

Mehmet ArÄ±k

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6943619/publications.pdf>

Version: 2024-02-01

103
papers

1,746
citations

394421

19
h-index

377865

34
g-index

104
all docs

104
docs citations

104
times ranked

924
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal management of LEDs: package to system. , 2004, , .		189
2	Effusivity-based correlation of surface property effects in pool boiling CHF of dielectric liquids. International Journal of Heat and Mass Transfer, 2003, 46, 3755-3764.	4.8	117
3	An investigation into feasibility of impingement heat transfer and acoustic abatement of meso scale synthetic jets. Applied Thermal Engineering, 2007, 27, 1483-1494.	6.0	105
4	Enhancement of pool boiling critical heat flux in dielectric liquids by microporous coatings. International Journal of Heat and Mass Transfer, 2007, 50, 997-1009.	4.8	100
5	Local Heat Transfer Coefficients of a High-Frequency Synthetic Jet during Impingement Cooling over Flat Surfaces. Heat Transfer Engineering, 2008, 29, 763-773.	1.9	89
6	Meso Scale Pulsating Jets for Electronics Cooling. Journal of Electronic Packaging, Transactions of the ASME, 2005, 127, 503-511.	1.8	78
7	Chip-scale thermal management of high-brightness LED packages. , 2004, , .		68
8	Optimization of Piezoelectric Oscillating Fan-Cooled Heat Sinks for Electronics Cooling. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 25-31.	1.3	63
9	Heat transfer characteristics of impinging steady and synthetic jets over vertical flat surface. International Journal of Heat and Mass Transfer, 2015, 80, 825-834.	4.8	48
10	Fabrication and structural characterization of a resonant frequency PZT microcantilever. Smart Materials and Structures, 2001, 10, 252-263.	3.5	46
11	Effects of Localized Heat Generations Due to the Color Conversion in Phosphor Particles and Layers of High Brightness Light Emitting Diodes. , 2003, , 611.		42
12	An investigation into flow and heat transfer for a slot impinging synthetic jet. International Journal of Heat and Mass Transfer, 2016, 100, 634-645.	4.8	37
13	Effect of chip and bonding defects on the junction temperatures of high-brightness light-emitting diodes. Optical Engineering, 2005, 44, 111305.	1.0	34
14	An Experimental and Computational Heat Transfer Study of Pulsating Jets. Journal of Heat Transfer, 2008, 130, .	2.1	33
15	Hierarchical Life Prediction Model for Actively Cooled LED-Based Luminaire. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 728-737.	1.3	33
16	Chip to System Levels Thermal Needs and Alternative Thermal Technologies for High Brightness LEDs. Journal of Electronic Packaging, Transactions of the ASME, 2007, 129, 328-338.	1.8	31
17	An investigation into flow and heat transfer of an ultrasonic micro-blower device for electronics cooling applications. Applied Thermal Engineering, 2016, 106, 881-889.	6.0	30
18	Micro Fluidic Jets for Thermal Management of Electronics. , 2004, , 647.		29

#	ARTICLE	IF	CITATIONS
19	Light Weight High Performance Thermal Management With Advanced Heat Sinks and Extended Surfaces. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 161-166.	1.3	26
20	Steady and Unsteady Air Impingement Heat Transfer for Electronics Cooling Applications. Journal of Heat Transfer, 2013, 135, .	2.1	26
21	Predicting Heat Transfer From Unsteady Synthetic Jets. Journal of Heat Transfer, 2012, 134, .	2.1	25
22	Pool boiling of perfluorocarbon mixtures on silicon surfaces. International Journal of Heat and Mass Transfer, 2010, 53, 5596-5604.	4.8	24
23	Environmental and economical impact of LED lighting systems and effect of thermal management. International Journal of Energy Research, 2010, 34, 1195-1204.	4.5	23
24	Energy Efficiency of Low Form Factor Cooling Devices. , 2007, , 1347.		19
25	Predicting Heat Transfer for Low- and High-Frequency Central-Orifice Synthetic Jets. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 586-595.	2.5	18
26	On the Conduction and Convection Heat Transfer From Lightweight Advanced Heat Sinks. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 424-431.	1.3	17
27	Spreading behavior of droplets impacting over substrates with varying surface topographies. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 606, 125385.	4.7	17
28	Life prediction of LED-based recess downlight cooled by synthetic jet. Microelectronics Reliability, 2012, 52, 937-948.	1.7	16
29	An Experimental Study of Impinging Synthetic Jets for Heat Transfer Augmentation. International Journal of Air-Conditioning and Refrigeration, 2015, 23, 1550024.	0.7	16
30	A Comparative Study on the Junction Temperature Measurements of LEDs With Raman Spectroscopy, Microinfrared (IR) Imaging, and Forward Voltage Methods. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 1914-1922.	2.5	16
31	An Experimental and Computational Sensitivity Analysis of Synthetic Jet Cooling Performance. , 2006, , 93.		15
32	Coupled Acoustic and Heat Transfer Modeling of a Synthetic Jet. , 2006, , .		13
33	Fluid-Structure Interaction Model for Low-Frequency Synthetic Jets. AIAA Journal, 2011, 49, 316-323.	2.6	13
34	Design and development of a durable series elastic actuator with an optimized spring topology. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2021, 235, 7848-7858.	2.1	13
35	Synthetic Jet Cooling Technology for Electronics Thermal Managementâ€™A Critical Review. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 1156-1170.	2.5	12
36	Interaction of Synthetic Jet Cooling Performance With Gravity and Buoyancy Driven Flows. , 2007, , 123.		11

#	ARTICLE	IF	CITATIONS
37	Development of a High-Lumen Solid State Down Light Application. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 668-679.	1.3	11
38	Effect of actuator deflection on heat transfer for low and high frequency synthetic jets. , 2014, , .		11
39	Numerical and experimental analysis of a heat-pipe-embedded printed circuit board for solid state lighting applications. Experimental Heat Transfer, 2019, 32, 1-13.	3.2	11
40	Particle based investigation of self-heating effect of phosphor particles in phosphor converted light emitting diodes. Journal of Luminescence, 2021, 231, 117782.	3.1	10
41	Natural Convection Immersion Cooling With Enhanced Optical Performance of Light-Emitting Diode Systems. Journal of Electronic Packaging, Transactions of the ASME, 2015, 137, .	1.8	9
42	A Comparative Study for the Junction Temperature of Green Light-Emitting Diodes. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 2024-2035.	2.5	9
43	An experimental study on the heat transfer and wettability characteristics of micro-structured surfaces during water vapor condensation under different pressure conditions. International Communications in Heat and Mass Transfer, 2021, 120, 105063.	5.6	9
44	Pool Boiling Critical Heat Flux in Dielectric Liquids and Nanofluids. Advances in Heat Transfer, 2011, 43, 1-76.	0.9	8
45	Heat Transfer Impact of Synthetic Jets for Air-Cooled Array of Fins. Journal of Heat Transfer, 2016, 138, .	2.1	8
46	Thermal and optical performance characterization of bare and phosphor converted LEDs through package level immersion cooling. International Journal of Heat and Mass Transfer, 2022, 189, 122607.	4.8	8
47	Turbulent forced convection with sinusoidal variation of inlet temperature between two parallel-plates. International Communications in Heat and Mass Transfer, 1996, 23, 1121-1132.	5.6	7
48	Energy Conversion Efficiency of Synthetic Jets. , 2011, , .		7
49	Developing a standard measurement and calculation procedure for high brightness LED junction temperature. , 2014, , .		7
50	Impact of junction temperature over forward voltage drop for red, blue and green high power light emitting diode chips. , 2017, , .		7
51	An experimental and analytical study on the influence of superhydrophobic micro-textured surfaces on liquid wetting phenomena. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 555, 191-200.	4.7	7
52	Effect of Polymer Coating on Vapor Condensation Heat Transfer. Journal of Heat Transfer, 2020, 142, .	2.1	7
53	Piezoelectric Fans: Heat Transfer Enhancements for Electronics Cooling. , 2008, , .		7
54	Synthetic jet enhancement of natural convection and pool boiling in a dielectric liquid. , 2002, , .		7

#	ARTICLE	IF	CITATIONS
55	Investigation of combined optical and thermal effects on phosphor converted light-emitting diodes with liquid immersion cooling. <i>Optical Engineering</i> , 2018, 57, 1.	1.0	6
56	Impingement Air Cooling With Synthetic Jets Over Small and Large Heated Surfaces. , 2005, , 277.		5
57	Design, fabrication, and characterization of thin film PZT membranes for high flux electronics cooling applications. <i>Smart Materials and Structures</i> , 2005, 14, 1239-1249.	3.5	5
58	Effect of Synthetic Jets Over Natural Convection Heat Sinks. , 2008, , .		5
59	An Experimental and Computational Study on Efficiency of White LED Packages With a Thermocaloric Approach. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2017, , 1-7.	2.5	5
60	Impact of Functional Nanofluid Coolant on Radiator Performance. <i>Journal of Thermal Science and Engineering Applications</i> , 2019, 11, .	1.5	5
61	Acoustics and Heat Transfer Characteristics of Piezoelectric Driven Central Orifice Synthetic Jet Actuators. <i>Experimental Heat Transfer</i> , 2022, 35, 758-779.	3.2	5
62	Immersion Cooling of Light Emitting Diodes. , 2010, , .		4
63	System-Level Metrics for Thermal Management Technology. <i>Journal of Thermal Science and Engineering Applications</i> , 2011, 3, .	1.5	4
64	A Computational and Experimental Investigation of Synthetic Jets for Cooling of Electronics. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2015, 137, .	1.8	4
65	Parametric Effects On Pool Boiling Heat Transfer and Critical Heat Flux: A Critical Review. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2022, , .	1.8	4
66	Thermal Characteristics of a Synthetic Jet Integrated Heat Sink Design for Air-Cooled Electronics. , 2009, , .		3
67	A Computational Study on the Momentum and Heat Transfer Distribution of a Low Frequency Round Impinging Synthetic Jet. , 2015, , .		3
68	Thermal Performance of a Light Emitting Diode Light Engine for a Multipurpose Automotive Exterior Lighting System With Competing Board Technologies. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2017, 139, .	1.8	3
69	Sweeping Flow Heat Transfer With Piezoelectric Fans Over Vertical Flat Surfaces. , 2009, , .		3
70	Solid State Thermotunneling Systems for Power Generation. <i>Nanoscience and Nanotechnology Letters</i> , 2010, 2, 189-195.	0.4	3
71	An Investigation Into the Optothermal Behavior of a High Power Red Light Emitting Diode: Impact of an Optical Path. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2021, 143, .	1.8	3
72	Optical and Thermal Analysis of Secondary Optics in Light Emitting Diodesâ€™ Packaging: Analysis of MR16 Lamp. <i>Journal of Physics: Conference Series</i> , 2021, 2116, 012121.	0.4	3

#	ARTICLE	IF	CITATIONS
73	Coupled Structural and Fluid Dynamics Modeling of a Synthetic Jet. , 2008, , .		2
74	Nano-thermotunneling systems for efficient power generation. , 2010, , .		2
75	Understanding the performance metrics for advanced cooling methodologies. , 2010, , .		2
76	Comparison of synthetic and steady air jets for impingement heat transfer over vertical surfaces. , 2012, , .		2
77	Effect of optical design on the thermal management for the Smart TV LED backlight systems. , 2014, , .		2
78	An investigation into momentum and temperature fields of a meso-scale synthetic jet. , 2014, , .		2
79	An experimental and computational investigation of a thin piezofan cooler. , 2017, , .		2
80	Impact of Electronics Over Localized Hot Spots in Multi-Chip White LED Light Engines. , 2019, , .		2
81	Thermal and Optical Characterization of White and Blue Multi-Chip LED Light Engines. , 2021, , .		2
82	On the Individual Droplet Growth Modeling and Heat Transfer Analysis in Dropwise Condensation. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, , 1-1.	2.5	2
83	Effect of 3D Diffusion Over Vertical Thin Rectangular Geometries in Natural Convection Heat Transfer. , 2006, , .		2
84	Effect of Direct Liquid Cooling on the Light Emitting Diode Local Hot Spots: Natural Convection Immersion Cooling. , 2014, , .		2
85	Editorial For a Brighter Future: Solid State Lighting. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 666-667.	1.3	1
86	An Investigation Into Performance Characteristics of an Axial Flow Fan Using CFD for Electronic Devices. , 2015, , .		1
87	FREQUENCY-DEPENDENT FLOW RESPONSE OF A HIGH-SPEED RECTANGULAR SYNTHETIC JET. Journal of Flow Visualization and Image Processing, 2016, 23, 93-116.	0.5	1
88	Acoustic analysis of an axial fan. , 2017, , .		1
89	Development of a Computational Modeling and Experimental Validation Approach for KSF LED Packages in a 65â€Ultra Thin LED TV System. , 2018, , .		1
90	Enhanced Thermal Performance of High Flux LED Systems with Two-Phase Immersion Cooling. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
91	Conduction-driven cooling of LED-based automotive LED lighting systems for abating local hot spots. Optical Engineering, 2018, 57, 1.	1.0	1
92	Development of a measurement technique for highly conductive CVD diamonds and analysis of uncertainties due to 3D heat losses. , 2010, , .		0
93	Characteristics of low reynolds number steady air jet impingement heat transfer over vertical flat surfaces. , 2012, , .		0
94	Hierarchical Reliability Assessment Models for Novel LED-Based Recessed Down Lighting Systems. , 2013, , 455-495.		0
95	SYNTHETIC JETS FOR HEAT TRANSFER AUGMENTATION IN MICROELECTRONICS SYSTEMS. WSPC Series in Advanced Integration and Packaging, 2014, , 125-165.	0.0	0
96	Synthetic Jets for Heat Transfer Augmentation in Microelectronics Systems. , 2014, , 109-143.		0
97	An Investigation of Performance of Synthetic Jets Emanating from Circular, Elliptical and Rectangular Nozzles. , 2018, , .		0
98	Impact of Orifice Size over Mechanical, Flow and Thermal Performances of Synthetic Jets. , 2018, , .		0
99	Rapid Heating And Cooling Chamber for a Photonics Junction Measurement System. , 2020, , .		0
100	An experimental and theoretical analysis of vapor-to-liquid phase change on microstructured surfaces. Applied Thermal Engineering, 2020, 178, 115382.	6.0	0
101	A Numerical Investigation into Frost Formation under Impinging Flow Conditions. , 2021, , .		0
102	Thermal Needs and Challenges for the Solid State Lighting Devices: Materials to Packages. , 2005, , .		0
103	Hierarchical Reliability Model for Life Prediction of Actively Cooled LED-Based Luminaire. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 189-190.	0.5	0