

# Bong Jae Lee

## List of Publications by Year in descending order

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120  
papers

3,506  
citations

126907

33  
h-index

155660

55  
g-index

120  
all docs

120  
docs citations

120  
times ranked

2639  
citing authors

#	ARTICLE	IF	CITATIONS
1	Coherent thermal emission by excitation of magnetic polaritons between periodic strips and a metallic film. <i>Optics Express</i> , 2008, 16, 11328.	3.4	229
2	Spectrally Selective Inorganic-Based Multilayer Emitter for Daytime Radiative Cooling. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 8073-8081.	8.0	195
3	Recent advances in using nanofluids in renewable energy systems and the environmental implications of their uptake. <i>Nano Energy</i> , 2021, 86, 106069.	16.0	149
4	Radiative Heat Transfer Analysis in Plasmonic Nanofluids for Direct Solar Thermal Absorption. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2012, 134, .	1.8	146
5	A Janus emitter for passive heat release from enclosures. <i>Science Advances</i> , 2020, 6, .	10.3	116
6	Analysis on the performance of a flat-plate volumetric solar collector using blended plasmonic nanofluid. <i>Solar Energy</i> , 2016, 132, 247-256.	6.1	111
7	Tailoring near-field thermal radiation between metallo-dielectric multilayers using coupled surface plasmon polaritons. <i>Nature Communications</i> , 2018, 9, 4302.	12.8	95
8	Study of the surface and bulk polaritons with a negative index metamaterial. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005, 22, 1016.	2.1	90
9	Surface Plasmon Assisted Energy Conversion in Dye-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2011, 1, 415-421.	19.5	86
10	Near-field thermal radiation between graphene-covered doped silicon plates. <i>Optics Express</i> , 2013, 21, 22173.	3.4	81
11	Near-field thermal radiation between doped silicon plates at nanoscale gaps. <i>Physical Review B</i> , 2015, 91, .	3.2	81
12	Spatial and temporal coherence of thermal radiation in asymmetric Fabry-Perot resonance cavities. <i>International Journal of Heat and Mass Transfer</i> , 2009, 52, 3024-3031.	4.8	74
13	Optical property of blended plasmonic nanofluid based on gold nanorods. <i>Optics Express</i> , 2014, 22, A1101.	3.4	74
14	Graphene-assisted Si-InSb thermophotovoltaic system for low temperature applications. <i>Optics Express</i> , 2015, 23, A240.	3.4	70
15	Broadband Solar Thermal Absorber Based on Optical Metamaterials for High-Temperature Applications. <i>Advanced Optical Materials</i> , 2016, 4, 1265-1273.	7.3	69
16	Hyperbolic metamaterial-based near-field thermophotovoltaic system for hundreds of nanometer vacuum gap. <i>Optics Express</i> , 2016, 24, A635.	3.4	65
17	Visible and near-infrared radiative properties of vertically aligned multi-walled carbon nanotubes. <i>Nanotechnology</i> , 2009, 20, 215704.	2.6	63
18	Optimization of a direct absorption solar collector with blended plasmonic nanofluids. <i>Solar Energy</i> , 2017, 150, 512-520.	6.1	63

#	ARTICLE	IF	CITATIONS
19	Absorption characteristics of nanoparticles with sharp edges for a direct-absorption solar collector. <i>Renewable Energy</i> , 2020, 145, 21-28.	8.9	63
20	Development of a high-energy-density portable/mobile hydrogen energy storage system incorporating an electrolyzer, a metal hydride and a fuel cell. <i>Applied Energy</i> , 2020, 259, 114175.	10.1	62
21	Performance analysis of a direct-absorption parabolic-trough solar collector using plasmonic nanofluids. <i>Renewable Energy</i> , 2019, 143, 24-33.	8.9	60
22	Coherent Thermal Emission From Modified Periodic Multilayer Structures. <i>Journal of Heat Transfer</i> , 2007, 129, 17-26.	2.1	57
23	Soft and Deformable Sensors Based on Liquid Metals. <i>Sensors</i> , 2019, 19, 4250.	3.8	57
24	Ultrahigh emissivity of grating-patterned PDMS film from 8 to 13 $\mu\text{m}$ wavelength regime. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	52
25	Femtosecond laser nanowelding of silver nanowires for transparent conductive electrodes. <i>RSC Advances</i> , 2016, 6, 86232-86239.	3.6	43
26	Confinement of infrared radiation to nanometer scales through metallic slit arrays. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 608-619.	2.3	41
27	Optimization of a near-field thermophotovoltaic system operating at low temperature and large vacuum gap. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 210, 35-43.	2.3	38
28	Transmission Enhancement Through Nanoscale Metallic Slit Arrays from the Visible to Mid-Infrared. <i>Journal of Computational and Theoretical Nanoscience</i> , 2008, 5, 201-213.	0.4	37
29	Modeling Radiative Properties of Silicon with Coatings and Comparison with Reflectance Measurements. <i>Journal of Thermophysics and Heat Transfer</i> , 2005, 19, 558-565.	1.6	34
30	Light scattering of semitransparent sintered polytetrafluoroethylene films. <i>Journal of Biomedical Optics</i> , 2008, 13, 054064.	2.6	34
31	Nanoscale Heaters: Single Nanowire Resistive Nanoheater for Highly Localized Thermochemical Reactions: Localized Hierarchical Heterojunction Nanowire Growth (Small 24/2014). <i>Small</i> , 2014, 10, 5014-5014.	10.0	34
32	Heat transfer analysis of a high-power and large-capacity thermal battery and investigation of effective thermal model. <i>Journal of Power Sources</i> , 2019, 424, 35-41.	7.8	34
33	Absorption characteristics of a metal-insulator-metal nanodisk for solar thermal applications. <i>Optics Express</i> , 2020, 28, 15731.	3.4	34
34	Surface waves between metallic films and truncated photonic crystals observed with reflectance spectroscopy. <i>Optics Letters</i> , 2008, 33, 204.	3.3	33
35	Wavelength-Selective Solar Thermal Absorber With Two-Dimensional Nickel Gratings. <i>Journal of Heat Transfer</i> , 2014, 136, .	2.1	33
36	Modified screening-based Kriging method with cross validation and application to engineering design. <i>Applied Mathematical Modelling</i> , 2019, 70, 626-642.	4.2	32

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37	Synthesis of Thermanol-based plasmonic nanofluids with core/shell nanoparticles and characterization of their absorption/scattering coefficients. <i>Solar Energy Materials and Solar Cells</i> , 2020, 209, 110442.	6.2	32
38	Experimental investigation of effusion and transpiration air cooling for single turbine blade. <i>Applied Thermal Engineering</i> , 2021, 182, 116156.	6.0	32
39	Lateral shift in photon tunneling studied by the energy streamline method. <i>Optics Express</i> , 2006, 14, 9963.	3.4	30
40	Design analysis of doped-silicon surface plasmon resonance immunosensors in mid-infrared range. <i>Optics Express</i> , 2010, 18, 19396.	3.4	30
41	Optimization of the spectral absorption coefficient of a plasmonic nanofluid for a direct absorption solar collector. <i>Solar Energy</i> , 2018, 169, 231-236.	6.1	29
42	Modeling and experiments of near-field thermophotovoltaic conversion: A review. <i>Solar Energy Materials and Solar Cells</i> , 2022, 238, 111556.	6.2	27
43	Lateral Shifts in Near-Field Thermal Radiation with Surface Phonon Polaritons. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2008, 12, 238-250.	2.6	26
44	Partially Coherent Spectral Transmittance of Dielectric Thin Films with Rough Surfaces. <i>Journal of Thermophysics and Heat Transfer</i> , 2005, 19, 360-366.	1.6	25
45	Effects of multilayered graphene on the performance of near-field thermophotovoltaic system at longer vacuum gap distances. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 197, 84-94.	2.3	25
46	Modeling the radiative properties of semitransparent wafers with rough surfaces and thin-film coatings. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2005, 93, 185-194.	2.3	24
47	Energy pathways in nanoscale thermal radiation. <i>Applied Physics Letters</i> , 2007, 91, 153101.	3.3	24
48	Electromagnetic resonance modes on a two-dimensional tandem grating and its application for broadband absorption in the visible spectrum. <i>Optics Express</i> , 2016, 24, A202.	3.4	23
49	Surface and magnetic polaritons on two-dimensional nanoslab-aligned multilayer structure. <i>Optics Express</i> , 2011, 19, 16375.	3.4	22
50	Programmable Fabrication of Submicrometer Bent Pillar Structures Enabled by a Photoreconfigurable Azopolymer. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 5058-5064.	8.0	22
51	Analysis of Photocurrent Generation within a Schottky-Junction-Based Near-Field Thermophotovoltaic System. <i>Physical Review Applied</i> , 2019, 11, .	3.8	21
52	Effect of light scattering on the performance of a direct absorption solar collector. <i>Frontiers in Energy</i> , 2018, 12, 169-177.	2.3	20
53	Surface-Plasmon-Enhanced Near-Field Radiative Heat Transfer between Planar Surfaces with a Thin-Film Plasmonic Coupler. <i>Physical Review Applied</i> , 2020, 14, .	3.8	18
54	A hybrid direct-absorption parabolic-trough solar collector combining both volumetric and surface absorption. <i>Applied Thermal Engineering</i> , 2021, 185, 116333.	6.0	18

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55	Design of a Broadband Solar Thermal Absorber Using a Deep Neural Network and Experimental Demonstration of Its Performance. <i>Scientific Reports</i> , 2019, 9, 15028.	3.3	17
56	Development of performance analysis model for central receiver system and its application to pattern-free heliostat layout optimization. <i>Solar Energy</i> , 2017, 153, 499-507.	6.1	16
57	Optimization and performance analysis of a multilayer structure for daytime radiative cooling. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 260, 107475.	2.3	16
58	Comparative analysis of direct-absorption parabolic-trough solar collectors considering concentric nanofluid segmentation. <i>International Journal of Energy Research</i> , 2020, 44, 4015-4025.	4.5	15
59	Quantum Size Effect on the Lattice Specific Heat of Nanostructures. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2010, 14, 1-20.	2.6	14
60	Precise infrared thermometry with considering background radiation for gas turbine air cooling application. <i>International Journal of Thermal Sciences</i> , 2020, 158, 106534.	4.9	14
61	Tailoring the Spectral Absorption Coefficient of a Blended Plasmonic Nanofluid Using a Customized Genetic Algorithm. <i>Scientific Reports</i> , 2020, 10, 8891.	3.3	14
62	Control of thermal radiative properties using two-dimensional complex gratings. <i>International Journal of Heat and Mass Transfer</i> , 2015, 84, 713-721.	4.8	13
63	Micropipette Resonator Enabling Targeted Aspiration and Mass Measurement of Single Particles and Cells. <i>ACS Sensors</i> , 2019, 4, 3275-3282.	7.8	13
64	All-day radiative cooling using a grating-patterned PDMS film emitter. <i>Applied Thermal Engineering</i> , 2022, 214, 118771.	6.0	13
65	Single Nanowire Resistive Nano-heater for Highly Localized Thermo-Chemical Reactions: Localized Hierarchical Heterojunction Nanowire Growth. <i>Small</i> , 2014, 10, 5015-5022.	10.0	12
66	Optical Measurements of Three-Dimensional Microscopic Temperature Distributions Around Gold Nanorods Excited by Localized Surface Plasmon Resonance. <i>Physical Review Applied</i> , 2019, 11, .	3.8	12
67	Performance analysis of a hybrid HVAC system consisting of a solar thermal collector and a radiative cooling panel. <i>Energy and Buildings</i> , 2021, 241, 110921.	6.7	12
68	Analysis of temperature-dependent I-V characteristics of the Au/n-GaSb Schottky diode. <i>Materials Science in Semiconductor Processing</i> , 2021, 131, 105882.	4.0	12
69	EXPERIMENTAL EXPLORATION OF NEAR-FIELD RADIATIVE HEAT TRANSFER. <i>Annual Review of Heat Transfer</i> , 2020, 23, 13-58.	1.0	12
70	Comprehensive analysis of an optimized near-field tandem thermophotovoltaic converter. <i>Solar Energy Materials and Solar Cells</i> , 2022, 236, 111522.	6.2	12
71	Thermophotovoltaic Energy Conversion in Far-to-Near-Field Transition Regime. <i>ACS Photonics</i> , 2022, 9, 1748-1756.	6.6	12
72	Robust optimization of a tandem grating solar thermal absorber. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 209, 129-136.	2.3	11

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73	Measurement of effective thermal conductivity of LaNi <sub>5</sub> powder packed bed. International Journal of Heat and Mass Transfer, 2021, 165, 120735.	4.8	11
74	Tunable surface plasmons of dielectric core-metal shell particles for dye sensitized solar cells. RSC Advances, 2013, 3, 9690.	3.6	10
75	Experimental and numerical investigation of micro-scale effusion and transpiration air cooling on cascaded turbine blades. Case Studies in Thermal Engineering, 2022, 32, 101892.	5.7	10
76	Determination of absorption coefficient of nanofluids with unknown refractive index from reflection and transmission spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 213, 107-112.	2.3	9
77	Indirect Measurements of Coherent Thermal Emission from a Truncated Photonic Crystal Structure. Journal of Thermophysics and Heat Transfer, 2009, 23, 9-17.	1.6	8
78	Brownian motion induced dynamic near-field interaction between quantum dots and plasmonic nanoparticles in aqueous medium. Applied Physics Letters, 2010, 96, 174101.	3.3	8
79	Synthesis of thermally stable graphite nanofluids and photo-thermal conversion properties. International Journal of Energy Research, 2021, 45, 11320-11328.	4.5	8
80	Optimization of a grating structure in hexagonal array with omnidirectional emission for daytime radiative cooling. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 284, 108165.	2.3	8
81	Enhancement of effective thermal conductivity of rGO/Mg nanocomposite packed beds. International Journal of Heat and Mass Transfer, 2022, 192, 122891.	4.8	8
82	Flow characterization of microscale effusion and transpiration air cooling on single blade. Case Studies in Thermal Engineering, 2022, 31, 101863.	5.7	7
83	Development of a device for characterizing radiative cooling performance. Applied Thermal Engineering, 2022, 213, 118744.	6.0	7
84	Temperature measurements of heated microcantilevers using scanning thermoreflectance microscopy. Review of Scientific Instruments, 2013, 84, 034903.	1.3	6
85	Thermal-Conductivity Enhancement by Surface Electromagnetic Waves Propagating along Multilayered Structures with Asymmetric Surrounding Media. Physical Review Applied, 2019, 12, .	3.8	6
86	Assessment of phonon boundary scattering from light scattering standpoint. Journal of Applied Physics, 2012, 112, 063513.	2.5	5
87	Multiscale Fluidic Channels via Internal Oxidation and Oxide Etching of Self-Assembled Silicon-on-Nothing Structures. Journal of Microelectromechanical Systems, 2019, 28, 865-868.	2.5	5
88	Optical simulation for radiative absorption of plasmonic nanoparticles using metal-insulator-magnetic structure for solar energy applications. Applied Physics Letters, 2021, 119, .	3.3	5
89	Formation, evolution, and prevention of thermally induced defects on germanium and silicon upon high-temperature vacuum annealing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	5
90	Thermal design of a hydrogen storage system using La(Ce)Ni <sub>5</sub> . International Journal of Hydrogen Energy, 2020, 45, 8742-8749.	7.1	5

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91	Thick Germanium-on-Nothing Structures by Annealing Microscale Hole Arrays With Straight Sidewall Profiles. <i>Journal of Microelectromechanical Systems</i> , 2022, 31, 183-185.	2.5	5
92	Chapter 3 Theory of Thermal Radiation and Radiative Properties. <i>Experimental Methods in the Physical Sciences</i> , 2009, 42, 73-132.	0.1	4
93	Synthesis of Low Viscous Dielectric Nanofluids and Characterization of Convection Heat Transfer. <i>Journal of Thermophysics and Heat Transfer</i> , 2018, 32, 965-974.	1.6	4
94	Magnetic resonance on core-shell nanowires with notches. <i>Applied Physics Letters</i> , 2011, 99, 101907.	3.3	3
95	Note: Simultaneous determination of local temperature and thickness of heated cantilevers using two-wavelength thermorefectance. <i>Review of Scientific Instruments</i> , 2014, 85, 036109.	1.3	3
96	Phonon Transport through Nanoscale Contact in Tip-Based Thermal Analysis of Nanomaterials. <i>Nanomaterials</i> , 2017, 7, 200.	4.1	3
97	Thermal Analysis of Ball Grid Array Non-Volatile Memory Express Solid-State Drive in Vacuum. <i>IEEE Electron Device Letters</i> , 2018, 39, 1908-1911.	3.9	3
98	Microfluidic resonators with two parallel channels for independent sample loading and effective density tuning. <i>Micro and Nano Systems Letters</i> , 2020, 8, .	3.7	3
99	Near-Field Electroluminescent Refrigeration System Consisting of Two Graphene Schottky Diodes. <i>Journal of Heat Transfer</i> , 2020, 142, .	2.1	3
100	Temperature measurement of Joule heated silicon micro/nanowires using selectively decorated quantum dots. <i>Nanotechnology</i> , 2016, 27, 505705.	2.6	2
101	Effect of Constriction on Phonon Transport in Silicon Thin Films and Nanowires. <i>Smart Science</i> , 2016, 4, 173-179.	3.2	2
102	AFM-thermorefectance for simultaneous measurements of the topography and temperature. <i>RSC Advances</i> , 2018, 8, 27616-27622.	3.6	2
103	Beyond mass measurement for single microparticles via bimodal operation of microchannel resonators. <i>Micro and Nano Systems Letters</i> , 2019, 7, .	3.7	2
104	Aspiration and MASS Measurement of Microparticles and Unicellular Organisms via Micropipette Resonators. , 2019, , .		2
105	Solid-State Nanopore for Molecular Detection. <i>International Journal of Precision Engineering and Manufacturing</i> , 2021, 22, 2001-2026.	2.2	2
106	Towards highly specific measurement of binary mixtures by tandem operation of nanomechanical sensing system and micro-Raman spectroscopy. <i>Sensors and Actuators B: Chemical</i> , 2022, 367, 132133.	7.8	2
107	Analysis of phonon transport in silicon nanowires including optical phonons. <i>Journal of the Korean Physical Society</i> , 2013, 63, 1007-1013.	0.7	1
108	Sub-Beam Size Temperature Measurement of Heavily Doped Silicon Heater Using Two-Wavelength Thermorefectance Microscopy. <i>Journal of Heat Transfer</i> , 2017, 139, .	2.1	1

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109	Effective Radiative Properties of Tilted Metallic Nanorod Arrays Considering Polarization Coupling. Scientific Reports, 2018, 8, 13896.	3.3	1
110	Special issue on the Third International Workshop on Nano-micro Thermal Radiation (NanoRad™17). Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 237, 106592.	2.3	1
111	PERFORMANCE ANALYSIS MODEL FOR A NEAR-FIELD THERMOPHOTOVOLTAIC SYSTEM WITH A BACKSIDE REFLECTOR. , 2019, , .		1
112	PCA-based sub-surface structure and defect analysis for germanium-on-nothing using nanoscale surface topography. Scientific Reports, 2022, 12, 7205.	3.3	1
113	Surrogate model for optimizing annealing duration of self-assembled membrane-cavity structures. Micro and Nano Systems Letters, 2022, 10, .	3.7	1
114	Multifunctional One-dimensional Phononic Crystal Structures Exploiting Interfacial Acoustic Waves. Materials Research Society Symposia Proceedings, 2009, 1188, 145.	0.1	0
115	Deflection Sensitivity Calibration of Heated Microcantilevers Using Pseudo-Gratings. IEEE Sensors Journal, 2012, 12, 2666-2667.	4.7	0
116	Design a Wavelength-Selective Absorber for Solar Thermal Collectors With Two-Dimensional Nickel Gratings. , 2013, , .		0
117	Partially Spatial Coherent Thermal Emitter Based on an Epsilon-and-mu-near-zero Metamaterial. Journal of the Korean Physical Society, 2020, 76, 889-894.	0.7	0
118	Process of measurement error treatment using model selection and local intensive smoothing and application to refractive index estimation of water. Applied Physics B: Lasers and Optics, 2020, 126, 1.	2.2	0
119	Corrigendum to "Heat transfer analysis of a high-power and large-capacity thermal battery and investigation of effective thermal model" [J. Power Sources 424 (2019) 35-41]. Journal of Power Sources, 2021, 507, 230293.	7.8	0
120	Correction to: Microfluidic resonators with two parallel channels for independent sample loading and effective density tuning. Micro and Nano Systems Letters, 2020, 8, .	3.7	0