Seong Hyuk Lee

List of Publications by Year
in descending order

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109 papers	1,513 citations	394421 19 h-index	361022 35 g-index
109 all docs	109 docs citations	109 times ranked	1544 citing authors

#	Article	IF	Citations
1	Evaluation of surface temperature uniformity of multi-zone ceramic heaters with embedded cooling channels for electrostatic chuck. Journal of Mechanical Science and Technology, 2022, 36, 1599-1606.	1.5	3
2	Numerical study of the boiling heat transfer characteristics of bluff body quenching in cylindrical tube. Case Studies in Thermal Engineering, 2022, 32, 101900.	5.7	0
3	Numerical study on subcooled water jet impingement cooling on superheated surfaces. Case Studies in Thermal Engineering, 2022, 32, 101883.	5.7	7
4	Local heating effect on thermal Marangoni flow and heat transfer characteristics of an evaporating droplet. International Journal of Heat and Mass Transfer, 2022, 195, 123206.	4.8	13
5	Quantitative analysis of contact line behaviors of evaporating binary mixture droplets using surface plasmon resonance imaging. International Journal of Heat and Mass Transfer, 2021, 165, 120690.	4.8	17
6	Numerical analysis of the close-contact heat transfer of the electro-thermal drilling probes for glacier-ice exploration. Journal of Mechanical Science and Technology, 2021, 35, 1309-1317.	1.5	4
7	Numerical Investigation on the Evolution of Thin Liquid Layer and Dynamic Behavior of an Electro-Thermal Drilling Probe during Close-Contact Heat Transfer. Applied Sciences (Switzerland), 2021, 11, 3443.	2.5	1
8	Solidâ€“Liquid Interface Temperature Measurement of Evaporating Droplet Using Thermoresponsive Polymer Aqueous Solution. Applied Sciences (Switzerland), 2021, 11, 3379.	2.5	3
9	Dynamic characteristics of droplet impingement on microscale hole-patterned surfaces with anodization. International Communications in Heat and Mass Transfer, 2021, 124, 105260.	5.6	6
10	Numerical evaluation on surface temperature uniformity of multi-zone and single-zone ceramic heaters with the electrostatic chuck. Journal of Mechanical Science and Technology, 2021, 35, 3763-3770.	1.5	6
11	Local mass flux and pinning behavior of an evaporating droplet on heated aluminum surfaces. Case Studies in Thermal Engineering, 2021, 26, 101171.	5.7	5
12	Selective evaporation rate modeling of volatile binary mixture droplets. International Journal of Heat and Mass Transfer, 2021, 178, 121584.	4.8	13
13	Review of the binary mixture droplet evaporation studies. Journal of Mechanical Science and Technology, 2021, 35, 5259-5272.	1.5	6
14	Development of automated angle-scanning, high-speed surface plasmon resonance imaging and SPRi visualization for the study of dropwise condensation. Experiments in Fluids, 2020, 61, 1.	2.4	13
15	The Effect of Adsorbed Volatile Organic Compounds on an Ultrathin Water Film Measurement. Applied Sciences (Switzerland), 2020, 10, 5981.	2.5	7
16	Modeling of the finite boundary limit of evaporation flux in the contact line region using the surface plasmon resonance imaging. International Communications in Heat and Mass Transfer, 2020, 116, 104598.	5.6	9
17	Effect of Secondary Vortex Flow Near Contact Point on Thermal Performance in the Plate Heat Exchanger with Different Corrugation Profiles. Energies, 2020, 13, 1328.	3.1	4
18	CFD-Based Metamodeling of the Propagation Distribution of Styrene Spilled from a Ship. Applied Sciences (Switzerland), 2020, 10, 2109.	2.5	1

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19	Surface Plasmon Resonance Imaging: A Technique to Reveal the Dropwise Condensation Mechanism. Journal of Heat Transfer, 2020, 142, .	2.1	3
20	Numerical Study on Gaseous CO2 Leakage and Thermal Characteristics of Containers in a Transport Ship. Applied Sciences (Switzerland), 2019, 9, 2536.	2.5	2
21	Effect of Laser-derived Surface Re-melting of YSZ Electrolyte on Performance of Solid Oxide Fuel Cells. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 235-239.	4.9	2
22	Quantitative measurements of nanoparticle layer thicknesses near the contact line region after droplet drying-out. Journal of Mechanical Science and Technology, 2019, 33, 967-971.	1.5	2
23	Influence of Perforated Fin on Flow Characteristics and Thermal Performance in Spiral Finned-Tube Heat Exchanger. Energies, 2019, 12, 556.	3.1	21
24	Dynamic contact angle and liquid displacement of a droplet impinging on heated textured surfaces. Experimental Thermal and Fluid Science, 2019, 101, 128-135.	2.7	13
25	Condensation Frosting Characteristics of SAM-Coated Nanostructured Superhydrophobic Surface. International Journal of Air-Conditioning and Refrigeration, 2018, 26, 1850008.	0.7	3
26	Quantitative measurements of nanoscale thin frost layers using surface plasmon resonance imaging. International Journal of Heat and Mass Transfer, 2018, 124, 83-89.	4.8	11
27	Three-dimensional turbulent flow and heat transfer characteristics of longitudinal vortices embedded in turbulent boundary layer in bent channels. International Journal of Heat and Mass Transfer, 2018, 117, 958-965.	4.8	9
28	Numerical Simulation of Propagation Characteristics of Hazardous Noxious Substances Spilled from Transport Ships. Applied Sciences (Switzerland), 2018, 8, 2409.	2.5	5
29	SURFACE PLASMON RESONANCE IMAGING OF DROP COALESCENCE AT HIGH-TEMPORAL RESOLUTION. Journal of Flow Visualization and Image Processing, 2018, 25, 191-205.	0.5	8
30	Numerical study on flow and heat transfer characteristics of air-jet cooling system. Journal of Mechanical Science and Technology, 2018, 32, 6021-6027.	1.5	5
31	Modeling of the evaporation rate of liquid droplets on anodized heated surfaces. International Communications in Heat and Mass Transfer, 2018, 98, 209-215.	5.6	5
32	SDC-Infiltrated Microporous Silver Membrane with Superior Resistance to Thermal Agglomeration for Cathode-Supported Solid Oxide Fuel Cells. Energies, 2018, 11, 2181.	3.1	4
33	Direct-current triboelectric nanogenerator via water electrification and phase control. Nano Energy, 2018, 52, 95-104.	16.0	50
34	Effect of Electrolyte Thickness on Electrochemical Reactions and Thermo-Fluidic Characteristics inside a SOFC Unit Cell. Energies, 2018, 11, 473.	3.1	38
35	Numerical analysis of injected current effects on thermal characteristics of vertical-cavity surface-emitting laser. Journal of Mechanical Science and Technology, 2018, 32, 1463-1469.	1.5	1
36	Observation of a mixed regime for an impinging droplet on a sessile droplet. International Journal of Heat and Mass Transfer, 2018, 127, 130-135.	4.8	11

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37	High Speed SPR Visualization of Frost Propagation Inside a Subcooled Water Droplet. Journal of Heat Transfer, 2017, 139, .	2.1	4
38	Mechanical model of an arched basilar membrane in the gerbil cochlea. Hearing Research, 2017, 345, 1-9.	2.0	4
39	Numerical investigation of LNG gas dispersion in a confined space: An engineering model. Journal of Mechanical Science and Technology, 2017, 31, 4533-4540.	1.5	11
40	Sputtered Nanoporous PtNi Thin Film Cathodes with Improved Thermal Stability for Low Temperature Solid Oxide Fuel Cells. Electrochimica Acta, 2017, 247, 558-563.	5.2	8
41	Numerical Investigation on Influence of Fan Speed and Swirling Gas Injection on Thermal-Flow Characteristics in Nitrocarburizing Furnace. Materials Transactions, 2017, 58, 1322-1328.	1.2	1
42	Effect of Wettability on Pool Boiling Incipience in Saturated Water. Journal of Heat Transfer, 2016, 138, .	2.1	2
43	Evaporative Characteristics of Al2O3 Nanofluid Droplet on Heated Surface. Journal of Heat Transfer, 2016, 138, .	2.1	1
44	Effect of crack size on gas leakage characteristics in a confined space. Journal of Mechanical Science and Technology, 2016, 30, 3411-3419.	1.5	5
45	Near-field leakage and diffusion characteristics of Hazardous and Noxious Substance. , 2016, , .		0
46	Design and optimization of rotating triboelectric nanogenerator by water electrification and inertia. Nano Energy, 2016, 27, 340-351.	16.0	81
47	Cylindrical Water Triboelectric Nanogenerator via Controlling Geometrical Shape of Anodized Aluminum for Enhanced Electrostatic Induction. ACS Applied Materials & Interfaces, 2016, 8, 25014-25018.	8.0	40
48	Observations of internal flow inside an evaporating nanofluid sessile droplet in the presence of an entrapped air bubble. Scientific Reports, 2016, 6, 32767.	3.3	0
49	Characteristics of heat transfer and chemical reaction of methane-steam reforming in a porous catalytic medium. Journal of Mechanical Science and Technology, 2016, 30, 473-481.	1.5	8
50	Frosting Characteristics on Hydrophilic and Superhydrophobic Copper Surfaces. Journal of Heat Transfer, 2016, 138, .	2.1	4
51	Dynamic wetting and heat transfer characteristics of a liquid droplet impinging on heated textured surfaces. International Journal of Heat and Mass Transfer, 2016, 97, 308-317.	4.8	63
52	Effects of Curvature on the Flow Characteristics and Particle Behavior in the Flame Spray Process. Materials Transactions, 2015, 56, 2070-2077.	1.2	0
53	Characteristics of Droplet Growth Behavior on Hydrophobic Micro-textured Surfaces. Journal of Heat Transfer, 2015, 137, .	2.1	0
54	A rebounding droplet impacting on a static droplet. Journal of Heat Transfer, 2015, 137, .	2.1	2

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55	Visualization of an Evaporating Thin Layer during the Evaporation of a Nanofluid Droplet. Langmuir, 2015, 31, 1237-1241.	3.5	8
56	Effect of spanwise pressure gradient on flow and heat transfer characteristics of longitudinal vortices embedded in a turbulent boundary layer. Journal of Mechanical Science and Technology, 2015, 29, 867-875.	1.5	2
57	Wetting Characteristic of Single Droplet Impinging on Hole-Patterned Texture Surfaces. Journal of ILASS-Korea, 2015, 20, 181-186.	0.1	1
58	Characteristics for Nanofluid Droplet Evaporation on Heated Surface at Boiling Temperature of Base Liquid. Journal of ILASS-Korea, 2015, 20, 236-240.	0.1	1
59	Dependency of Condensation Forms on Wettability. Journal of Heat Transfer, 2014, 136, .	2.1	1
60	A novel miniature dynamic microfluidic cell culture platform using electro-osmosis diode pumping. Biomicrofluidics, 2014, 8, 044116.	2.4	12
61	Dynamic behavior of capillary-driven encapsulation flow characteristics for different injection types in flip chip packaging. Journal of Mechanical Science and Technology, 2014, 28, 167-173.	1.5	12
62	Local aggregation characteristics of a nanofluid droplet during evaporation. International Journal of Heat and Mass Transfer, 2014, 72, 336-344.	4.8	27
63	Spreading and receding characteristics of a non-Newtonian droplet impinging on a heated surface. Experimental Thermal and Fluid Science, 2014, 57, 94-101.	2.7	40
64	Numerical Study on Effective Thermal Conductivity of Radial Nanowire Heterostructures with MWCNT Core. Materials Transactions, 2014, 55, 1770-1776.	1.2	0
65	Effects of Secondary Air Flows on Thermal Characteristics and Particle Behavior in Flame Spray Process. Materials Transactions, 2014, 55, 850-856.	1.2	1
66	Visualization in the Contact Line Region of an Evaporating Nanofluid Drop. Journal of Heat Transfer, 2014, 136, .	2.1	0
67	The thermal conductivity of Al(OH)3 covered MWCNT/epoxy terminated dimethyl polysiloxane composite based on analytical Al(OH)3 covered MWCNT. Composites Part A: Applied Science and Manufacturing, 2013, 54, 159-165.	7.6	21
68	Dynamic Behavior of Non-Newtonian Droplets Impinging on Solid Surfaces. Materials Transactions, 2013, 54, 260-265.	1.2	23
69	Effect of Flame Spray Distance on the Adhesive Characteristics of Ni–20 mass%Cr Layers on SCM415 Substrates. Materials Transactions, 2012, 53, 2043-2048.	1.2	5
70	Reliability Properties of Solderable Conductive Adhesives with Low-Melting-Point Alloy Fillers. Materials Transactions, 2012, 53, 2104-2110.	1.2	18
71	Characteristics of solderable electrically conductive adhesives (ECAs) for electronic packaging. Microelectronics Reliability, 2012, 52, 1165-1173.	1.7	30
72	Dynamic Wetting and Spreading Characteristics of a Liquid Droplet Impinging on Hydrophobic Textured Surfaces. Langmuir, 2011, 27, 6565-6573.	3.5	106

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73	Flattening Characteristics of Ni₂₀Cr Thermal-Sprayed Coating Layers on Preheated SCM415 Substrates. Materials Transactions, 2011, 52, 1515-1521.	1.2	5
74	Dynamic Filling Characteristics of a Capillary Driven Underfill Process in Flip-Chip Packaging. Materials Transactions, 2011, 52, 1998-2003.	1.2	8
75	Comparison of Theoretical Models of Electron-Phonon Coupling in Thin Gold Films Irradiated by Femtosecond Pulse Lasers. Materials Transactions, 2011, 52, 547-553.	1.2	34
76	Thermal Boundary Resistance Effect on Non-Equilibrium Energy Transport in Metal-Dielectric Thin Films Heated by Femtosecond Pulse Lasers. Materials Transactions, 2011, 52, 1492-1499.	1.2	13
77	Thermal deformation of glass backplanes during Joule-heating induced crystallization process. Vacuum, 2011, 85, 847-852.	3.5	12
78	In-situ observation of phase transformation in amorphous silicon during Joule-heating induced crystallization process. Thin Solid Films, 2011, 519, 5516-5522.	1.8	17
79	Femtosecond Laser Pulse Train Effect on Optical Characteristics and Nonequilibrium Heat Transfer in Thin Metal Films. Materials Transactions, 2010, 51, 1156-1162.	1.2	19
80	Characteristics of Thermosonic Anisotropic Conductive Adhesives (ACFs) Flip-Chip Bonding. Materials Transactions, 2010, 51, 1790-1795.	1.2	3
81	Spectral and Angular Responses of Surface Plasmon Resonance Based on the Kretschmann Prism Configuration. Materials Transactions, 2010, 51, 1150-1155.	1.2	137
82	Wetting Transition Characteristics on Microstructured Hydrophobic Surfaces. Materials Transactions, 2010, 51, 1709-1711.	1.2	37
83	The evaporation and wetting dynamics of sessile water droplets on submicron-scale patterned silicon hydrophobic surfaces. Journal of Micromechanics and Microengineering, 2010, 20, 055021.	2.6	31
84	Characteristics of Sn-2.5Ag flip chip solder joints under thermal shock test conditions. Journal of Mechanical Science and Technology, 2009, 23, 435-441.	1.5	4
85	Evaporating characteristics of sessile droplet on hydrophobic and hydrophilic surfaces. Microelectronic Engineering, 2009, 86, 1350-1353.	2.4	140
86	Self-Organized Interconnection Process Using Solderable ACA (Anisotropic Conductive Adhesive). Materials Transactions, 2009, 50, 1684-1689.	1.2	6
87	Hybrid Interconnection Process Using Solderable ICAs (Isotropic Conductive Adhesives) with Low-Melting-Point Alloy Fillers. Materials Transactions, 2009, 50, 2649-2655.	1.2	20
88	Numerical Analysis of Coalescence Characteristics of Low Melting Point Alloy Fillers Using a Non-Equilibrium Phase Field Model. Materials Transactions, 2009, 50, 1678-1683.	1.2	1
89	Femtosecond pulse laser interactions with thin silicon films and crater formation considering optical phonons and wave interference. Microsystem Technologies, 2008, 14, 1439-1446.	2.0	15
90	Numerical Investigation of Opto-Energy Phenomena in Thin Gold Films Irradiated by Femtosecond Pulse Laser Considering Quantum Effects. Numerical Heat Transfer; Part A: Applications, 2008, 54, 279-292.	2.1	6

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91	Numerical Investigation on Self-Organized Interconnection Using Anisotropic Conductive Adhesive with Low Melting Point Alloy Filler. Materials Transactions, 2008, 49, 2572-2578.	1.2	1
92	Wave Interference Effect in Thin Film Structures under Pulsed Laser Irradiation. Materials Transactions, 2008, 49, 1880-1888.	1.2	5
93	Optical Characteristics and Nanoscale Energy Transport in Thin Film Structures Irradiated by Nanosecond-to-Femtosecond Lasers. Materials Transactions, 2008, 49, 2521-2527.	1.2	2
94	Numerical analysis of crater formation and ablation depth in thin silicon films heated by ultrashort pulse train lasers. Journal of Mechanical Science and Technology, 2007, 21, 1847.	1.5	5
95	Femtosecond Laser Pulse Train Effects on Optical Characteristics and Nonequilibrium Energy Transport in Metal Thin Films Considering Quantum Effects. , 2007, , .		1
96	Fokker-Planck Approach to Laser-Induced Damage in Dielectrics with Subpicosecond Pulses. Nanoscale and Microscale Thermophysical Engineering, 2006, 10, 217-232.	2.6	4
97	Three Temperature Model for Nonequilibrium Energy Transfer in Semiconductor Films Irradiated with Short Pulse Lasers. Materials Transactions, 2006, 47, 2835-2841.	1.2	11
98	A numerical study on ultra-short pulse laser-induced damage on dielectrics using the Fokkerâ€“Planck equation. International Journal of Heat and Mass Transfer, 2006, 49, 1493-1500.	4.8	13
99	Three-temperature modeling of carrier-phonon interactions in thin GaAs film structures irradiated by picosecond pulse lasers. Journal of Mechanical Science and Technology, 2006, 20, 1292-1301.	1.5	1
100	Nonequilibrium heat transfer characteristics during ultrafast pulse laser heating of a silicon microstructure. Journal of Mechanical Science and Technology, 2005, 19, 1378-1389.	1.5	6
101	Numerical Analysis of Electronic Transport Characteristics in Dielectrics Irradiated by Ultrashort Pulsed Laser Using the Nonlocal Fokker-Planck Equation. Numerical Heat Transfer; Part A: Applications, 2005, 48, 59-76.	2.1	7
102	NUMERICAL ANALYSIS ON HEAT TRANSFER CHARACTERISTICS OF A SILICON FILM IRRADIATED BY PICO-TO FEMTOSECOND PULSE LASERS. Numerical Heat Transfer; Part A: Applications, 2003, 44, 833-850.	2.1	36
103	A numerical study on the spray-to-spray impingement system. Journal of Mechanical Science and Technology, 2002, 16, 235-245.	0.4	11
104	Modelling of Wall Films Formed by Impinging Diesel Sprays. , 2001, , .		4
105	Development and application of a new spray impingement model considering film formation in a diesel engine. Journal of Mechanical Science and Technology, 2001, 15, 951-961.	0.4	11
106	An experimental and numerical study on thermal performance of a regenerator system with ceramic honeycomb. Journal of Mechanical Science and Technology, 2001, 15, 357-365.	0.4	17
107	Modeling of diesel spray impingement on a flat wall. Journal of Mechanical Science and Technology, 2000, 14, 796-806.	0.4	6
108	Comparison of two-equation model and reynolds stress models with experimental data for the three-dimensional turbulent boundary layer in a 30 degree bend. Journal of Mechanical Science and Technology, 2000, 14, 93-102.	0.4	3

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109	Comparison of Spray/Wall Impingement Models with Experimental Data. Journal of Propulsion and Power, 2000, 16, 939-945.	2.2	8