# Niket S Kaisare

List of Publications by Year
in descending order

| 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 | 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 |
| 2 | A recurrent neural network model for biomass gasification chemistry. Reaction Chemistry and Engineering, 2022, 7, 570-579. | 3.7 | 7 |
| 3 | Two-layered dynamic control for simultaneous set-point tracking and improved economic performance. Journal of Process Control, 2021, 97, 17-25. | 3.3 | 6 |
| 4 | Integration of heat recirculating microreactors with thermoelectric modules for power generation: a comparative study using CFD. Reaction Chemistry and Engineering, 2021, 6, 2327-2341. | 3.7 | 1 |
| 5 | Modeling the Effects of the Inlet Manifold Design on the Performance of a Diesel Oxidation Catalytic Converter. Industrial &amp; Engineering Chemistry Research, 2021, 60, 3860-3870. | 3.7 | 6 |
| 6 | Modeling of Thermal Integration of a Catalytic Microcombustor with a Thermoelectric for Power Generation Applications. Energy &amp; Fuels, 2021, 35, 5141-5152. | 5.1 | 9 |
| 7 | $BiVO_4$/$Cs_2PtI_6$ Vacancy-Ordered Halide Perovskite Heterojunction for Panchromatic Light Harvesting and Enhanced Charge Separation in Photoelectrochemical Water Oxidation. ACS Applied Materials &amp; Interfaces, 2021, 13, 16267-16278. | 8.0 | 17 |
| 8 | A CFD study of ignition of lean propane-air mixtures in a heat recirculating U-bend catalytic microreactor. Chemical Engineering Research and Design, 2021, 173, 15-26. | 5.6 | 4 |
| 9 | The Effect of Catalyst Placement on the Stability of a U-Bend Catalytic Heat-Recirculating Micro-Combustor: A Numerical Investigation. Catalysts, 2021, 11, 1560. | 3.5 | 2 |
| 10 | Microkinetic Modeling and Analysis of CO2 Methanation on Ruthenium. Industrial &amp; Engineering Chemistry Research, 2020, 59, 16161-16169. | 3.7 | 10 |
| 11 | A critical analysis of transport models for refueling of MOF-5 based hydrogen adsorption system. Journal of Industrial and Engineering Chemistry, 2020, 85, 170-180. | 5.8 | 13 |
| 12 | On-board hydrogen storage in an adsorbent bed: Development of a multi-scale dynamic â€œ1D-plus-1Dâ€• model. International Journal of Hydrogen Energy, 2020, 45, 25862-25874. | 7.1 | 2 |
| 13 | Adsorption of hydrogen and carbon dioxide in zeolitic imidazolate framework structure with SOD topology: experimental and modelling studies. Adsorption, 2020, 26, 1027-1038. | 3.0 | 21 |
| 14 | 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 |
| 15 | Distributed output feedback control for multi-unit system with delayed multirate measurements. Computers and Chemical Engineering, 2020, 139, 106879. | 3.8 | 6 |
| 16 | Sampled Output augmentation method for handling measurement delays in multirate Kalman filter. Chemical Engineering Science, 2020, 224, 115763. | 3.8 | 4 |
| 17 | Analysis of the autothermal operability of the Sabatier reaction in a heat-recirculating microreactor using CFD. Reaction Chemistry and Engineering, 2019, 4, 1823-1833. | 3.7 | 13 |
| 18 | Modeling the Effect of Nonuniformities from Urea Injection on SCR Performance Using CFD. Industrial &amp; Engineering Chemistry Research, 2019, 58, 20247-20258. | 3.7 | 10 |

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|---|---|---|---|
| 19 | Automated Simulation Error based Reduction (ASER) of large chemical reaction mechanisms. Computers and Chemical Engineering, 2019, 130, 106560. | 3.8 | 2 |
| 20 | A 3D CFD study of homogeneous-catalytic combustion of hydrogen in a spiral microreactor. Combustion and Flame, 2019, 206, 441-450. | 5.2 | 26 |
| 21 | Integrated multi-objective predictive control for multi-unit system. , 2019, , . | | 0 |
| 22 | Diesel Emulsion Fuels with Ultralong Stability. Energy &amp; Fuels, 2019, 33, 12227-12235. | 5.1 | 13 |
| 23 | Kinetic stability of surfactant stabilized water-in-diesel emulsion fuels. Fuel, 2019, 236, 1415-1422. | 6.4 | 41 |
| 24 | Global Kinetic Modeling and Analysis of Lean NO$_x$ Traps (LNT) Catalysts. Industrial &amp; Engineering Chemistry Research, 2018, 57, 6853-6862. | 3.7 | 2 |
| 25 | A spiral microreactor for improved stability and performance for catalytic combustion of propane. Chemical Engineering Science, 2018, 187, 87-97. | 3.8 | 27 |
| 26 | Online optimization for a plunger lift process in shale gas wells. Computers and Chemical Engineering, 2018, 108, 89-97. | 3.8 | 11 |
| 27 | Ignition of homo/hetero combustion of propane in a microreactor with catalyst segmentation. Chemical Engineering Research and Design, 2018, 138, 125-134. | 5.6 | 10 |
| 28 | Distributed model predictive control of a system with multi-rate and delayed measurements. Computer Aided Chemical Engineering, 2018, , 517-522. | 0.5 | 4 |
| 29 | Dynamic plunger lift model for deliquification of shale gas wells. Computers and Chemical Engineering, 2017, 103, 81-90. | 3.8 | 18 |
| 30 | Modeling of cryo-adsorption of hydrogen on MOF-5 pellets: Effect of pellet properties on moderate pressure refueling. International Journal of Hydrogen Energy, 2016, 41, 342-354. | 7.1 | 15 |
| 31 | Generalized thermodynamic analysis of methanol synthesis: Effect of feed composition. Journal of CO2 Utilization, 2015, 10, 95-104. | 6.8 | 44 |
| 32 | Order reduction and control of hyperbolic, countercurrent distributed parameter systems using method of characteristics. Chemical Engineering Science, 2014, 110, 153-163. | 3.8 | 4 |
| 33 | Hydrogen generation in spatially coupled cross-flow microreactors. Chemical Engineering Journal, 2013, 215-216, 876-885. | 12.7 | 34 |
| 34 | 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 |
| 35 | Thermoacoustic Instabilities in a Ducted Premixed Flame: Reduced-Order Models and Control. Combustion Science and Technology, 2013, 185, 920-942. | 2.3 | 7 |
| 36 | Model order reduction of hyperbolic systems using method of characteristics and differential transform. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 785-790. | 0.4 | 0 |

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|---|---------|-----|-----------|
| 37 | Control and Optimization Challenges in Liquid-Loaded Shale Gas Wells. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 227-232. | 0.4 | 2 |
| 38 | Method of characteristics based model reduction for control of a counter-current reactor using approximate dynamic programming. , 2013, , . | | 1 |
| 39 | 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 |
| 40 | The Role of Homogeneous Chemistry during Ignition of Propane Combustion in Pt-Catalyzed Microburners. International Journal of Spray and Combustion Dynamics, 2012, 4, 155-174. | 1.0 | 10 |
| 41 | Microkinetic model for NO–CO reaction: Model reduction. International Journal of Chemical Kinetics, 2012, 44, 577-585. | 1.6 | 11 |
| 42 | Modeling the effect of flow mal-distribution on the performance of a catalytic converter. Chemical Engineering Science, 2012, 71, 310-320. | 3.8 | 41 |
| 43 | A review on microcombustion: Fundamentals, devices and applications. Progress in Energy and Combustion Science, 2012, 38, 321-359. | 31.2 | 307 |
| 44 | Approximate Dynamic Programming based control for Water Gas Shift reactor. Computer Aided Chemical Engineering, 2012, , 340-344. | 0.5 | 3 |
| 45 | Numerical Analysis of Fractal Catalyst Structuring in Microreactors. Industrial &amp; Engineering Chemistry Research, 2011, 50, 12925-12932. | 3.7 | 8 |
| 46 | An analysis of drifts and nonlinearities in electrochemical impedance spectra. Electrochimica Acta, 2011, 56, 7467-7475. | 5.2 | 13 |
| 47 | Approximate dynamic programming–based control of distributed parameter systems. Asia-Pacific Journal of Chemical Engineering, 2011, 6, 452-459. | 1.5 | 8 |
| 48 | Propane combustion in non-adiabatic microreactors: 1. Comparison of channel and posted catalytic inserts. Chemical Engineering Science, 2011, 66, 1123-1131. | 3.8 | 15 |
| 49 | Propane combustion in non-adiabatic microreactors: 2. Flow configuration in posted microreactors. Chemical Engineering Science, 2011, 66, 3732-3741. | 3.8 | 10 |
| 50 | Incorporating delayed and infrequent measurements in Extended Kalman Filter based nonlinear state estimation. Journal of Process Control, 2011, 21, 119-129. | 3.3 | 110 |
| 51 | Optimal design of periodic test input signals for multivariable impulse response models. Optimal Control Applications and Methods, 2010, 31, 451-469. | 2.1 | 3 |
| 52 | Simulation of hydrogen and hydrogen-assisted propane ignition in pt catalyzed microchannel. Combustion and Flame, 2010, 157, 2051-2062. | 5.2 | 28 |
| 53 | Ignition strategies for fuel mixtures in catalytic microburners. Combustion Theory and Modelling, 2010, 14, 23-40. | 1.9 | 7 |
| 54 | Methane steam reforming at microscales: Operation strategies for variable power output at millisecond contact times. AICHE Journal, 2009, 55, 180-191. | 3.6 | 56 |

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| 55 | Comparison of ignition strategies for catalytic microburners. Proceedings of the Combustion Institute, 2009, 32, 3027-3034. | 3.9 | 22 |
| 56 | Millisecond Production of Hydrogen from Alternative, High Hydrogen Density Fuels in a Cocurrent Multifunctional Microreactor. Industrial &amp; Engineering Chemistry Research, 2009, 48, 1749-1760. | 3.7 | 40 |
| 57 | Stability and performance of catalytic microreactors: Simulations of propane catalytic combustion on Pt. Chemical Engineering Science, 2008, 63, 1098-1116. | 3.8 | 137 |
| 58 | Extending the region of stable homogeneous micro-combustion through forced unsteady operation. Proceedings of the Combustion Institute, 2007, 31, 3293-3300. | 3.9 | 45 |
| 59 | Optimal reactor dimensions for homogeneous combustion in small channels. Catalysis Today, 2007, 120, 96-106. | 4.4 | 99 |
| 60 | Hierarchical multiscale model-based design of experiments, catalysts, and reactors for fuel processing. Computers and Chemical Engineering, 2006, 30, 1712-1724. | 3.8 | 67 |
| 61 | 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 |
| 62 | Hydrogen generation in a reverse-flow microreactor: 1. Model formulation and scaling. AICHE Journal, 2005, 51, 2254-2264. | 3.6 | 34 |
| 63 | Hydrogen generation in a reverse-flow microreactor: 2. Simulation and analysis. AICHE Journal, 2005, 51, 2265-2272. | 3.6 | 12 |
| 64 | 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 |
| 65 | Operability Analysis and Design of a Reverse-Flow Microreactor for Hydrogen Generation via Methane Partial Oxidation. Industrial &amp; Engineering Chemistry Research, 2005, 44, 8323-8333. | 3.7 | 13 |
| 66 | 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 |
| 67 | Study of propane/air catalytic combustion in heat recirculating U-bend and spiral microcombustors. Journal of Flow Chemistry, 0, , 1. | 1.9 | 0 |
| 68 | Modeling Growth Kinetics of Methane Hydrate in Stirred Tank Batch Reactors. ACS Engineering Au, 0, , . | 5.1 | 10 |
| 69 | A compact heat recirculating spiral geometry for thermal integration for Sabatier reaction in microreactor. AICHE Journal, 0, , . | 3.6 | 1 |