

Yoshio Utaka

List of Publications by Year in descending order

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70
papers

1,300
citations

394421

19
h-index

377865

34
g-index

70
all docs

70
docs citations

70
times ranked

812
citing authors

#	ARTICLE	IF	CITATIONS
1	Flow boiling critical heat flux enhancement via different-mode-interacting boiling in narrow gaps. International Journal of Heat and Mass Transfer, 2022, 182, 121982.	4.8	5
2	Effect of water distribution in gas diffusion layer on proton exchange membrane fuel cell performance. International Journal of Hydrogen Energy, 2021, 46, 2969-2977.	7.1	22
3	An Improved Treatment on the Apparent Contact Angle of a Single-Bubble in Consideration of Microlayer for Simulations of Nucleate Pool Boiling. Journal of Thermal Science, 2021, 30, 1951-1959.	1.9	2
4	Improvement of cold start performance of polymer electrolyte fuel cell using microporous and gas diffusion layers with patterned wettability. International Journal of Energy Research, 2021, 45, 13760-13770.	4.5	3
5	Effect of material arrangement pattern on different-mode-interacting boiling in narrow gaps with two liquid supply systems. Applied Thermal Engineering, 2021, 191, 116893.	6.0	5
6	Measurement of the microlayer characteristics in the whole range of nucleate boiling for water by laser interferometry. International Journal of Heat and Mass Transfer, 2020, 146, 118856.	4.8	34
7	Effect of Dual Porous Layers with Patterned Wettability on Low-Temperature Start Performance of Polymer Electrolyte Membrane Fuel Cell. Energies, 2020, 13, 3529.	3.1	3
8	Effect of heating surface size on critical heat flux in different-mode-interacting boiling inside narrow gaps for water. International Journal of Heat and Mass Transfer, 2019, 143, 118543.	4.8	13
9	Planar-distributed wettability of microporous layer of polymer electrolyte fuel cell to improve cold start performance. Journal of Power Sources, 2019, 437, 226930.	7.8	24
10	Self-sustained movement of condensate drop on uniform temperature surface during Marangoni dropwise condensation. International Journal of Heat and Mass Transfer, 2019, 142, 118468.	4.8	3
11	Adhesion characteristics of ice in urea aqueous solution for efficient slurry formation in cold storage. International Journal of Refrigeration, 2019, 100, 335-342.	3.4	6
12	Application of simple and effective thermal switch for solid-state magnetic refrigeration at room temperature. Applied Thermal Engineering, 2019, 155, 196-205.	6.0	20
13	Critical heat flux enhancement in narrow gaps via different-mode-interacting boiling with nonuniform thermal conductance inside heat transfer plate. International Journal of Heat and Mass Transfer, 2019, 133, 702-711.	4.8	15
14	Measurement of contribution of microlayer evaporation applying the microlayer volume change during nucleate pool boiling for water and ethanol. International Journal of Heat and Mass Transfer, 2018, 125, 243-247.	4.8	48
15	Numerical simulation of thermal property effect of heat transfer plate on bubble growth with microlayer evaporation during nucleate pool boiling. International Journal of Heat and Mass Transfer, 2018, 118, 989-996.	4.8	37
16	Combination of laser interferometric and laser extinction methods for precise thickness measurement of liquid film between coalescing twin air bubbles. International Journal of Heat and Mass Transfer, 2018, 127, 154-160.	4.8	2
17	Enhancement of critical heat flux using spherical porous bodies in saturated pool boiling of nanofluid. Applied Thermal Engineering, 2018, 144, 219-230.	6.0	23
18	Critical heat flux enhancement by surface modification in a saturated pool boiling: A review. International Journal of Heat and Mass Transfer, 2017, 108, 2534-2557.	4.8	160

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19	Effect of wettability-distribution pattern of the gas diffusion layer with a microgrooved separator on polymer electrolyte fuel cell performance. <i>Journal of Power Sources</i> , 2017, 363, 227-233.	7.8	25
20	Special Issue on Leading-Edge Power and Energy Systems. <i>Transactions of the JSME (in Japanese)</i> , 2017, 83, 17-pre01-17-pre01.	0.2	0
21	Detailed structure of microlayer in nucleate pool boiling for water measured by laser interferometric method. <i>International Journal of Heat and Mass Transfer</i> , 2017, 108, 1285-1291.	4.8	68
22	Performance enhancement of polymer electrolyte fuel cells by combining liquid removal mechanisms of a gas diffusion layer with wettability distribution and a gas channel with microgrooves. <i>Journal of Power Sources</i> , 2016, 323, 37-43.	7.8	21
23	Variation of the liquid film thickness distribution between contacting twin air bubbles during the coalescence process in water and ethanol pools. <i>International Journal of Heat and Mass Transfer</i> , 2016, 98, 96-107.	4.8	17
24	Improvement of performance of polymer electrolyte fuel cell due to addition of micro-grooves as water removal mechanism. <i>Transactions of the JSME (in Japanese)</i> , 2015, 81, 14-00537-14-00537.	0.2	0
25	Characteristics of a liquid microlayer formed by a confined vapor bubble in micro gap boiling between two parallel plates. <i>International Journal of Heat and Mass Transfer</i> , 2015, 84, 475-485.	4.8	15
26	Measurement of Liquid Film Thickness Between Coalescing Twin Air Bubbles in a Water Pool Using a Modified Laser Extinction Method. <i>Heat Transfer Engineering</i> , 2015, 36, 1266-1274.	1.9	4
27	Proposal and examination of method of water removal from gas diffusion layer by applying slanted microgrooves inside gas channel in separator to improve polymer electrolyte fuel cell performance. <i>Journal of Power Sources</i> , 2015, 279, 533-539.	7.8	13
28	Water control by employing microgrooves inside gas channel for performance improvement in polymer electrolyte fuel cells. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 8172-8181.	7.1	16
29	Improvement in Performance of Secondary Heat Exchanger for Gas Water Heater by Using Narrow Tubes. <i>Heat Transfer Engineering</i> , 2015, 36, 1282-1291.	1.9	4
30	On heat transfer and evaporation characteristics in the growth process of a bubble with microlayer structure during nucleate boiling. <i>International Journal of Heat and Mass Transfer</i> , 2015, 81, 750-759.	4.8	49
31	ICOPE-15-1121 Improvement of PEFC Performance due to New Design of Gas Channel and Gas Diffusion Layer for Water Management. <i>The Proceedings of the International Conference on Power Engineering (ICOPE)</i> , 2015, 2015.12, _ICOPE-15--_ICOPE-15-.	0.0	0
32	Improved performance of secondary heat exchanger for latent heat recovery from flue gas using mini-tubes. <i>Applied Thermal Engineering</i> , 2014, 67, 230-239.	6.0	10
33	Heat transfer characteristics based on microlayer structure in nucleate pool boiling for water and ethanol. <i>International Journal of Heat and Mass Transfer</i> , 2014, 68, 479-488.	4.8	64
34	Improvement of oxygen diffusion characteristic in gas diffusion layer with planar-distributed wettability for polymer electrolyte fuel cell. <i>Journal of Power Sources</i> , 2014, 271, 16-24.	7.8	43
35	Precise measurement of effective oxygen diffusivity for microporous media containing moisture by review of galvanic cell oxygen absorber configuration. <i>International Journal of Heat and Mass Transfer</i> , 2014, 76, 549-558.	4.8	15
36	Numerical simulation on the heat transfer characteristics during the bubble growth considering microlayer evaporation in nucleate boiling. <i>Transactions of the JSME (in Japanese)</i> , 2014, 80, TEP0097-TEP0097.	0.2	1

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37	On prediction of heat exchanger performance for latent heat recovery using flue gas. Transactions of the JSME (in Japanese), 2014, 80, TEPO303-TEPO303.	0.2	1
38	Microlayer structure in nucleate boiling of water and ethanol at atmospheric pressure. International Journal of Heat and Mass Transfer, 2013, 57, 222-230.	4.8	118
39	Improvement of Water Discharge from Gas Diffusion Layer to Gas Channel with Obliquely-Directed Micro-Grooves Arranged inside Channel Walls. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2013, 79, 1866-1874.	0.2	1
40	Enhancement of Oxygen Diffusivity in Gas Diffusion Layer of PEFC with Wettability Distribution and Effect of PTFE Content. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2013, 79, 1038-1050.	0.2	1
41	High Performance Heat Exchanger for Latent Heat Recovery from Flue Gas. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2013, 79, 1363-1374.	0.2	4
42	Condensate Drop Movement by Surface Temperature Gradient on Heat Transfer Surface in Marangoni Dropwise Condensation. , 2012, , .		0
43	CHARACTERISTICS OF MICROLAYER FORMATION AND HEAT TRANSFER IN MINI/MICROCHANNEL BOILING SYSTEMS: A REVIEW. Frontiers in Heat and Mass Transfer, 2012, 3, .	0.2	8
44	High Precision Measurement of Oxygen Diffusion Coefficient in Micro Porous Media Using a Galvanic Cell Type Oxygen Absorber. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2011, 77, 2191-2199.	0.2	1
45	Characteristics of condensate drop movement with application of bulk surface temperature gradient in Marangoni dropwise condensation. International Journal of Heat and Mass Transfer, 2011, 54, 5049-5059.	4.8	7
46	Characteristics of oxygen diffusivity and water distribution by X-ray radiography in microporous media in alternate porous layers of different wettability for moisture control in gas diffusion layer of PEFC. International Journal of Hydrogen Energy, 2011, 36, 9128-9138.	7.1	34
47	Formation Mechanism and Characteristics of a Liquid Microlayer in Microchannel Boiling System. Journal of Heat Transfer, 2010, 132, .	2.1	13
48	Separation characteristics of clathrate hydrates from a cooling plate for efficient cold energy storage. Applied Energy, 2010, 87, 2682-2689.	10.1	28
49	Adhesion and detachment characteristics of a TBAB hydrate solid on a heat transfer surface (Effect) Tj ETQq1 1 0.784314 rgBT /Overl 2.8 5		
50	Configuration of the micro-layer and characteristics of heat transfer in a narrow gap mini/micro-channel boiling system. International Journal of Heat and Mass Transfer, 2009, 52, 2205-2214.	4.8	40
51	Method of measuring oxygen diffusivity in microporous media. International Journal of Heat and Mass Transfer, 2009, 52, 3685-3692.	4.8	42
52	F101 SEPARATION CHARACTERISTICS OF CLATHRATE HYDRATE FROM THE COOLING PLATE OF LOW SURFACE ENERGY FOR EFFICIENT COOL ENERGY STORAGE(Energy Storage and Load Leveling). The Proceedings of the International Conference on Power Engineering (ICOPE), 2009, 2009.1, _1-293_-_1-297_.	0.0	0
53	Condensate drop movement in Marangoni condensation by applying bulk temperature gradient on heat transfer surface. Heat Transfer - Asian Research, 2008, 37, 387-397.	2.8	12
54	Characteristics Detachment of Adhered Solid to Cooling Surface for Formation of Clathrate Hydrate Slurry (Effect of Concentration of TBAB Solutions). 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 2020-2027.	0.2	1

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55	Configuration of Micro-Layer in Nucleate Boiling. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 2358-2364.	0.2	13
56	Heat Transfer Characteristics Based on Micro-Layer Configuration in Nucleate Boiling. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 2560-2567.	0.2	5
57	An Effect of Scraper Shapes on Detachment of Solid Adhered to Cooling Surface for Formation of Clathrate Hydrate Slurry. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2007, 73, 594-600.	0.2	4
58	An effect of scraper shapes on detachment of solid adhered to cooling surface for formation of clathrate hydrate slurry. Heat Transfer - Asian Research, 2007, 36, 489-500.	2.8	13
59	A Basic Study on Humidity Recovery by Using Micro-Porous Media (Effects of Thermal Condition of) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 4 RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2006, 72, 390-396.	0.2	0
60	Behaviors of micro-layer in micro-channel boiling system applying laser extinction method. Heat Transfer - Asian Research, 2006, 35, 35-46.	2.8	8
61	A basic study on humidity recovery using micro-porous media: General characteristics and effect of material properties on transport performance. Heat Transfer - Asian Research, 2006, 35, 137-151.	2.8	7
62	A basic study on humidity recovery by using micro-porous media (Effects of thermal condition of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 4 Research, 2006, 35, 568-581.	2.8	3
63	A Basic study on Humidity Recovery by Using Micro-Porous Media(General Characteristics and Effect) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 4 Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2005, 71, 1647-1654.	0.2	3
64	AN EXPERIMENTAL STUDY ON THE EFFECT OF NON CONDENSABLE GAS FOR SOLUTAL MARANGONI CONDENSATION HEAT TRANSFER. Experimental Heat Transfer, 2005, 18, 61-79.	3.2	16
65	Characteristic curves and the promotion effect of ethanol addition on steam condensation heat transfer. International Journal of Heat and Mass Transfer, 2004, 47, 4507-4516.	4.8	63
66	Effect of Non-Condensable Gas Mass Fraction on Condensation Heat Transfer for Water-Ethanol Vapor Mixture. JSME International Journal Series B, 2004, 47, 162-167.	0.3	5
67	Measurement of Condensate Film Thickness for Solutal Marangoni Condensation Applying Laser Extinction Method. Journal of Enhanced Heat Transfer, 2003, 10, 119-130.	1.1	29
68	Unsteady Measurement of Condensate Film Thickness for Solutal Marangoni Condensation by Using Laser Absorption Method. Investigation of Extinction Property of Test Material and Measuring Method.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2002, 68, 2285-2291.	0.2	3
69	On Condensation Heat Transfer for Water and Ethanol Vapor Mixture. Characteristics over a Wide Range of Vapor Velocity.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2001, 67, 141-147.	0.2	11
70	Study on Condensation Heat Transfer for Steam-Ethanol Vapor Mixture. Relation between Condensation Characteristic Curves and Modes of Condensate.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 1995, 61, 3059-3065.	0.2	11