

Shinichi Ookawara

List of Publications by Year in descending order

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124
papers

4,223
citations

81839

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124
all docs

124
docs citations

124
times ranked

3657
citing authors

#	ARTICLE	IF	CITATIONS
1	Performance enhancement of concentrated photovoltaic systems using a microchannel heat sink with nanofluids. <i>Energy Conversion and Management</i> , 2016, 119, 289-303.	4.4	171
2	Comparison of solar TiO ₂ photocatalysis and solar photo-Fenton for treatment of pesticides industry wastewater: Operational conditions, kinetics, and costs. <i>Journal of Water Process Engineering</i> , 2015, 8, 55-63.	2.6	165
3	Degradation of four pharmaceuticals by solar photo-Fenton process: Kinetics and costs estimation. <i>Journal of Environmental Chemical Engineering</i> , 2015, 3, 46-51.	3.3	157
4	Enhancement of photocatalytic activity of TiO ₂ by immobilization on activated carbon for degradation of pharmaceuticals. <i>Journal of Environmental Chemical Engineering</i> , 2016, 4, 1929-1937.	3.3	141
5	Performance study and analysis of an inclined concentrated photovoltaic-phase change material system. <i>Solar Energy</i> , 2017, 150, 229-245.	2.9	114
6	Improved WO ₃ photocatalytic efficiency using ZrO ₂ and Ru for the degradation of carbofuran and ampicillin. <i>Journal of Hazardous Materials</i> , 2016, 302, 225-231.	6.5	106
7	Enhancing the performance of concentrator photovoltaic systems using Nanoparticle-phase change material heat sinks. <i>Energy Conversion and Management</i> , 2019, 179, 229-242.	4.4	98
8	Performance of a PV module integrated with standalone building in hot arid areas as enhanced by surface cooling and cleaning. <i>Energy and Buildings</i> , 2015, 88, 100-109.	3.1	96
9	Continuous biohydrogen production from starch wastewater via sequential dark-photo fermentation with emphasize on maghemite nanoparticles. <i>Journal of Industrial and Engineering Chemistry</i> , 2015, 21, 500-506.	2.9	94
10	Feasibility study on concentration of slurry and classification of contained particles by microchannel. <i>Chemical Engineering Journal</i> , 2004, 101, 171-178.	6.6	89
11	Earth-Air Heat Exchanger thermal performance in Egyptian conditions: Experimental results, mathematical model, and Computational Fluid Dynamics simulation. <i>Energy Conversion and Management</i> , 2016, 122, 25-38.	4.4	89
12	Adaptive reference voltage-based MPPT technique for PV applications. <i>IET Renewable Power Generation</i> , 2017, 11, 715-722.	1.7	78
13	Thermal management of concentrator photovoltaic systems using two-phase flow boiling in double-layer microchannel heat sinks. <i>Applied Energy</i> , 2019, 241, 404-419.	5.1	77
14	Thermal management of concentrator photovoltaic systems using new configurations of phase change material heat sinks. <i>Solar Energy</i> , 2019, 183, 632-652.	2.9	75
15	Solar chimney optimization for enhancing thermal comfort in Egypt: An experimental and numerical study. <i>Solar Energy</i> , 2019, 180, 524-536.	2.9	74
16	Analysis and simulation of concentrating photovoltaic systems with a microchannel heat sink. <i>Solar Energy</i> , 2016, 136, 35-48.	2.9	73
17	Numerical study on development of particle concentration profiles in a curved microchannel. <i>Chemical Engineering Science</i> , 2006, 61, 3714-3724.	1.9	69
18	Thermal and structure analyses of high concentrator solar cell under confined jet impingement cooling. <i>Energy Conversion and Management</i> , 2018, 176, 39-54.	4.4	69

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19	Uniform cooling for concentrator photovoltaic cells and electronic chips by forced convective boiling in 3D-printed monolithic double-layer microchannel heat sink. <i>Energy Conversion and Management</i> , 2018, 166, 356-371.	4.4	69
20	Performance evaluation of PV panels/wind turbines hybrid system for green hydrogen generation and storage: Energy, exergy, economic, and enviroeconomic. <i>Energy Conversion and Management</i> , 2022, 267, 115870.	4.4	69
21	Adsorption working pairs for adsorption cooling chillers: A review based on adsorption capacity and environmental impact. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 50, 445-456.	8.2	68
22	Performance enhancement of twisted-bladed Savonius vertical axis wind turbines. <i>Energy Conversion and Management</i> , 2020, 209, 112673.	4.4	67
23	Experimental, analytical, and numerical investigation into the feasibility of integrating a passive Trombe wall into a single room. <i>Applied Thermal Engineering</i> , 2019, 154, 751-768.	3.0	66
24	Numerical analyses of hybrid jet impingement/microchannel cooling device for thermal management of high concentrator triple-junction solar cell. <i>Applied Energy</i> , 2019, 253, 113538.	5.1	63
25	Thermal management of electronic devices and concentrator photovoltaic systems using phase change material heat sinks: Experimental investigations. <i>Renewable Energy</i> , 2019, 141, 322-339.	4.3	63
26	Multiphase photocatalytic microreactors. <i>Chemical Engineering Science</i> , 2017, 169, 67-77.	1.9	61
27	Immobilization of S-TiO ₂ on reusable aluminum plates by polysiloxane for photocatalytic degradation of 2,4-dichlorophenol in water. <i>Journal of Water Process Engineering</i> , 2018, 26, 329-335.	2.6	60
28	The Influence of Multi-walled Carbon Nanotubes Additives into Non-edible Biodiesel-diesel Fuel Blend on Diesel Engine Performance and Emissions. <i>Energy Procedia</i> , 2016, 100, 166-172.	1.8	59
29	A High-Fidelity CFD Model of Methane Steam Reforming in a Packed Bed Reactor. <i>Journal of Chemical Engineering of Japan</i> , 2009, 42, S73-S78.	0.3	57
30	Performance evaluation of a new design of concentrator photovoltaic and solar thermoelectric generator hybrid system. <i>Energy Conversion and Management</i> , 2019, 195, 1382-1401.	4.4	54
31	Solar photocatalytic degradation of phenol by TiO ₂ /AC prepared by temperature impregnation method. <i>Desalination and Water Treatment</i> , 2016, 57, 835-844.	1.0	50
32	Solar chimney combined with earth to-air heat exchanger for passive cooling of residential buildings in hot areas. <i>Solar Energy</i> , 2020, 206, 145-162.	2.9	47
33	Parametric study and optimization of a solar chimney passive ventilation system coupled with an earth-to-air heat exchanger. <i>Sustainable Energy Technologies and Assessments</i> , 2018, 30, 263-278.	1.7	46
34	An experimental study of the performance of the solar cell with heat sink cooling system. <i>Energy Procedia</i> , 2019, 162, 127-135.	1.8	46
35	Hybrid sorption-vapor compression cooling systems: A comprehensive overview. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 143, 110912.	8.2	46
36	Achieving standard natural ventilation rate of dwellings in a hot-arid climate using solar chimney. <i>Energy and Buildings</i> , 2016, 133, 360-370.	3.1	43

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37	Efficient fuel utilization by enhancing the under-rib mass transport using new serpentine flow field designs of direct methanol fuel cells. <i>Energy Conversion and Management</i> , 2017, 144, 88-103.	4.4	43
38	Photocatalytic degradation of trimethoprim using S-TiO ₂ and Ru/WO ₃ /ZrO ₂ immobilized on reusable fixed plates. <i>Journal of Water Process Engineering</i> , 2020, 33, 101023.	2.6	42
39	Temperature uniformity enhancement of densely packed high concentrator photovoltaic module using four quadrants microchannel heat sink. <i>Solar Energy</i> , 2020, 202, 446-464.	2.9	41
40	Bioethanol production from paperboard mill sludge using acid-catalyzed bio-derived choline acetate ionic liquid pretreatment followed by fermentation process. <i>Energy Conversion and Management</i> , 2017, 145, 255-264.	4.4	40
41	Thermal management of high concentrator solar cell using new designs of stepwise varying width microchannel cooling scheme. <i>Applied Thermal Engineering</i> , 2020, 172, 115124.	3.0	39
42	Energy management of standalone cascaded adsorption-compression refrigeration system using hybrid biomass-solar-wind energies. <i>Energy Conversion and Management</i> , 2022, 258, 115387.	4.4	39
43	Performance evaluation of a novel vertical axis wind turbine using twisted blades in multi-stage Savonius rotors. <i>Energy Conversion and Management</i> , 2021, 235, 114013.	4.4	38
44	Investigation of optimum conditions and costs estimation for degradation of phenol by solar photo-Fenton process. <i>Applied Water Science</i> , 2017, 7, 375-382.	2.8	37
45	Effect of compression ratio on performance, combustion and emissions characteristics of compression ignition engine fueled with jojoba methyl ester. <i>Renewable Energy</i> , 2019, 141, 632-645.	4.3	35
46	Energy, exergy, economic and environmental (4E) assessment of hybrid solar system powering adsorption-parallel/series ORC multigeneration system. <i>Chemical Engineering Research and Design</i> , 2022, 164, 761-780.	2.7	35
47	Optimization of stepwise varying width microchannel heat sink for high heat flux applications. <i>Case Studies in Thermal Engineering</i> , 2020, 18, 100587.	2.8	33
48	The impact of Novel Process Windows on the Claisen rearrangement. <i>Tetrahedron</i> , 2013, 69, 2885-2890.	1.0	32
49	Performance, limits, and thermal stress analysis of high concentrator multijunction solar cell under passive cooling conditions. <i>Applied Thermal Engineering</i> , 2020, 164, 114497.	3.0	31
50	Concentrator photovoltaic thermal management using a new design of double-layer microchannel heat sink. <i>Solar Energy</i> , 2021, 220, 552-570.	2.9	31
51	Energy/exergy analysis of solar driven mechanical vapor compression desalination system with nano-filtration pretreatment. <i>Desalination</i> , 2021, 509, 115078.	4.0	30
52	Evaluation of transparent acrylic stepped solar still equipped with internal and external reflectors and copper fins. <i>Thermal Science and Engineering Progress</i> , 2020, 18, 100518.	1.3	29
53	Visible-light-driven photocatalytic disinfection of raw surface waters (300–5000 CFU/mL) using reusable coated Ru/WO ₃ /ZrO ₂ . <i>Journal of Hazardous Materials</i> , 2021, 402, 123514.	6.5	29
54	Thermal analysis of high concentrator photovoltaic module using convergent-divergent microchannel heat sink design. <i>Applied Thermal Engineering</i> , 2021, 183, 116201.	3.0	29

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55	Performance and economic analysis of solar-powered adsorption-based hybrid cooling systems. Energy Conversion and Management, 2021, 238, 114134.	4.4	29
56	Integrated adsorption-based multigeneration systems: A critical review and future trends. International Journal of Refrigeration, 2020, 116, 129-145.	1.8	28
57	Enhancing under-rib mass transport in proton exchange membrane fuel cells using new serpentine flow field designs. International Journal of Hydrogen Energy, 2019, 44, 30644-30662.	3.8	27
58	Potential application of cascade adsorption-vapor compression refrigeration system powered by photovoltaic/thermal collectors. Applied Thermal Engineering, 2022, 207, 118075.	3.0	24
59	Renewable energy-based cascade adsorption-compression refrigeration system: Energy, exergy, exergoeconomic and enviroeconomic perspectives. Energy, 2022, 253, 124127.	4.5	24
60	Performance and Sizing of Solar Driven dc Motor Vapor Compression Refrigerator with Thermal Storage in Hot Arid Remote Areas. Energy Procedia, 2015, 70, 634-643.	1.8	23
61	A study of wavy falling film flow on micro-baffled plate. Chemical Engineering Science, 2016, 149, 104-116.	1.9	23
62	Low-cost polymeric photocatalytic microreactors: Catalyst deposition and performance for phenol degradation. Journal of Environmental Chemical Engineering, 2014, 2, 1487-1494.	3.3	22
63	A Fundamental Approach to Bubble Column Scale-Up Based on Quality of Mixedness.. Journal of Chemical Engineering of Japan, 1999, 32, 431-439.	0.3	22
64	Predicting the onset of consequent stenotic regions in carotid arteries using computational fluid dynamics. Physics of Fluids, 2021, 33, .	1.6	21
65	Performance evaluation of concentrator photovoltaic systems integrated with combined passive cooling techniques. Solar Energy, 2021, 228, 447-463.	2.9	19
66	Quasi-direct numerical simulation of lift force-induced particle separation in a curved microchannel by use of a macroscopic particle model. Chemical Engineering Science, 2007, 62, 2454-2465.	1.9	18
67	Assessment of wind turbine transient overvoltages when struck by lightning: experimental and analytical study. IET Renewable Power Generation, 2019, 13, 1360-1368.	1.7	18
68	A 3d model of the effect of using heat spreader on the performance of photovoltaic panel (PV). Mathematics and Computers in Simulation, 2020, 167, 78-91.	2.4	18
69	Photo-Fenton Degradation of Carbofuran in Helical Tube Microreactor and Kinetic Modeling. Industrial & Engineering Chemistry Research, 2020, 59, 3811-3819.	1.8	18
70	Unified Entry Length Correlation for Newtonian, Power Law and Bingham Fluids in Laminar Pipe Flow at Low Reynolds Number.. Journal of Chemical Engineering of Japan, 2000, 33, 675-678.	0.3	16
71	Characterization of microseparator/classifier with a simple arc microchannel. AIChE Journal, 2009, 55, 24-34.	1.8	16
72	Environmental and Economic Aspects of Hydrogen and Methane Production from Starch Wastewater Industry. Journal of Water and Environment Technology, 2013, 11, 463-475.	0.3	16

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73	Flow boiling in a four-compartment heat sink for high-heat flux cooling: A parametric study. <i>Energy Conversion and Management</i> , 2021, 230, 113778.	4.4	16
74	A combined model for the prediction of the permeation flux during the cross-flow ultrafiltration of a whey suspension. <i>Journal of Membrane Science</i> , 2010, 361, 71-77.	4.1	15
75	Mathematical modeling of bio-hydrogen production from starch wastewater via up-flow anaerobic staged reactor. <i>Desalination and Water Treatment</i> , 2015, 54, 50-58.	1.0	14
76	CFD modelling of mass and heat dispersion in sphere fixed bed with porosity-dependent segmented-continuum approaches. <i>Chemical Engineering Research and Design</i> , 2019, 141, 93-114.	2.7	14
77	Thermal management of concentrator photovoltaic systems using nano-enhanced phase change materials-based heat sink. <i>International Journal of Energy Research</i> , 2020, 44, 7713-7733.	2.2	14
78	Kinetics and physical analyses for pyrolyzed Egyptian agricultural and woody biomasses: effect of microwave drying. <i>Biomass Conversion and Biorefinery</i> , 2021, 11, 2855-2868.	2.9	14
79	Time-Dependent Mixing Behaviors in Lower and Upper Zones of Bubble Column.. <i>Journal of Chemical Engineering of Japan</i> , 2000, 33, 761-767.	0.3	14
80	Performance assessment of photovoltaic/thermal (PVT) hybrid adsorption-vapor compression refrigeration system. <i>Journal of Energy Systems</i> , 2022, 6, 209-220.	0.8	14
81	Experimental study of the performance of concentrator photovoltaic/thermoelectric generator system integrated with a new <scp>3D</scp> printed microchannel heat sink. <i>International Journal of Energy Research</i> , 2021, 45, 7741-7763.	2.2	13
82	Blood viscometer with vacuum glass suction tube and needle.. <i>Journal of Chemical Engineering of Japan</i> , 1991, 24, 215-220.	0.3	12
83	Intensification of Photochemical Wastewater Decolorization Process Using Microreactors. <i>Journal of Chemical Engineering of Japan</i> , 2014, 47, 136-140.	0.3	12
84	Process intensification of particle separation by lift force in arc microchannel with bifurcation. <i>Chemical Engineering and Processing: Process Intensification</i> , 2010, 49, 697-703.	1.8	11
85	Double-layered catalytic wall-plate microreactor for process intensification of dry reforming of methane: Reaction activity improvement and coking suppression. <i>Chemical Engineering and Processing: Process Intensification</i> , 2021, 164, 108406.	1.8	11
86	Performance enhancement of the concentrated photovoltaic using different phase change material configurations. <i>Energy Procedia</i> , 2017, 141, 61-65.	1.8	10
87	Experimental study of using system of flat heat pipe-phase change material inclusion heat sink for thermal regulation of simulated PV. <i>Experimental Heat Transfer</i> , 2023, 36, 648-664.	2.3	10
88	Influence of encapsulation materials on the thermal performance of concentrator photovoltaic cells. <i>Case Studies in Thermal Engineering</i> , 2021, 26, 101135.	2.8	9
89	Flow Properties of Newtonian and Non-Newtonian Fluid Downstream of Stenosis.. <i>Journal of Chemical Engineering of Japan</i> , 2000, 33, 582-590.	0.3	8
90	Quality of Mixedness Profiles Based on Spatial Distribution of Local Mass Transfer Coefficients in a Bubble Column. <i>Canadian Journal of Chemical Engineering</i> , 2003, 81, 597-603.	0.9	8

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91	Numerical Analyses of High Concentrator Triple-Junction Solar Cell under Jet Impingement Cooling. Energy Procedia, 2018, 152, 1051-1056.	1.8	8
92	Analysis of the effect of guidewire position on stenosis diagnosis using computational fluid dynamics. Computers in Biology and Medicine, 2020, 121, 103777.	3.9	8
93	Effect of guidewire insertion in fractional flow reserve procedure for real geometry using computational fluid dynamics. BioMedical Engineering OnLine, 2021, 20, 95.	1.3	8
94	Process Intensification of Photocatalytic <i>p</i>-Anisaldehyde Synthesis by Using Mini Batch Reactor and UV-LED. Journal of Chemical Engineering of Japan, 2016, 49, 130-135.	0.3	7
95	Micro-structured packed bed reactors for solar photocatalysis: impacts of packing size and material on light harnessing. Photochemical and Photobiological Sciences, 2019, 18, 577-582.	1.6	7
96	Non-Newtonian Flow Characteristics of Blood in the Shear Rate Range of 100 - 10,000 s ⁻¹ . Journal of Chemical Engineering of Japan, 1994, 27, 610-615.	0.3	6
97	Steady State Permeate Flux Estimation in Cross-Flow Ultrafiltration of Protein Solution. Separation Science and Technology, 2014, 49, 1469-1478.	1.3	6
98	A Numerical Study on Cooling-Solidification Process of Urea Particles in Prilling Tower. Journal of Chemical Engineering of Japan, 2014, 47, 628-634.	0.3	6
99	A Model for Transport Phenomena in a Cross-Flow Ultrafiltration Module with Microchannels. Membranes, 2011, 1, 13-24.	1.4	5
100	A New Model for Estimation of Just-Suspension Speed Based on Lift Force for Solid-Liquid Suspension in a Stirred Tank. Journal of Chemical Engineering of Japan, 2016, 49, 737-746.	0.3	5
101	The Influence of Channel Depth on the Performance of a Micro-Separator/Classifier. Kagaku Kogaku Ronbunshu, 2004, 30, 135-141.	0.1	5
102	Stability of Interface between Two Liquids in T-shape Confluence of Microchannels. Kagaku Kogaku Ronbunshu, 2004, 30, 148-153.	0.1	5
103	Drop Size Distribution in Liquid-Liquid Mixing. Journal of Chemical Engineering of Japan, 2003, 36, 940-945.	0.3	4
104	Influence of Varying the Stage Aspect Ratio on the Performance of Multi-Stage Savonius Wind Rotors. Journal of Energy Resources Technology, Transactions of the ASME, 2022, 144, .	1.4	4
105	Shear Thickening Flow Characteristics Model of Suspensions.. Kagaku Kogaku Ronbunshu, 2000, 26, 366-373.	0.1	3
106	A Numerical Study of the Influence of Particle Density on Lift Force-Induced Separation in a Micro-Separator/Classifier by a Macroscopic Particle Model. Journal of Chemical Engineering of Japan, 2007, 40, 986-992.	0.3	3
107	Effect of diffuser configuration on the flow field pattern inside wind concentrator. , 2013, , .		3
108	Performance enhancement of direct methanol fuel cell using multi-zone narrow flow fields. International Journal of Energy Research, 2019, 43, 8257.	2.2	3

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109	Numerical study on porosity distribution and hydrodynamics of packed bed in narrow square channels. <i>Chemical Engineering and Processing: Process Intensification</i> , 2020, 151, 107905.	1.8	3
110	The Effect of Superficial Gas Velocity and Aerated Liquid Height on the Spatial Distribution of Local Liquid-Phase Axial Dispersion Coefficients in a Bubble Column. <i>Journal of Chemical Engineering of Japan</i> , 2005, 38, 1-11.	0.3	3
111	Instantaneous Successive Particle Collisions with an Impeller in a Stirred Tank. <i>Journal of Chemical Engineering of Japan</i> , 2007, 40, 12-16.	0.3	3
112	Particle Collision Frequencies with Impeller and Wall in a Stirred Tank. <i>Kagaku Kogaku Ronbunshu</i> , 2003, 29, 685-691.	0.1	3
113	Mixing Spectrum of an Impeller Based on Whole Mixing Capacity. <i>Journal of Chemical Engineering of Japan</i> , 2009, 42, 861-867.	0.3	3
114	Visualization and VOF Modeling of Large Bubble Rising in Narrow Fixed Bed. <i>Journal of Chemical Engineering of Japan</i> , 2010, 43, 17-22.	0.3	2
115	A Numerical Study on Interparticle Collisions in a Microseparator/Classifier by a Macroscopic Particle Model. <i>Journal of Chemical Engineering of Japan</i> , 2010, 43, 56-62.	0.3	1
116	Photocatalytic Synthesis of <i>p</i> -Anisaldehyde in a Mini Slurry-Bubble Reactor under Solar Light Irradiation. <i>Canadian Journal of Chemical Engineering</i> , 2020, 98, 119-126.	0.9	1
117	Characteristics of coconut protein separation process by means of membrane ultrafiltration. <i>Journal of Food Process Engineering</i> , 2020, 43, e13363.	1.5	1
118	Numerical and experimental investigation on air distributor design of fluidized bed reactor of sawdust pyrolysis. <i>Energy</i> , 2022, 239, 122179.	4.5	1
119	Applicability of the Dilatancy Model to Suspensions in Shear-thinning Medium. <i>Kagaku Kogaku Ronbunshu</i> , 2003, 29, 714-717.	0.1	1
120	Theoretical Study on Particle Size Distribution and Suspension Viscosity.. <i>Kagaku Kogaku Ronbunshu</i> , 2002, 28, 322-329.	0.1	1
121	Machine Learning in Porous Materials: SVM-Based Characterization and CGAN-Driven Materials Discovery and Design. <i>ACS Symposium Series</i> , 0, , 181-209.	0.5	1
122	Estimation of Red Cell Deformability Based on Flow Curve of Whole Blood in the Higher Shear Rate Range.. <i>Kagaku Kogaku Ronbunshu</i> , 2001, 27, 228-235.	0.1	0
123	A New Graphical Method for Calculation of Mass Transfer Time in a Deep Bubble Bed. <i>Journal of Chemical Engineering of Japan</i> , 2006, 39, 7-13.	0.3	0
124	Numerical study on mass transfer in a falling film on structured plates with micro-baffles. <i>Chemical Engineering and Processing: Process Intensification</i> , 2022, , 108903.	1.8	0