Georgios D Stefanidis

List of Publications by Year
in descending order

92 papers	3,287 citations	117619 34 h-index	175241 52 g-index
97 all docs	97 docs citations	97 times ranked	2736 citing authors

#	Article	IF	Citations
1	Plasma technology for lignocellulosic biomass conversion toward an electrified biorefinery. Green Chemistry, 2022, 24, 2680-2721.	9.0	18
2	Highly selective conversion of mixed polyolefins to valuable base chemicals using phosphorus-modified and steam-treated mesoporous HZSM-5 zeolite with minimal carbon footprint. Applied Catalysis B: Environmental, 2022, 309, 121251.	20.2	33
3	Exceeding Equilibrium CO₂ Conversion by Plasma-Assisted Chemical Looping. ACS Energy Letters, 2022, 7, 1896-1902.	17.4	13
4	Applications of Artificial Intelligence and Machine Learning Algorithms to Crystallization. Chemical Reviews, 2022, 122, 13006-13042.	47.7	28
5	An assessment of electrified methanol production from an environmental perspective. Green Chemistry, 2021, 23, 7243-7258.	9.0	20
6	Crystal Growth, Dissolution, and Agglomeration Kinetics of Sodium Chlorate. Industrial & Engineering Chemistry Research, 2021, 60, 7367-7384.	3.7	16
7	Scaleup of a Single-Mode Microwave Reactor. Industrial & Engineering Chemistry Research, 2020, 59, 2516-2523.	3.7	36
8	Nanosecond pulsed discharge-driven non-oxidative methane coupling in a plate-to-plate electrode configuration plasma reactor. Chemical Engineering Journal, 2020, 380, 122477.	12.7	39
9	On the Effect of Secondary Nucleation on Deracemization through Temperature Cycles. Chemistry - A European Journal, 2020, 26, 1344-1354.	3.3	18
10	Adaptable Reactors for Resource- and Energy-Efficient Methane Valorisation (ADREM). Johnson Matthey Technology Review, 2020, 64, 298-306.	1.0	1
11	High-throughput on demand access of single enantiomers by a continuous flow crystallization process. CrystEngComm, 2020, 22, 3519-3525.	2.6	11
12	Dielectric-based temperature sensing of nanoliter water samples with a post-processing tuned matching network. Measurement Science and Technology, 2020, 31, 115104.	2.6	1
13	Life cycle assessment of plasma-assisted ethylene production from rich-in-methane gas streams. Sustainable Energy and Fuels, 2020, 4, 1351-1362.	4.9	26
14	Glycerol: An Optimal Hydrogen Source for Microwave-Promoted Cu-Catalyzed Transfer Hydrogenation of Nitrobenzene to Aniline. Frontiers in Chemistry, 2020, 8, 34.	3.6	19
15	Fundamentals and applications of microwave heating to chemicals separation processes. Renewable and Sustainable Energy Reviews, 2019, 114, 109316.	16.4	115
16	Toward Continuous Deracemization via Racemic Crystal Transformation Monitored by in Situ Raman Spectroscopy. Crystal Growth and Design, 2019, 19, 5858-5868.	3.0	12
17	Process Modeling and Evaluation of Plasma-Assisted Ethylene Production from Methane. Processes, 2019, 7, 68.	2.8	32
18	Biomass gasification in microwave plasma: An experimental feasibility study with a side stream from a fermentation reactor. Chemical Engineering and Processing: Process Intensification, 2019, 141, 107538.	3.6	25

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19	A two-step modelling approach for plasma reactors â€“ experimental validation for CO_2 dissociation in surface wave microwave plasma. Reaction Chemistry and Engineering, 2019, 4, 1253-1269.	3.7	11
20	Sonocrystallisation: Observations, theories and guidelines. Chemical Engineering and Processing: Process Intensification, 2019, 139, 130-154.	3.6	44
21	The behavior and modelling of the vibrational-to-translational temperature ratio at long time scales in CO_2 vibrational kinetics. Reaction Chemistry and Engineering, 2019, 4, 2108-2116.	3.7	1
22	A study on the reaction mechanism of non-oxidative methane coupling in a nanosecond pulsed discharge reactor using isotope analysis. Chemical Engineering Journal, 2019, 360, 64-74.	12.7	28
23	Particle Breakage Kinetics and Mechanisms in Attrition-Enhanced Deracemization. Crystal Growth and Design, 2018, 18, 3051-3061.	3.0	28
24	Applications of ultrasound to chiral crystallization, resolution and deracemization. Ultrasonics Sonochemistry, 2018, 43, 184-192.	8.2	32
25	Direct methane-to-ethylene conversion in a nanosecond pulsed discharge. Fuel, 2018, 222, 705-710.	6.4	52
26	Low energy cost conversion of methane to ethylene in a hybrid plasma-catalytic reactor system. Fuel Processing Technology, 2018, 176, 33-42.	7.2	58
27	Synthesis, characterization, and application of ruthenium-doped $SrTiO_3$ perovskite catalysts for microwave-assisted methane dry reforming. Chemical Engineering and Processing: Process Intensification, 2018, 127, 178-190.	3.6	66
28	A Population Balance Model for Temperature Cycling-Enhanced Deracemization. Crystal Growth and Design, 2018, 18, 6547-6558.	3.0	1
29	Intensified deracemization <i>via</i> rapid microwave-assisted temperature cycling. CrystEngComm, 2018, 20, 2897-2901.	2.6	33
30	Intensification of a hydrogenation catalyst activity by nanosecond pulsed discharge treatment. Plasma Processes and Polymers, 2018, 15, 1800065.	3.0	5
31	Microwave plasma emerging technologies for chemical processes. Journal of Chemical Technology and Biotechnology, 2017, 92, 2495-2505.	3.2	37
32	The panorama of plasma-assisted non-oxidative methane reforming. Chemical Engineering and Processing: Process Intensification, 2017, 117, 120-140.	3.6	122
33	On the improvement of chemical conversion in a surface-wave microwave plasma reactor for CO_2 reduction with hydrogen (The Reverse Water-Gas Shift reaction). International Journal of Hydrogen Energy, 2017, 42, 12943-12955.	7.1	28
34	Efficiency Versus Productivity in Photoreactors: A Case Study. , 2017, , 123-154.		0
35	Immobilization of gluten in spherical matrices of foodâ€grade hydrogels. Journal of Food Process Engineering, 2017, 40, e12534.	2.9	1
36	Subtle Microwave-Induced Overheating Effects in an Industrial Demethylation Reaction and Their Direct Use in the Development of an Innovative Microwave Reactor. Journal of the American Chemical Society, 2017, 139, 5431-5436.	13.7	36

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37	Release of hydrogen from nanoconfined hydrides by application of microwaves. Journal of Power Sources, 2017, 353, 131-137.	7.8	13
38	Towards Deracemization in the Absence of Grinding through Crystal Transformation, Ripening, and Racemization. Crystal Growth and Design, 2017, 17, 882-890.	3.0	17
39	Complexity and Challenges in Noncontact High Temperature Measurements in Microwave-Assisted Catalytic Reactors. Industrial & Engineering Chemistry Research, 2017, 56, 13379-13391.	3.7	62
40	Coupling Viedma Ripening with Racemic Crystal Transformations: Mechanism of Deracemization. Crystal Growth and Design, 2017, 17, 4965-4976.	3.0	23
41	Efficiency vs. productivity in photoreactors, a case study on photochemical separation of Eu. Chemical Engineering Journal, 2017, 310, 240-248.	12.7	13
42	Harvesting Renewable Energy for Carbon Dioxide Catalysis. Energy Technology, 2017, 5, 796-811.	3.8	42
43	Investigating the Plasma-Assisted and Thermal Catalytic Dry Methane Reforming for Syngas Production: Process Design, Simulation and Evaluation. Energies, 2017, 10, 1429.	3.1	25
44	Microwave-Driven Plasma Gasification for Biomass Waste Treatment at Miniature Scale. IEEE Transactions on Plasma Science, 2016, 44, 670-678.	1.3	37
45	Reduction of CO2 with hydrogen in a non-equilibrium microwave plasma reactor. International Journal of Hydrogen Energy, 2016, 41, 21067-21077.	7.1	53
46	A new methodology for the reduction of vibrational kinetics in non-equilibrium microwave plasma: application to CO₂ dissociation. Reaction Chemistry and Engineering, 2016, 1, 540-554.	3.7	24
47	Furfural Synthesis from <scp>d</scp>â€Xylose in the Presence of Sodium Chloride: Microwave versus Conventional Heating. ChemSusChem, 2016, 9, 2159-2166.	6.8	36
48	Microwave Assisted Direct Nucleation Control for Batch Crystallization: Crystal Size Control with Reduced Batch Time. Crystal Growth and Design, 2016, 16, 440-446.	3.0	24
49	Milli-channel mixer and phase separator for solvent extraction of rare earth elements. Chemical Engineering Journal, 2016, 293, 273-280.	12.7	34
50	A particle scale model for municipal solid waste and refuse-derived fuels pyrolysis. Computers and Chemical Engineering, 2016, 86, 148-159.	3.8	18
51	On the use of the Couette Cell technology for large scale production of textured soy-based meat replacers. Journal of Food Engineering, 2016, 169, 205-213.	5.2	113
52	Microwave Reactor Concepts: From Resonant Cavities to Traveling Fields. RSC Green Chemistry, 2016, , 93-125.	0.1	1
53	Attrition-Enhanced Deracemization of NaClO₃: Comparison between Ultrasonic and Abrasive Grinding. Crystal Growth and Design, 2015, 15, 5476-5484.	3.0	43
54	Computational modelling of a photocatalytic UV-LED reactor with internal mass and photon transfer consideration. Chemical Engineering Journal, 2015, 264, 962-970.	12.7	59

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55	A systematic investigation of microwave-assisted reactive distillation: Influence of microwaves on separation and reaction. Chemical Engineering and Processing: Process Intensification, 2015, 93, 87-97.	3.6	27
56	Production of structured soy-based meat analogues using simple shear and heat in a Couette Cell. Journal of Food Engineering, 2015, 160, 34-41.	5.2	105
57	Comparison of photocatalytic space-time yields of 12 reactor designs for wastewater treatment. Chemical Engineering and Processing: Process Intensification, 2015, 97, 106-111.	3.6	109
58	A concise review on microwave-assisted polycondensation reactions and curing of polycondensation polymers with focus on the effect of process conditions. Chemical Engineering Journal, 2015, 264, 633-644.	12.7	49
59	A helicopter view of microwave application to chemical processes: reactions, separations, and equipment concepts. Reviews in Chemical Engineering, 2014, 30, .	4.4	91
60	On characterization of anisotropic plant protein structures. Food and Function, 2014, 5, 3233-3240.	4.6	51
61	Analysis of niflumic acid prepared by rapid microwave-assisted evaporation. Journal of Pharmaceutical and Biomedical Analysis, 2014, 98, 16-21.	2.8	11
62	Microwaves and microreactors: Design challenges and remedies. Chemical Engineering Journal, 2014, 243, 147-158.	12.7	73
63	Practical challenges in the energyâ€based control of molecular transformations in chemical reactors. AICHE Journal, 2014, 60, 3392-3405.	3.6	6
64	Integrated design of microwave and photocatalytic reactors. Where are we now?. Current Opinion in Chemical Engineering, 2014, 5, 37-41.	7.8	16
65	Application of microwave heating to pervaporation: A case study for separation of ethanolâ€“water mixtures. Chemical Engineering and Processing: Process Intensification, 2014, 81, 35-40.	3.6	16
66	Exploration of rectangular waveguides as a basis for microwave enhanced continuous flow chemistries. Chemical Engineering Science, 2013, 89, 196-205.	3.8	20
67	On the parametric sensitivity of heat generation by resonant microwave fields in process fluids. International Journal of Heat and Mass Transfer, 2013, 57, 375-388.	4.8	48
68	Novel microwave reactor equipment using internal transmission line (INTLI) for efficient liquid phase chemistries: A study-case of polyester preparation. Chemical Engineering and Processing: Process Intensification, 2013, 69, 83-89.	3.6	15
69	Microwave-Assisted Evaporative Crystallization of Niflumic Acid for Particle Size Reduction. Crystal Growth and Design, 2013, 13, 4186-4189.	3.0	20
70	Microwave-Promoted Synthesis of <i>n</i>-Propyl Propionate using Homogeneous Zinc Triflate Catalyst. Industrial & Engineering Chemistry Research, 2012, 51, 1612-1619.	3.7	22
71	Low-cost small scale processing technologies for production applications in various environmentsâ€"Mass produced factories. Chemical Engineering and Processing: Process Intensification, 2012, 51, 32-52.	3.6	76
72	On the effect of resonant microwave fields on temperature distribution in time and space. International Journal of Heat and Mass Transfer, 2012, 55, 3800-3811.	4.8	87

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73	Microwave Swing Regeneration vs Temperature Swing Regenerationâ€"Comparison of Desorption Kinetics. Industrial & Engineering Chemistry Research, 2011, 50, 8632-8644.	3.7	40
74	Phase Equilibria for Reactive Distillation of Propyl Propanoate. Pure Component Property Data, Vaporâ˘'Liquid Equilibria, and Liquidâ˘'Liquid Equilibria. Journal of Chemical & Engineering Data, 2011, 56, 2322-2328.	1.9	12
75	Microwave-activated methanol steam reforming for hydrogen production. International Journal of Hydrogen Energy, 2011, 36, 12843-12852.	7.1	67
76	Enhancing stability in parallel plate microreactor stacks for syngas production. Chemical Engineering Science, 2011, 66, 1051-1059.	3.8	24
77	Pilot plant synthesis of n-propyl propionate via reactive distillation with decanter separator for reactant recovery. Experimental model validation and simulation studies. Chemical Engineering and Processing: Process Intensification, 2010, 49, 965-972.	3.6	29
78	Design principles of microwave applicators for small-scale process equipment. Chemical Engineering and Processing: Process Intensification, 2010, 49, 912-922.	3.6	33
79	Intensification of steam reforming of natural gas: Choosing combustible fuel and reforming catalyst. Chemical Engineering Science, 2010, 65, 398-404.	3.8	55
80	On the accuracy and reproducibility of fiber optic (FO) and infrared (IR) temperature measurements of solid materials in microwave applications. Measurement Science and Technology, 2010, 21, 045108.	2.6	63
81	Process Intensification of Reactive Distillation for the Synthesis of <i>n</i>-Propyl Propionate: The Effects of Microwave Radiation on Molecular Separation and Esterification Reaction. Industrial & Engineering Chemistry Research, 2010, 49, 10287-10296.	3.7	51
82	Scale-out of Microreactor Stacks for Portable and Distributed Processing: Coupling of Exothermic and Endothermic Processes for Syngas Production. Industrial & Engineering Chemistry Research, 2010, 49, 10942-10955.	3.7	30
83	Methane steam reforming at microscales: Operation strategies for variable power output at millisecond contact times. AIChE Journal, 2009, 55, 180-191.	3.6	56
84	High vs. low temperature reforming for hydrogen production via microtechnology. Chemical Engineering Science, 2009, 64, 4856-4865.	3.8	41
85	Comparison of ignition strategies for catalytic microburners. Proceedings of the Combustion Institute, 2009, 32, 3027-3034.	3.9	22
86	Millisecond Production of Hydrogen from Alternative, High Hydrogen Density Fuels in a Cocurrent Multifunctional Microreactor. Industrial & Engineering Chemistry Research, 2009, 48, 1749-1760.	3.7	40
87	Controlling Homogeneous Chemistry in Homogeneousâ˘'Heterogeneous Reactors: Application to Propane Combustion. Industrial & Engineering Chemistry Research, 2009, 48, 5962-5968.	3.7	35
88	Gray/nongray gas radiation modeling in steam cracker CFD calculations. AIChE Journal, 2007, 53, 1658-1669.	3.6	29
89	Development of Reduced Combustion Mechanisms for Premixed Flame Modeling in Steam Cracking Furnaces with Emphasis on NO Emission. Energy & Fuels, 2006, 20, 103-113.	5.1	15
90	CFD simulations of steam cracking furnaces using detailed combustion mechanisms. Computers and Chemical Engineering, 2006, 30, 635-649.	3.8	100

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91	An improved weighted average reactor temperature estimation for simulation of adiabatic industrial hydrotreaters. Fuel Processing Technology, 2005, 86, 1761-1775.	7.2	15
92	CHAPTER 9. Photocatalytic Reactors in Environmental Applications. RSC Green Chemistry, 0, , 270-295.	0.1	1