

Niket S Kaisare

List of Publications by Year in descending order

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69
papers

1,675
citations

361413

20
h-index

302126

39
g-index

70
all docs

70
docs citations

70
times ranked

1167
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on microcombustion: Fundamentals, devices and applications. Progress in Energy and Combustion Science, 2012, 38, 321-359.	31.2	307
2	Stability and performance of catalytic microreactors: Simulations of propane catalytic combustion on Pt. Chemical Engineering Science, 2008, 63, 1098-1116.	3.8	137
3	Incorporating delayed and infrequent measurements in Extended Kalman Filter based nonlinear state estimation. Journal of Process Control, 2011, 21, 119-129.	3.3	110
4	Optimal reactor dimensions for homogeneous combustion in small channels. Catalysis Today, 2007, 120, 96-106.	4.4	99
5	Hierarchical multiscale model-based design of experiments, catalysts, and reactors for fuel processing. Computers and Chemical Engineering, 2006, 30, 1712-1724.	3.8	67
6	Choice of approximator and design of penalty function for an approximate dynamic programming based control approach. Journal of Process Control, 2006, 16, 135-156.	3.3	58
7	Methane steam reforming at microscales: Operation strategies for variable power output at millisecond contact times. AIChE Journal, 2009, 55, 180-191.	3.6	56
8	Optimal control of a fed-batch bioreactor using simulation-based approximate dynamic programming. IEEE Transactions on Control Systems Technology, 2005, 13, 786-790.	5.2	53
9	Extending the region of stable homogeneous micro-combustion through forced unsteady operation. Proceedings of the Combustion Institute, 2007, 31, 3293-3300.	3.9	45
10	Generalized thermodynamic analysis of methanol synthesis: Effect of feed composition. Journal of CO ₂ Utilization, 2015, 10, 95-104.	6.8	44
11	Modeling the effect of flow mal-distribution on the performance of a catalytic converter. Chemical Engineering Science, 2012, 71, 310-320.	3.8	41
12	Kinetic stability of surfactant stabilized water-in-diesel emulsion fuels. Fuel, 2019, 236, 1415-1422.	6.4	41
13	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
14	Hydrogen generation in a reverse-flow microreactor: 1. Model formulation and scaling. AIChE Journal, 2005, 51, 2254-2264.	3.6	34
15	Hydrogen generation in spatially coupled cross-flow microreactors. Chemical Engineering Journal, 2013, 215-216, 876-885.	12.7	34
16	Simulation based strategy for nonlinear optimal control: application to a microbial cell reactor. International Journal of Robust and Nonlinear Control, 2003, 13, 347-363.	3.7	28
17	Simulation of hydrogen and hydrogen-assisted propane ignition in pt catalyzed microchannel. Combustion and Flame, 2010, 157, 2051-2062.	5.2	28
18	A spiral microreactor for improved stability and performance for catalytic combustion of propane. Chemical Engineering Science, 2018, 187, 87-97.	3.8	27

#	ARTICLE	IF	CITATIONS
19	A 3D CFD study of homogeneous-catalytic combustion of hydrogen in a spiral microreactor. <i>Combustion and Flame</i> , 2019, 206, 441-450.	5.2	26
20	Comparison of ignition strategies for catalytic microburners. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 3027-3034.	3.9	22
21	Adsorption of hydrogen and carbon dioxide in zeolitic imidazolate framework structure with SOD topology: experimental and modelling studies. <i>Adsorption</i> , 2020, 26, 1027-1038.	3.0	21
22	Dynamic plunger lift model for deliquification of shale gas wells. <i>Computers and Chemical Engineering</i> , 2017, 103, 81-90.	3.8	18
23	$\text{BiVO}_4/\text{Cs}_2\text{Pt}_6$ Vacancy-Ordered Halide Perovskite Heterojunction for Panchromatic Light Harvesting and Enhanced Charge Separation in Photoelectrochemical Water Oxidation. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 16267-16278.	8.0	17
24	Propane combustion in non-adiabatic microreactors: 1. Comparison of channel and posted catalytic inserts. <i>Chemical Engineering Science</i> , 2011, 66, 1123-1131.	3.8	15
25	Modeling of cryo-adsorption of hydrogen on MOF-5 pellets: Effect of pellet properties on moderate pressure refueling. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 342-354.	7.1	15
26	Operability Analysis and Design of a Reverse-Flow Microreactor for Hydrogen Generation via Methane Partial Oxidation. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 8323-8333.	3.7	13
27	An analysis of drifts and nonlinearities in electrochemical impedance spectra. <i>Electrochimica Acta</i> , 2011, 56, 7467-7475.	5.2	13
28	Analysis of the autothermal operability of the Sabatier reaction in a heat-recirculating microreactor using CFD. <i>Reaction Chemistry and Engineering</i> , 2019, 4, 1823-1833.	3.7	13
29	Diesel Emulsion Fuels with Ultralong Stability. <i>Energy & Fuels</i> , 2019, 33, 12227-12235.	5.1	13
30	A critical analysis of transport models for refueling of MOF-5 based hydrogen adsorption system. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 85, 170-180.	5.8	13
31	Hydrogen generation in a reverse-flow microreactor: 2. Simulation and analysis. <i>AIChE Journal</i> , 2005, 51, 2265-2272.	3.6	12
32	Microkinetic model for $\text{NO} \rightleftharpoons \text{CO}$ reaction: Model reduction. <i>International Journal of Chemical Kinetics</i> , 2012, 44, 577-585.	1.6	11
33	Online optimization for a plunger lift process in shale gas wells. <i>Computers and Chemical Engineering</i> , 2018, 108, 89-97.	3.8	11
34	Propane combustion in non-adiabatic microreactors: 2. Flow configuration in posted microreactors. <i>Chemical Engineering Science</i> , 2011, 66, 3732-3741.	3.8	10
35	The Role of Homogeneous Chemistry during Ignition of Propane Combustion in Pt-Catalyzed Microburners. <i>International Journal of Spray and Combustion Dynamics</i> , 2012, 4, 155-174.	1.0	10
36	Ignition of homo/hetero combustion of propane in a microreactor with catalyst segmentation. <i>Chemical Engineering Research and Design</i> , 2018, 138, 125-134.	5.6	10

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37	Modeling the Effect of Nonuniformities from Urea Injection on SCR Performance Using CFD. Industrial & Engineering Chemistry Research, 2019, 58, 20247-20258.	3.7	10
38	Thermally integrated microreactor for Sabatier reaction: Study of air-cooled and inert-diluted counter-current operation strategies. Catalysis Today, 2022, 383, 146-155.	4.4	10
39	Microkinetic Modeling and Analysis of CO ₂ Methanation on Ruthenium. Industrial & Engineering Chemistry Research, 2020, 59, 16161-16169.	3.7	10
40	Modeling Growth Kinetics of Methane Hydrate in Stirred Tank Batch Reactors. ACS Engineering Au, 0, , .	5.1	10
41	Evaluating the impact of pellet densification and graphite addition for design of on-board hydrogen storage in a fixed bed of MOF-5 pellets. International Journal of Hydrogen Energy, 2020, 45, 25875-25889.	7.1	9
42	Modeling of Thermal Integration of a Catalytic Microcombustor with a Thermoelectric for Power Generation Applications. Energy & Fuels, 2021, 35, 5141-5152.	5.1	9
43	Numerical Analysis of Fractal Catalyst Structuring in Microreactors. Industrial & Engineering Chemistry Research, 2011, 50, 12925-12932.	3.7	8
44	Approximate dynamic programming-based control of distributed parameter systems. Asia-Pacific Journal of Chemical Engineering, 2011, 6, 452-459.	1.5	8
45	Ignition strategies for fuel mixtures in catalytic microburners. Combustion Theory and Modelling, 2010, 14, 23-40.	1.9	7
46	POPULATION BALANCE MODEL FOR VULCANIZATION OF NATURAL RUBBER WITH DELAYED-ACTION ACCELERATOR AND PREVULCANIZATION INHIBITOR. Rubber Chemistry and Technology, 2012, 85, 219-243.	1.2	7
47	Approximate dynamic programming based control of hyperbolic PDE systems using reduced-order models from method of characteristics. Computers and Chemical Engineering, 2013, 57, 122-132.	3.8	7
48	Thermoacoustic Instabilities in a Ducted Premixed Flame: Reduced-Order Models and Control. Combustion Science and Technology, 2013, 185, 920-942.	2.3	7
49	A recurrent neural network model for biomass gasification chemistry. Reaction Chemistry and Engineering, 2022, 7, 570-579.	3.7	7
50	Two-layered dynamic control for simultaneous set-point tracking and improved economic performance. Journal of Process Control, 2021, 97, 17-25.	3.3	6
51	Modeling the Effects of the Inlet Manifold Design on the Performance of a Diesel Oxidation Catalytic Converter. Industrial & Engineering Chemistry Research, 2021, 60, 3860-3870.	3.7	6
52	Distributed output feedback control for multi-unit system with delayed multirate measurements. Computers and Chemical Engineering, 2020, 139, 106879.	3.8	6
53	Order reduction and control of hyperbolic, countercurrent distributed parameter systems using method of characteristics. Chemical Engineering Science, 2014, 110, 153-163.	3.8	4
54	Distributed model predictive control of a system with multi-rate and delayed measurements. Computer Aided Chemical Engineering, 2018, , 517-522.	0.5	4

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55	A CFD study of ignition of lean propane-air mixtures in a heat recirculating U-bend catalytic microreactor. <i>Chemical Engineering Research and Design</i> , 2021, 173, 15-26.	5.6	4
56	Sampled Output augmentation method for handling measurement delays in multirate Kalman filter. <i>Chemical Engineering Science</i> , 2020, 224, 115763.	3.8	4
57	Optimal design of periodic test input signals for multivariable impulse response models. <i>Optimal Control Applications and Methods</i> , 2010, 31, 451-469.	2.1	3
58	Approximate Dynamic Programming based control for Water Gas Shift reactor. <i>Computer Aided Chemical Engineering</i> , 2012, , 340-344.	0.5	3
59	Control and Optimization Challenges in Liquid-Loaded Shale Gas Wells. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2013, 46, 227-232.	0.4	2
60	Global Kinetic Modeling and Analysis of Lean NO _x Traps (LNT) Catalysts. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 6853-6862.	3.7	2
61	Automated Simulation Error based Reduction (ASER) of large chemical reaction mechanisms. <i>Computers and Chemical Engineering</i> , 2019, 130, 106560.	3.8	2
62	On-board hydrogen storage in an adsorbent bed: Development of a multi-scale dynamic 1D+1D model. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 25862-25874.	7.1	2
63	The Effect of Catalyst Placement on the Stability of a U-Bend Catalytic Heat-Recirculating Micro-Combustor: A Numerical Investigation. <i>Catalysts</i> , 2021, 11, 1560.	3.5	2
64	Method of characteristics based model reduction for control of a counter-current reactor using approximate dynamic programming. , 2013, , .		1
65	Integration of heat recirculating microreactors with thermoelectric modules for power generation: a comparative study using CFD. <i>Reaction Chemistry and Engineering</i> , 2021, 6, 2327-2341.	3.7	1
66	A compact heat recirculating spiral geometry for thermal integration for Sabatier reaction in microreactor. <i>AIChE Journal</i> , 0, , .	3.6	1
67	Model order reduction of hyperbolic systems using method of characteristics and differential transform. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2013, 46, 785-790.	0.4	0
68	Integrated multi-objective predictive control for multi-unit system. , 2019, , .		0
69	Study of propane/air catalytic combustion in heat recirculating U-bend and spiral microcombustors. <i>Journal of Flow Chemistry</i> , 0, , 1.	1.9	0