Masaru Nakaiwa

List of Publications by Year
in descending order

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102	2,177	201385	253896
papers	citations	27	43
		h-index	g-index

103	103	103	1407
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Internally Heat-Integrated Distillation Columns: A Review. Chemical Engineering Research and Design, 2003, 81, 162-177.	2.7	233
2	Energy saving in multicomponent separation using an internally heat-integrated distillation column (HIDiC). Applied Thermal Engineering, 2006, 26, 1362-1368.	3.0	129
3	Operation of a bench-scale ideal heat integrated distillation column (HIDiC): an experimental study. Computers and Chemical Engineering, 2000, 24, 495-499.	2.0	98
4	Two-Parameter Stochastic Resonance in a Model of the Photosensitive Belousovâ^'Zhabotinsky Reaction in a Flow System. Journal of Physical Chemistry A, 1998, 102, 4537-4542.	1.1	74
5	Porous properties of carbon gel microspheres as adsorbents for gas separation. Carbon, 2004, 42, 1671-1676.	5.4	65
6	Preparation of highly mesoporous carbon membranes via a solâ€“gel process using resorcinol and formaldehyde. Carbon, 2008, 46, 1031-1036.	5.4	56
7	Operating an ideal heat integrated distillation column with different control algorithms. Computers and Chemical Engineering, 1998, 22, S389-S393.	2.0	55
8	Adsorption of phenol and reactive dyes from aqueous solution on carbon cryogel microspheres with controlled porous structure. Microporous and Mesoporous Materials, 2006, 96, 191-196.	2.2	55
9	Remarkable Antiagglomeration Effect of a Yeast Biosurfactant, Diacylmannosylerythritol, on Ice-Water Slurry for Cold Thermal Storage. Biotechnology Progress, 2001, 17, 362-365.	1.3	54
10	Simulation of a porous ceramic membrane reactor for hydrogen production. International Journal of Hydrogen Energy, 2005, 30, 1071-1079.	3.8	53
11	Parameter analysis and optimization of ideal heat integrated distillation columns. Computers and Chemical Engineering, 2001, 25, 737-744.	2.0	48
12	Reactive distillation design with considerations of heats of reaction. AICHE Journal, 2006, 52, 2518-2534.	1.8	47
13	Degradation of aqueous phenol by simultaneous use of ozone with silica-gel and zeolite. Chemical Engineering and Processing: Process Intensification, 2007, 46, 513-519.	1.8	45
14	A comparative simulation study of methane steam reforming in a porous ceramic membrane reactor using nitrogen and steam as sweep gases. International Journal of Hydrogen Energy, 2008, 33, 685-692.	3.8	44
15	Evaluation of thermoporometry for characterization of mesoporous materials. Journal of Colloid and Interface Science, 2005, 284, 614-620.	5.0	43
16	Towards further internal heat integration in design of reactive distillation columnsâ€”part I: The design principle. Chemical Engineering Science, 2005, 60, 4901-4914.	1.9	42
17	Energy savings in heat-integrated distillation columns. Energy, 1997, 22, 621-625.	4.5	41
18	Bromomalonic acid as a source of photochemically produced Brâ^' ion in the Ru(bpy)32+-catalyzed Belousov-Zhabotinsky reaction. Chemical Physics Letters, 1996, 259, 219-224.	1.2	40

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19	Evaluation of pore size distribution in boundary region of micropore and mesopore using gas adsorption method. Journal of Colloid and Interface Science, 2003, 262, 116-125.	5.0	39
20	Evaluation of an energy supply system with air separation. Energy Conversion and Management, 1996, 37, 295-301.	4.4	38
21	A new configuration of ideal heat integrated distillation columns (HIDiC). Computers and Chemical Engineering, 2000, 24, 239-245.	2.0	37
22	Towards further internal heat integration in design of reactive distillation columnsâ€"Part II. The process dynamics and operation. Chemical Engineering Science, 2006, 61, 5377-5392.	1.9	37
23	Recent Advances in Internally Heat-Integrated Distillation Columns (HIDiC) for Sustainable Development. Journal of Chemical Engineering of Japan, 2012, 45, 363-372.	0.3	35
24	Modeling and design method for internal heatintegrated packed distillation column.. Journal of Chemical Engineering of Japan, 1988, 21, 595-601.	0.3	30
25	A numerical consideration on dynamic modeling and control of ideal heat integrated distillation columns.. Journal of Chemical Engineering of Japan, 1996, 29, 344-351.	0.3	29
26	Potential energy savings in ideal heat-integrated distillation column. Applied Thermal Engineering, 1998, 18, 1077-1087.	3.0	28
27	Pinch analysis for bioethanol production process from lignocellulosic biomass. Applied Thermal Engineering, 2011, 31, 3332-3336.	3.0	28
28	Process Systems Engineering. The Concept of an Ideal Heat Integrated Distillation Column(HIDiC) and its Fundamental Properties.. Kagaku Kogaku Ronbunshu, 1996, 22, 985-990.	0.1	26
29	The effects of different synthetic conditions on the porous properties of carbon cryogel microspheres. Carbon, 2005, 43, 1231-1238.	5.4	26
30	Performance of an Internally Heat-Integrated Distillation Column (HIDiC) in Separation of Ternary Mixtures. Journal of Chemical Engineering of Japan, 2006, 39, 417-425.	0.3	26
31	Synthesis of submillimeter-thick films of surfactant templated mesoporous silica. Microporous and Mesoporous Materials, 2001, 43, 181-189.	2.2	25
32	Energy Saving Characteristics of the Internally Heat Integrated Distillation Column (HIDiC) Pilot Plant for Multicomponent Petroleum Distillation. Journal of Chemical Engineering of Japan, 2008, 41, 771-778.	0.3	23
33	Chemical waves in mesoporous media. Physica D: Nonlinear Phenomena, 1995, 84, 103-111.	1.3	22
34	Dynamics of ideal heat integrated distillation columns.. Journal of Chemical Engineering of Japan, 1996, 29, 656-661.	0.3	21
35	Approximate design of fully thermally coupled distillation columns. Korean Journal of Chemical Engineering, 2002, 19, 383-390.	1.2	19
36	Optimal design and operation of methane steam reforming in a porous ceramic membrane reactor for hydrogen production. Chemical Engineering Science, 2007, 62, 5627-5631.	1.9	19

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37	Brownian Dynamics Simulation Study of Self-Diffusion of a Charged Particle in Swollen Counter-Charged Hydrogel Modeled as Cubic Lattice.. Journal of Chemical Engineering of Japan, 2002, 35, 640-648.	0.3	18
38	Interpretation of structure formation during the sol-gel transition of a resorcinol-formaldehyde solution by population balance. Journal of Colloid and Interface Science, 2003, 264, 532-537.	5.0	18
39	Evaluation of porous structure of resorcinol-formaldehyde hydrogels by thermoporometry. Thermochimica Acta, 2005, 439, 74-79.	1.2	17
40	Simple and rapid synthesis of mesoporous silica by vacuum solvent evaporation. AICHE Journal, 2006, 52, 1275-1277.	1.8	17
41	Degradation of Phenol by Simultaneous Use of Gas-Phase Corona Discharge and Catalyst-Supported Mesoporous Carbon Gels. Industrial & Engineering Chemistry Research, 2006, 45, 2897-2900.	1.8	15
42	Synthesis of ordered mesoporous carbon thin films at various temperatures in vapor infiltration method. Carbon, 2008, 46, 1358-1360.	5.4	15
43	Feasibility Study of the Application of Membrane Separation in CO2 Removal from Flue Gases.. Kagaku Kogaku Ronbunshu, 1993, 19, 714-721.	0.1	14
44	Design procedure for a plate-to-plate heat-integrated distillation column.. Kagaku Kogaku Ronbunshu, 1986, 12, 535-541.	0.1	13
45	Evaluating control structures for a general heat integrated distillation column (general HIDiC). Computers and Chemical Engineering, 1999, 23, S851-S854.	2.0	13
46	Interpreting Design of an Ideal Heat-Integrated Distillation Column through Exergy Analysis. Journal of Chemical Engineering of Japan, 2006, 39, 963-970.	0.3	13
47	Design of a fully thermally coupled distillation column for hexane process using a semi-rigorous model. Korean Journal of Chemical Engineering, 2004, 21, 1098-1102.	1.2	12
48	The Influences of Pressure Distribution on an Ideal Heat-Integrated Distillation Column (HIDiC). Journal of Chemical Engineering of Japan, 2006, 39, 652-660.	0.3	12
49	A case study of HIDiC design and energy saving. Computers and Chemical Engineering, 1999, 23, S855-S858.	2.0	11
50	Effect of Drying Method on Gas Adsorption Characteristics of Carbon Gel Microspheres. Drying Technology, 2005, 23, 2119-2129.	1.7	10
51	Synthesis of monodisperse carbon beads with developed mesoporosity. AICHE Journal, 2007, 53, 746-749.	1.8	10
52	Separation of Binary Azeotrope Mixture via Pressure-Swing Distillation with Heat Integration. Journal of Chemical Engineering of Japan, 2011, 44, 969-975.	0.3	10
53	Evaluation of a power generation system that integrates multiple Kalina cycles and absorption heat pumps. Case Studies in Thermal Engineering, 2021, 28, 101363.	2.8	10
54	Identification and Internal Model Control of an Ideal Heat Integrated Distillation Column (HIDiC).. Journal of Chemical Engineering of Japan, 1998, 31, 159-164.	0.3	10

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55	Self-sustained pH oscillations in a compartmentalized enzyme reactor system. Biophysical Chemistry, 1997, 67, 51-57.	1.5	9
56	Development on a coaxial heat integrated distillation column (HIDiC). Korean Journal of Chemical Engineering, 2000, 17, 593-596.	1.2	9
57	Graphical Synthesis of an Internally Heat-Integrated Distillation Column. Journal of Chemical Engineering of Japan, 2006, 39, 703-708.	0.3	9
58	Choosing More Controllable Configuration for an Internally Heat-Integrated Distillation Column. Journal of Chemical Engineering of Japan, 2006, 39, 818-825.	0.3	9
59	Noise-induced convergence of the low flow rate chaos in the Belousov-Zhabotinsky reaction. Physica D: Nonlinear Phenomena, 1995, 84, 310-317.	1.3	8
60	Possibility of Energy Saving in the Ideal Heat Integrated Distillation Column(HIDiC).. Kagaku Kogaku Ronbunshu, 1997, 23, 28-36.	0.1	8
61	Reaction Rate of the Production of Dimethyl Carbonate Directly from the Supercritical CO2 and Methanol. Journal of Chemical Engineering of Japan, 2005, 38, 1020-1024.	0.3	8
62	Preparation of Mesoporous Silicate Thick Films by Electrophoretic Deposition and Their Adsorption Properties of Water Vapor. Key Engineering Materials, 2006, 314, 147-152.	0.4	8
63	Synthesis of ultrafine carbon cryogel microspheres using a homogenizer. AICHE Journal, 2007, 53, 228-236.	1.8	8
64	Intensification of the Process Flow in the Pilot Plant of an Internally Heat-Integrated Distillation Column (HIDiC). Kagaku Kogaku Ronbunshu, 2008, 34, 70-75.	0.1	8
65	Performance Evaluation of Ideal Heat Integrated Distillation Columns.. Journal of Chemical Engineering of Japan, 1997, 30, 108-115.	0.3	7
66	Synthesis and characterization of mesoporous carbon thin films from phloroglucinol/surfactant self-assembly. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 347, 142-145.	2.3	7
67	Operating pressure of a plate-to-plate heat-integrated distillation column.. Kagaku Kogaku Ronbunshu, 1988, 14, 63-70.	0.1	6
68	Change of the Shape of a Chemical Vortex Due To a Local Disturbance. Journal of Physical Chemistry A, 1997, 101, 1313-1316.	1.1	6
69	New System for Electric Power Generation by Wet Oxidation of Biomass Ethanol.. Journal of Chemical Engineering of Japan, 2001, 34, 1545-1548.	0.3	6
70	Evaluation of Economical and Environmental Performance of an Internally Heat-Integrated Distillation Column (HIDiC). Kagaku Kogaku Ronbunshu, 2008, 34, 444-447.	0.1	6
71	Conventional Plate to Plate Calculation with Consideration of Plate to Plate Temperature Difference in Ideal Heat Integrated Distillation Column(HIDiC).. Kagaku Kogaku Ronbunshu, 1996, 22, 1345-1350.	0.1	5
72	Determining Appropriate Configuration of Ideal Heat Integrated Distillation Columns(HIDiC).. Journal of Chemical Engineering of Japan, 1997, 30, 575-579.	0.3	5

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73	Innovation in distillation processes. Synthesiology, 2009, 2, 55-63.	0.2	5
74	Improvement in Efficiency of a Chemical Reaction System for Converting Methanol to Light Olefins by Periodic Operation.. Kagaku Kogaku Ronbunshu, 2001, 27, 812-818.	0.1	5
75	Design of electric power generation systems using waste heat energy. Energy Conversion and Management, 1986, 26, 277-281.	4.4	4
76	Minimum reflux ratio and possibility of energy saving on a plate-to-plate heat-integrated distillation column.. Sekiyu Gakkaishi (Journal of the Japan Petroleum Institute), 1988, 31, 81-86.	0.1	4
77	Modeling of nonlinear chemical reaction systems and two-parameter stochastic resonance. Journal of Biological Physics, 1999, 25, 73-85.	0.7	4
78	Parameter analysis and optimization of ideal heat integrated distillation columns (HIDiC). Computer Aided Chemical Engineering, 2000, , 661-666.	0.3	4
79	Gibbs Ensemble Monte Carlo Simulation of LJ Fluid in Cylindrical Pore with Energetically Heterogeneous Surface. Molecular Simulation, 2004, 30, 353-359.	0.9	4
80	On enzymatic pH oscillations in CSTR with outlet regulator. Chemical Physics Letters, 2005, 407, 48-52.	1.2	4
81	Simulation study on ceramic membrane reactor for hydrogen production. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers,Series A/Chung-kuo Kung Ch'eng Hsuch K'an, 2005, 28, 1069-1075.	0.6	4
82	Synthesis of monodisperse platinum nanoparticles supported on carbon gel microspheres. Journal of Non-Crystalline Solids, 2006, 352, 2929-2932.	1.5	4
83	Rate-based Modeling for Internally Heat-integrated Distillation Column (HIDiC) in Binary System. Journal of the Japan Petroleum Institute, 2007, 50, 162-168.	0.4	4
84	Heat and Mass Transfer of Internally Heat Integrated Distillation Column (HIDiC). Journal of the Japan Petroleum Institute, 2015, 58, 189-196.	0.4	4
85	On the Startup of Ideal Heat Integrated Distillation Columns (HIDiC).. Journal of Chemical Engineering of Japan, 2000, 33, 533-537.	0.3	4
86	Minimum and Total Reflux in Ideal Heat Integrated Distillation Column(HIDiC).. Kagaku Kogaku Ronbunshu, 1996, 22, 1461-1464.	0.1	3
87	Periodic and Recycling Operations in a Chemical Reaction Process for Production of Light Olefins. Kagaku Kogaku Ronbunshu, 2003, 29, 374-377.	0.1	3
88	Simulation of Multicomponent Separation in Internally Heat Integrated Distillation Column using the Compact Heat Exchanger System. Kagaku Kogaku Ronbunshu, 2008, 34, 64-69.	0.1	3
89	Crystallization characteristics of flon gas hydrates used as cool storage materials.. Kagaku Kogaku Ronbunshu, 1988, 14, 692-695.	0.1	2
90	An improved branchâ€andâ€cut algorithm for mixedâ€integer nonlinear systems optimization problem. AICHE Journal, 2008, 54, 3239-3247.	1.8	2

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91	Development of a High Performance Distributor for an Internally Heat-Integrated Distillation Column. Kagaku Kogaku Ronbunshu, 2008, 34, 224-229.	0.1	2
92	Steady State Simulation of Reactive Distillation for TAME Synthesis. Kagaku Kogaku Ronbunshu, 2011, 37, 104-109.	0.1	2
93	Self-Sustained Oscillations of an Enzyme Reaction in a Compartmentalized Reactor. Kagaku Kogaku Ronbunshu, 2003, 29, 357-362.	0.1	1
94	Global Reaction Enhancement by Periodic Operation. Kagaku Kogaku Ronbunshu, 2011, 37, 125-127.	0.1	1
95	A Simple Method for Modeling Process Asymmetry. Journal of Chemical Engineering of Japan, 2006, 39, 448-452.	0.3	1
96	A Basic Study on the Applicability of Internal Heat-Integration to Batch Distillation. Kagaku Kogaku Ronbunshu, 2011, 37, 241-245.	0.1	1
97	Effect of Heat Transfer Characteristics on the Compression Process for an Internally Heat-Integrated Distillation Column. Kagaku Kogaku Ronbunshu, 2011, 37, 100-103.	0.1	1
98	Development of Simulator for Bio-Propylene Synthesis Process. Kagaku Kogaku Ronbunshu, 2013, 39, 126-131.	0.1	1
99	Producing electric power by wet oxidation of biomass ethanol. , 2000, , .		0
100	Economic Evaluation of Heat-Pump-Assisted Distillation Systems. Kagaku Kogaku Ronbunshu, 2018, 44, 303-307.	0.1	0
101	Feasibility Study of Micro Kalina Cycle for Hot Spring Power Generation. Kagaku Kogaku Ronbunshu, 2021, 47, 143-147.	0.1	0
102	On Process Intensification of Membrane Reactor. Kagaku Kogaku Ronbunshu, 2008, 34, 144-147.	0.1	0