Ho Seon Ahn

List of Publications by Year
in descending order

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105	3,970	117453	128067
papers	citations	34 h-index	60 g-index

105	105	105	2804
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A study of nucleate boiling heat transfer on hydrophilic, hydrophobic and heterogeneous wetting surfaces. International Journal of Heat and Mass Transfer, 2011, 54, 5643-5652.	2.5	350
2	Review of boiling heat transfer enhancement on micro/nanostructured surfaces. Experimental Thermal and Fluid Science, 2015, 66, 173-196.	1.5	290
3	Effect of liquid spreading due to nano/microstructures on the critical heat flux during pool boiling. Applied Physics Letters, 2011, 98, .	1.5	188
4	Effect of sonication characteristics on stability, thermophysical properties, and heat transfer of nanofluids: A comprehensive review. Ultrasonics Sonochemistry, 2019, 58, 104701.	3.8	188
5	Pool boiling CHF enhancement by micro/nanoscale modification of zircaloy-4 surface. Nuclear Engineering and Design, 2010, 240, 3350-3360.	0.8	164
6	Effects of nano-fluid and surfaces with nano structure on the increase of CHF. Experimental Thermal and Fluid Science, 2010, 34, 487-495.	1.5	150
7	Experimental study of critical heat flux enhancement during forced convective flow boiling of nanofluid on a short heated surface. International Journal of Multiphase Flow, 2010, 36, 375-384.	1.6	134
8	The effect of capillary wicking action of micro/nano structures on pool boiling critical heat flux. International Journal of Heat and Mass Transfer, 2012, 55, 89-92.	2.5	104
9	The effect of water absorption on critical heat flux enhancement during pool boiling. Experimental Thermal and Fluid Science, 2012, 42, 187-195.	1.5	94
10	On the Mechanism of Pool Boiling Critical Heat Flux Enhancement in Nanofluids. Journal of Heat Transfer, 2010, 132, .	1.2	88
11	A Review on Critical Heat Flux Enhancement With Nanofluids and Surface Modification. Journal of Heat Transfer, 2012, 134, .	1.2	79
12	Toluene and acetaldehyde removal from air on to graphene-based adsorbents with microsized pores. Journal of Hazardous Materials, 2018, 344, 458-465.	6.5	77
13	Self-assembled foam-like graphene networks formed through nucleate boiling. Scientific Reports, 2013, 3, 1396.	1.6	75
14	A Novel Role of Three Dimensional Graphene Foam to Prevent Heater Failure during Boiling. Scientific Reports, 2013, 3, 1960.	1.6	75
15	Critical heat flux triggering mechanism on micro-structured surfaces: Coalesced bubble departure frequency and liquid furnishing capability. International Journal of Heat and Mass Transfer, 2015, 91, 1237-1247.	2.5	69
16	Effect of chevron angle and surface roughness on thermal performance of single-phase water flow inside a plate heat exchanger. International Communications in Heat and Mass Transfer, 2018, 91, 201-209.	2.9	65
17	A comprehensive review on micro/nanoscale surface modification techniques for heat transfer enhancement in heat exchanger. International Journal of Heat and Mass Transfer, 2021, 178, 121601.	2.5	60
18	Pool boiling experiments in reduced graphene oxide colloids. Part I â€“ Boiling characteristics. International Journal of Heat and Mass Transfer, 2014, 74, 501-512.	2.5	52

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19	Distribution of oxygen functional groups of graphene oxide obtained from low-temperature atomic layer deposition of titanium oxide. RSC Advances, 2017, 7, 13979-13984.	1.7	51
20	The boiling phenomenon of alumina nanofluid near critical heat flux. International Journal of Heat and Mass Transfer, 2013, 62, 718-728.	2.5	49
21	Dynamics of water droplet on a heated nanotubes surface. Applied Physics Letters, 2013, 102, .	1.5	49
22	Experimental study of the effect of a reduced graphene oxide coating on critical heat flux enhancement. International Journal of Heat and Mass Transfer, 2013, 60, 763-771.	2.5	47
23	Loss of superhydrophobicity of hydrophobic micro/nano structures during condensation. Scientific Reports, 2015, 5, 9901.	1.6	47
24	Wicking and Spreading of Water Droplets on Nanotubes. Langmuir, 2012, 28, 2614-2619.	1.6	46
25	Effect of a graphene oxide coating layer on critical heat flux enhancement under pool boiling. International Journal of Heat and Mass Transfer, 2014, 77, 919-927.	2.5	46
26	Film boiling heat transfer on a completely wettable surface with atmospheric saturated distilled water quenching. International Journal of Heat and Mass Transfer, 2016, 93, 67-74.	2.5	45
27	Enhanced critical heat flux by capillary driven liquid flow on the well-designed surface. Applied Physics Letters, 2015, 107, .	1.5	43
28	Enhanced heat transfer is dependent on thickness of graphene films: the heat dissipation during boiling. Scientific Reports, 2014, 4, 6276.	1.6	43
29	Experimental investigation of microbubble generation in the venturi nozzle. International Journal of Heat and Mass Transfer, 2019, 136, 1127-1138.	2.5	42
30	Experimental study of water droplets on over-heated nano/microstructured zirconium surfaces. Nuclear Engineering and Design, 2014, 278, 367-376.	0.8	40
31	Visualization study of critical heat flux mechanism on a small and horizontal copper heater. International Journal of Multiphase Flow, 2012, 41, 1-12.	1.6	39
32	Wetting and evaporation phenomena of water droplets on textured surfaces. International Journal of Heat and Mass Transfer, 2015, 90, 191-200.	2.5	39
33	Visualization study of the effects of nanoparticles surface deposition on convective flow boiling CHF from a short heated wall. International Journal of Multiphase Flow, 2011, 37, 215-228.	1.6	38
34	Fluid flow and heat transfer characteristics of heat sinks with laterally perforated plate fins. International Journal of Heat and Mass Transfer, 2019, 138, 293-303.	2.5	38
35	Heat transfer and flow characteristics of sinusoidal wavy plate fin heat sink with and without crosscut flow control. International Journal of Heat and Mass Transfer, 2019, 137, 565-572.	2.5	37
36	The effect of liquid spreading due to micro-structures of flow boiling critical heat flux. International Journal of Multiphase Flow, 2012, 43, 1-12.	1.6	33

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37	Dynamics of Contact Line Depinning during Droplet Evaporation Based on Thermodynamics. Langmuir, 2015, 31, 1950-1957.	1.6	33
38	Experimental investigation of filmwise and dropwise condensation inside transparent circular tubes. Applied Thermal Engineering, 2017, 110, 412-423.	3.0	33
39	Wetting state on hydrophilic and hydrophobic micro-textured surfaces: Thermodynamic analysis and X-ray visualization. Applied Physics Letters, 2015, 106, .	1.5	30
40	Two-phase flow boiling in a microfluidic channel at high mass flux. Physics of Fluids, 2020, 32, .	1.6	30
41	STUDY OF LEIDENFROST MECHANISM IN DROPLET IMPACTING ON HYDROPHILIC AND HYDROPHOBIC SURFACES. International Journal of Air-Conditioning and Refrigeration, 2013, 21, 1350028.	0.8	29
42	Fluid flow and heat transfer in vascularized cooling plates. International Journal of Heat and Mass Transfer, 2010, 53, 3607-3614.	2.5	28
43	Micro/nanostructure evolution of zircaloy surface using anodization technique: Application to nuclear fuel cladding modification. Applied Surface Science, 2012, 258, 8724-8731.	3.1	28
44	Controllable pore size of three dimensional self-assembled foam-like graphene and its wettability. Carbon, 2013, 64, 27-34.	5.4	27
45	Pool boiling experiments in reduced graphene oxide colloids part II â€“ Behavior after the CHF, and boiling hysteresis. International Journal of Heat and Mass Transfer, 2014, 78, 224-231.	2.5	27
46	Nucleate boiling in graphene oxide colloids: Morphological change and critical heat flux enhancement. International Journal of Multiphase Flow, 2016, 85, 209-222.	1.6	27
47	Effect of porous graphene networks and micropillar arrays on boiling heat transfer performance. Experimental Thermal and Fluid Science, 2018, 93, 153-164.	1.5	27
48	Anti-fouling performance of chevron plate heat exchanger by the surface modification. International Journal of Heat and Mass Transfer, 2019, 144, 118634.	2.5	27
49	Orientation effects on bubble dynamics and nucleate pool boiling heat transfer of graphene-modified surface. International Journal of Heat and Mass Transfer, 2017, 108, 1393-1405.	2.5	26
50	Mesoporous graphene adsorbents for the removal of toluene and xylene at various concentrations and its reusability. Scientific Reports, 2019, 9, 10922.	1.6	26
51	Boiling crisis controlled by capillary pumping and viscous friction: Liquid penetration length and dry spot diameter. Applied Physics Letters, 2016, 109, .	1.5	24
52	Visualized effect of alumina nanoparticles surface deposition on water flow boiling heat transfer. Experimental Thermal and Fluid Science, 2012, 37, 154-163.	1.5	23
53	Advanced Boilingâ€“A Scalable Strategy for Self-Assembled Three-Dimensional Graphene. ACS Nano, 2021, 15, 2839-2848.	7.3	21
54	Boiling characteristics on the reduced graphene oxide films. Experimental Thermal and Fluid Science, 2015, 60, 361-366.	1.5	20

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55	Application of the heat pipe to enhance the performance of the vapor compression refrigeration system. Case Studies in Thermal Engineering, 2019, 15, 100531.	2.8	19
56	Effect of aluminum oxide and reduced graphene oxide mixtures on critical heat flux enhancement. International Journal of Heat and Mass Transfer, 2018, 116, 858-870.	2.5	18
57	Effect of h-BN coating on nucleate boiling heat transfer performance in pool boiling. Experimental Thermal and Fluid Science, 2018, 98, 12-19.	1.5	18
58	Experimental study on evaporative heat transfer and pressure drop of R-134a in a horizontal dimpled tube. International Journal of Heat and Mass Transfer, 2019, 144, 118688.	2.5	18
59	Tunable, self-assembled 3D reduced graphene oxide structures fabricated via boiling. Carbon, 2015, 81, 357-366.	5.4	17
60	Investigation of Pool Boiling Critical Heat Flux Enhancement on a Modified Surface Through the Dynamic Wetting of Water Droplets. Journal of Heat Transfer, 2012, 134, .	1.2	16
61	Experimental study of siphon breaking phenomenon in the real-scaled research reactor pool. Nuclear Engineering and Design, 2013, 255, 28-37.	0.8	16
62	An experimental investigation of the air-side performance of crimped spiral fin-and-tube heat exchangers with a small tube diameter. International Journal of Heat and Mass Transfer, 2021, 178, 121571.	2.5	16
63	Experimental study of turbulent air natural convection in open-ended vertical parallel plates under asymmetric heating conditions. International Journal of Heat and Mass Transfer, 2020, 159, 120135.	2.5	15
64	Two/three-dimensional reduced graphene oxide coating for porous flow distributor in polymer electrolyte membrane fuel cell. International Journal of Hydrogen Energy, 2020, 45, 12972-12981.	3.8	14
65	Experimental investigation of the microbubble generation using a venturi-type bubble generator. Case Studies in Thermal Engineering, 2021, 27, 101238.	2.8	14
66	Boiling characteristics on a serpentine-like geometry thin-film platinum heater under pool boiling. International Journal of Heat and Mass Transfer, 2016, 95, 214-223.	2.5	13
67	Effect of pin fin configuration on thermal performance of plate pin fin heat sinks. Case Studies in Thermal Engineering, 2021, 27, 101269.	2.8	13
68	Air-side performance of embedded and welded spiral fin and tube heat exchangers. Case Studies in Thermal Engineering, 2022, 30, 101721.	2.8	13
69	Experimental study of transient boiling characteristics on three-dimensional reduced graphene oxide networks. Experimental Thermal and Fluid Science, 2014, 59, 51-55.	1.5	12
70	Heat transfer and fluid flow characteristics in a plate heat exchanger filled with copper foam. Heat and Mass Transfer, 2020, 56, 3261-3271.	1.2	12
71	Numerical study on novel airfoil corrugated plate heat exchanger: A comparison with commercial type and geometrical parameter analysis. International Journal of Heat and Mass Transfer, 2022, 195, 123119.	2.5	12
72	Building with graphene oxide: effect of graphite nature and oxidation methods on the graphene assembly. RSC Advances, 2021, 11, 3645-3654.	1.7	11

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73	THE EFFECT OF MICRO/NANOSCALE STRUCTURES ON CHF ENHANCEMENT. Nuclear Engineering and Technology, 2011, 43, 205-216.	1.1	11
74	Hydrodynamics of nucleate boiling on downward surface with various orientation. Part I: Departure diameter, frequency, and escape speed of the slug. International Journal of Heat and Mass Transfer, 2018, 116, 1341-1351.	2.5	10
75	Improvement of thermal-hydraulic performance of plate heat exchanger by electroless nickel, copper and silver plating. Case Studies in Thermal Engineering, 2021, 23, 100797.	2.8	10
76	Experimental investigation of the heat transfer and pressure drop characteristics of SiO2/water nanofluids flowing through a circular tube equipped with free rotating swirl generators. Heat and Mass Transfer, 2020, 56, 1613-1626.	1.2	8
77	Geometrical parametric study of drop impingement onto heated surface with micro-pillar arrays. International Journal of Heat and Mass Transfer, 2021, 168, 120891.	2.5	8
78	Nanocapillarity in Graphene Oxide Laminate and Its Effect on Critical Heat Flux. Journal of Heat Transfer, 2017, 139, .	1.2	7
79	Virtual Loudspeaker Effect of Graphene-Based Hybrid Material To Improve Low-Frequency Acoustic Performance. ACS Applied Materials & Interfaces, 2019, 11, 35941-35948.	4.0	7
80	An experimental study of the air-side performance of a novel louver spiral fin-and-tube heat exchanger. AEJ - Alexandria Engineering Journal, 2022, 61, 9811-9818.	3.4	7
81	Effect of the segmented fin height on the air-side performance of serrated welded spiral fin-and-tube heat exchangers. Case Studies in Thermal Engineering, 2022, 35, 102128.	2.8	7
82	An investigation of the thermal behavior of constructal theory-based pore-scale porous media by using a combination of computational fluid dynamics and machine learning. International Journal of Heat and Mass Transfer, 2022, 194, 123072.	2.5	7
83	Experimental study on the thermal-hydraulic performance of modified chevron plate heat exchanger by electrochemical etching method. International Journal of Heat and Mass Transfer, 2020, 155, 119857.	2.5	6
84	Experimental study on breakup mechanism of microbubble in 2D channel. Case Studies in Thermal Engineering, 2021, 28, 101523.	2.8	6
85	Experimental investigation on two-phase heat transfer of R-134a during vaporization in a plate heat exchanger with rough surface. International Journal of Heat and Mass Transfer, 2020, 160, 120221.	2.5	5
86	Experimental Study of Pool Boiling for Enhancing the Boiling Heat Transfer by Hydrophobic Dots on Silicon Surface. Transactions of the Korean Society of Mechanical Engineers, B, 2010, 34, 655-663.	0.0	5
87	Numerical study and optimisation of the boiling of refrigerant in a vertical corrugated tube using vapour phase tracking. International Journal of Heat and Mass Transfer, 2022, 183, 122116.	2.5	5
88	Nanostructured micro/mesoporous graphene: removal performance of volatile organic compounds. RSC Advances, 2022, 12, 14570-14577.	1.7	5
89	Design of A scale-down experimental model for SFR reactor vault cooling system performance analyses. Nuclear Engineering and Technology, 2020, 52, 1611-1625.	1.1	4
90	Effect of geometrical parameters on the evaporative heat transfer and pressure drop of R-134a flowing in dimpled tubes. Heat and Mass Transfer, 2021, 57, 465-479.	1.2	4

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91	Experimental Investigation of Critical Heat Flux Enhancement by Micro/Nanoscale Surface Modification in Pool Boiling. , 2008, , .		3
92	Experimental Study of Boiling Phenomena by Micro/Milli Hydrophobic Dot on the Silicon Surface in Pool Boiling. , 2009, , .		3
93	Explosive lift-off triggering mechanism on a surface with micropillar arrays: Liquid-vapor interface behavior between micropillars during drop impingement. Applied Thermal Engineering, 2022, 201, 117739.	3.0	3
94	Thermally annealed self-assembled three-dimensional graphene for direct construction of porous flow distributor in polymer electrolyte membrane fuel cell. International Journal of Hydrogen Energy, 2021, 46, 36930-36930.	3.8	2
95	Effects of confined space on the critical heat flux under the pool-boiling condition. AEJ - Alexandria Engineering Journal, 2022, 61, 329-338.	3.4	2
96	Optimizing the Configurations of Cooling Channels with Low Flow Resistance and Thermal Resistance. Transactions of the Korean Society of Mechanical Engineers, B, 2011, 35, 9-15.	0.0	2
97	Transition phenomena of natural convection of the air in an asymmetrically heated vertical channel with a damper. International Journal of Heat and Mass Transfer, 2022, 183, 122196.	2.5	2
98	Experimental Study of Nucleate Boiling Performance on Several Types of the Mixed-Wettability Pattern Surface by Micro/Milli-Sized Hydrophobic Patterns. , 2010, , .		1
99	Improving the water resistance and adhesion strength of a mixed alkali silicate adhesive by optimizing the molar ratio and curing conditions. Journal of Adhesion Science and Technology, 2020, 34, 1269-1282.	1.4	1
100	Pool Boiling Characteristics on the Microstructured surfaces with Both Rectangular Cavities and Channels. Transactions of the Korean Society of Mechanical Engineers, B, 2016, 40, 383-389.	0.0	1
101	A high-temperature adhesive for stainless steel 304: Effect of Cr growth at the interface of alkali silicate adhesive. International Journal of Adhesion and Adhesives, 2022, 116, 103152.	1.4	1
102	Pool Boiling CHF Enhancement on a Zircaloy-4 Surface With Micro/Nano Scale Modification. , 2009, , .		0
103	Dynamics of a Water Droplet on the Heated Surface of Nano- and Micro-Structures. , 2012, , .		0
104	MHF (Minimum Heat Flux) Point on Anodized Zirconium Surface During Quenching. , 2014, , .		0
105	PROFESSOR SOMCHAI WONGWISES ON HIS 60TH BIRTHDAY. Journal of Thermal Engineering, 0, , 438-439.	0.8	0