication of fluorescent nanomaterials: A review. Chemical Engineering Journal, 2021, 425, 131511.	6.6	33
150	From a Review of Noble Metal versus Enzyme Catalysts for Glucose Oxidation Under Conventional Conditions Towards a Process Design Analysis for Continuous-flow Operation. Journal of Flow Chemistry, 2012, 1, 13-23.	1.2	32
151	Microstructure-based intensification of a falling film microreactor through optimal film setting with realistic profiles and in-channel induced mixing. Chemical Engineering Journal, 2012, 179, 318-329.	6.6	32
152	The impact of Novel Process Windows on the Claisen rearrangement. Tetrahedron, 2013, 69, 2885-2890.	1.0	32
153	Designing flow and temperature uniformities in parallel microchannels reactor. AIChE Journal, 2014, 60, 1941-1952.	1.8	32
154	Life Cycle Assessment of the Nitrogen Fixation Process Assisted by Plasma Technology and Incorporating Renewable Energy. Industrial & Engineering Chemistry Research, 2016, 55, 8141-8153.	1.8	32
155	Every photon counts: understanding and optimizing photon paths in luminescent solar concentrator-based photomicroreactors (LSC-PMs). Reaction Chemistry and Engineering, 2017, 2, 561-566.	1.9	32
156	Continuous Synthesis of <i>tert</i>â€Butyl Peroxypivalate using a Singleâ€Channel Microreactor Equipped with Orifices as Emulsification Units. ChemSusChem, 2011, 4, 392-398.	3.6	31
157	Energy Considerations for Plasma-Assisted N-Fixation Reactions. Processes, 2014, 2, 694-710.	1.3	31
158	Cost Analysis of a Commercial Manufacturing Process of a Fine Chemical Compound Using Micro Process Engineering. Chimia, 2006, 60, 611-617.	0.3	30
159	Agile Green Process Design for the Intensified Kolbeâ€“Schmitt Synthesis by Accompanying (Simplified) Life Cycle Assessment. Environmental Science & Technology, 2013, 47, 5362-5371.	4.6	30
160	Visibleâ€Lightâ€Mediated Selective Arylation of Cysteine in Batch and Flow. Angewandte Chemie, 2017, 129, 12876-12881.	1.6	30
161	Environmental impact assessment of plasmaâ€assisted and conventional ammonia synthesis routes. Journal of Industrial Ecology, 2020, 24, 1171-1185.	2.8	30
162	g/l-Dispersion in interdigital micromixers with different mixing chamber geometries. Chemical Engineering Journal, 2004, 101, 75-85.	6.6	29

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163	Phenylacetylene Hydrogenation over [Rh(NBD)(PPh₃)₂]BF₄ Catalyst in a Numbered-Up Microchannels Reactor. Industrial & Engineering Chemistry Research, 2013, 52, 11516-11526.	1.8	29
164	Controlled Photocatalytic Aerobic Oxidation of Thiols to Disulfides in an Energyâ€Efficient Photomicroreactor. Chemical Engineering and Technology, 2015, 38, 1733-1742.	0.9	29
165	Micromixer Based Liquid/Liquid Dispersion. Chemical Engineering and Technology, 2005, 28, 501-508.	0.9	28
166	Bromination of Thiophene in Micro Reactors. Letters in Organic Chemistry, 2005, 2, 767-779.	0.2	28
167	Microwave-assisted Cu-catalyzed Ullmann ether synthesis in a continuous-flow milli-plant. Chemical Engineering Journal, 2012, 207-208, 426-439.	6.6	28
168	Development of a Microrectification Apparatus for Analytical and Preparative Applications. Chemical Engineering and Technology, 2012, 35, 58-71.	0.9	28
169	Eco-efficiency Analysis for Intensified Production of an Active Pharmaceutical Ingredient: A Case Study. Organic Process Research and Development, 2014, 18, 1326-1338.	1.3	28
170	Mixers with Microstructured Foils for Chemical Production Purposes. Chemical Engineering and Technology, 2005, 28, 401-407.	0.9	27
171	High-Temperature Epoxidation of Soybean Oil in Flowâ€"Speeding up Elemental Reactions Wanted and Unwanted. Industrial & Engineering Chemistry Research, 2012, 51, 1680-1689.	1.8	27
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