

Ankur Jain

List of Publications by Year in descending order

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93
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2,277
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#	ARTICLE	IF	CITATIONS
1	Eigenfunction-based solution for one-dimensional solid-liquid phase change heat transfer problems with advection. <i>International Journal of Thermal Sciences</i> , 2022, 172, 107262.	2.6	6
2	Increasing perpendicular alignment in extruded filament by an orifice embedded 3D printing nozzle. <i>Virtual and Physical Prototyping</i> , 2022, 17, 1-18.	5.3	3
3	Theoretical analysis of unsteady convective heat transfer from a flat plate with time-varying and spatially-varying temperature distribution. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122061.	2.5	4
4	An iterative analytical model for aging analysis of Li-ion cells. <i>Journal of Power Sources</i> , 2022, 517, 230667.	4.0	9
5	Theoretical model for diffusion-reaction based drug delivery from a multilayer spherical capsule. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122072.	2.5	13
6	Analytical modeling of conjugate heat transfer between a bed of phase change material and laminar convective flow. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122180.	2.5	1
7	Theoretical analysis of phase change heat transfer and energy storage in a spherical phase change material with encapsulation. <i>International Journal of Heat and Mass Transfer</i> , 2022, 185, 122348.	2.5	12
8	Drug diffusion and release from a bioerodible spherical capsule. <i>International Journal of Pharmaceutics</i> , 2022, 616, 121442.	2.6	7
9	Local Thermal Nonequilibrium (LTNE) Modeling of a Partially Porous Channel With Spatial Variation in Biot Number. <i>Journal of Heat Transfer</i> , 2022, 144, .	1.2	0
10	Analytical solution of the convection-diffusion-reaction-source (CDRS) equation using Green's function technique. <i>International Communications in Heat and Mass Transfer</i> , 2022, 131, 105869.	2.9	4
11	Theoretical modeling of endovascular drug delivery into a multilayer arterial wall from a drug-coated balloon. <i>International Journal of Heat and Mass Transfer</i> , 2022, 187, 122572.	2.5	12
12	Eigenfunction-based solution for solid-liquid phase change heat transfer problems with time-dependent boundary conditions. <i>International Journal of Heat and Mass Transfer</i> , 2022, 189, 122693.	2.5	8
13	Thermal Management Effectiveness and Efficiency of a Fin Surrounded by a Phase Change Material (PCM). <i>International Journal of Heat and Mass Transfer</i> , 2022, 191, 122630.	2.5	19
14	Accelerating the numerical solution of thermal runaway in Li-ion batteries. <i>Journal of Power Sources</i> , 2022, 538, 231531.	4.0	8
15	Discrete Element Modeling (DEM) simulations of powder bed densification using horizontal compactors in metal additive manufacturing. <i>Powder Technology</i> , 2022, 405, 117557.	2.1	8
16	Derivation of multiple but finite number of imaginary eigenvalues for a two-layer diffusion-reaction problem. <i>International Journal of Heat and Mass Transfer</i> , 2022, 194, 123037.	2.5	5
17	Diffusion and reaction in a two-dimensional multilayer body: Analytical solution and imaginary eigenvalue analysis. <i>International Journal of Heat and Mass Transfer</i> , 2022, 196, 123163.	2.5	4
18	Analytical modeling of solution-phase diffusion in porous composite electrodes under time-dependent flux boundary conditions using Green's function method. <i>Ionics</i> , 2021, 27, 213-224.	1.2	5

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19	Local thermal non-equilibrium (LTNE) model for developed flow in porous media with spatially-varying Biot number. <i>International Journal of Heat and Mass Transfer</i> , 2021, 164, 120538.	2.5	21
20	Computationally-efficient thermal simulations of large Li-ion battery packs using submodeling technique. <i>International Journal of Heat and Mass Transfer</i> , 2021, 165, 120616.	2.5	10
21	Temperature distribution in a multi-layer cylinder with circumferentially-varying convective heat transfer boundary conditions. <i>International Journal of Thermal Sciences</i> , 2021, 160, 106673.	2.6	12
22	Dual-purpose thermal management of Li-ion cells using solid-state thermoelectric elements. <i>International Journal of Energy Research</i> , 2021, 45, 4303-4313.	2.2	5
23	Multi-Mode Heat Transfer Simulations of the Onset and Propagation of Thermal Runaway in a Pack of Cylindrical Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2021, 168, 020504.	1.3	18
24	Void reduction in fused filament fabrication (FFF) through <i>in situ</i> nozzle-integrated compression rolling of deposited filaments. <i>Virtual and Physical Prototyping</i> , 2021, 16, 146-159.	5.3	19
25	Improved print quality in fused filament fabrication through localized dispensing of hot air around the deposited filament. <i>Additive Manufacturing</i> , 2021, 40, 101917.	1.7	8
26	Imaginary Eigenvalues in Multilayer One-Dimensional Thermal Conduction Problem with Linear Temperature-Dependent Heat Generation. <i>International Journal of Heat and Mass Transfer</i> , 2021, 170, 120993.	2.5	13
27	A Review of Recent Research on Heat Transfer in Three-Dimensional Integrated Circuits (3-D ICs). <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2021, 11, 802-821.	1.4	41
28	Theoretical analysis of transient solution phase concentration field in a porous composite electrode with time-dependent flux boundary condition. <i>Journal of Applied Electrochemistry</i> , 2021, 51, 1241-1252.	1.5	2
29	Investigation of the Impact of Flow of Vented Gas on Propagation of Thermal Runaway in a Li-Ion Battery Pack. <i>Journal of the Electrochemical Society</i> , 2021, 168, 060555.	1.3	33
30	Unsteady convective heat transfer from a flat plate with heat flux that varies in space and time. <i>International Journal of Heat and Mass Transfer</i> , 2021, 172, 121084.	2.5	4
31	Solution Phase Limited Diffusion Modeling in a Li-ion Cell Subject to Concentration-Dependent Pore Wall Flux. <i>Journal of the Electrochemical Society</i> , 2021, 168, 090511.	1.3	3
32	Multilayer one-dimensional Convection-Diffusion-Reaction (CDR) problem: Analytical solution and imaginary eigenvalue analysis. <i>International Journal of Heat and Mass Transfer</i> , 2021, 177, 121465.	2.5	10
33	Conditionally Exact Closed-Form Solution for Moving Boundary Problems in Heat and Mass Transfer in the Presence of Advection. <i>International Journal of Heat and Mass Transfer</i> , 2021, 180, 121802.	2.5	14
34	Theoretical modeling of heat transfer in a multilayer rectangular body with spatially-varying convective heat transfer boundary condition. <i>International Journal of Thermal Sciences</i> , 2021, 170, 107156.	2.6	10
35	Analytical Solution for Temperature Distribution in a Multilayer Body With Spatially Varying Convective Heat Transfer Boundary Conditions on Both Ends. <i>Journal of Heat Transfer</i> , 2021, 143, .	1.2	3
36	Investigation of the Impact of Radiative Shielding by Internal Partitions Walls on Propagation of Thermal Runaway in a Matrix of Cylindrical Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2021, 168, 120507.	1.3	8

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37	Molecular dynamics simulations of separator-cathode interfacial thermal transport in a Li-ion cell. <i>Surfaces and Interfaces</i> , 2020, 21, 100674.	1.5	11
38	Raceways, rebates, and retrofits: an exploration of several American cities' policies to facilitate electric vehicle purchase and usage. <i>International Journal of Urban Sustainable Development</i> , 2020, , 1-11.	1.0	2
39	Measurement of the in-plane temperature field on the build plate during polymer extrusion additive manufacturing using infrared thermometry. <i>Polymer Testing</i> , 2020, 92, 106866.	2.3	11
40	Semi-analytical thermal modeling of transverse and longitudinal fins in a cylindrical phase change energy storage system. <i>International Journal of Thermal Sciences</i> , 2020, 153, 106352.	2.6	26
41	Measurement of thermal conductivity of millimeter-sized wires using the fin effect. <i>Applied Thermal Engineering</i> , 2020, 178, 115482.	3.0	2
42	Post-Process Effects of Isothermal Annealing and Initially Applied Static Uniaxial Loading on the Ultimate Tensile Strength of Fused Filament Fabrication Parts. <i>Materials</i> , 2020, 13, 352.	1.3	22
43	Analytical Modeling of Solid Phase Diffusion in Single-Layer and Composite Electrodes Under Time-Dependent Flux Boundary Condition. <i>Journal of the Electrochemical Society</i> , 2020, 167, 060528.	1.3	9
44	Analytical Model Based Prediction of State-of-Charge (SoC) of a Lithium-Ion Cell under Time-Varying Charge/Discharge Currents. <i>Journal of the Electrochemical Society</i> , 2020, 167, 120544.	1.3	10
45	Early Design Stage Evaluation of Thermal Performance of Battery Heat Acquisition System of a Hybrid Electric Aircraft. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2020, 17, .	1.1	0
46	The impact of thermal properties on performance of phase change based energy storage systems. <i>Applied Thermal Engineering</i> , 2019, 162, 114154.	3.0	15
47	Theoretical modeling and optimization of fin-based enhancement of heat transfer into a phase change material. <i>International Journal of Heat and Mass Transfer</i> , 2019, 145, 118698.	2.5	23
48	Solution of the Phase Change Stefan Problem With Time-Dependent Heat Flux Using Perturbation Method. <i>Journal of Heat Transfer</i> , 2019, 141, .	1.2	17
49	Improvement in build-direction thermal conductivity in extrusion-based polymer additive manufacturing through thermal annealing. <i>Additive Manufacturing</i> , 2019, 26, 242-249.	1.7	23
50	Nozzle-integrated pre-deposition and post-deposition heating of previously deposited layers in polymer extrusion based additive manufacturing. <i>Additive Manufacturing</i> , 2019, 28, 719-726.	1.7	28
51	Theoretical modeling of a phase change heat transfer problem with a pre-melted or pre-solidified region. <i>International Journal of Heat and Mass Transfer</i> , 2019, 136, 635-643.	2.5	3
52	Experimental and numerical investigation of heat transfer in Li-ion battery pack of a hoverboard. <i>International Journal of Energy Research</i> , 2019, 43, 1802-1814.	2.2	4
53	Prediction of thermal runaway and thermal management requirements in cylindrical Li-ion cells in realistic scenarios. <i>International Journal of Energy Research</i> , 2019, 43, 1827-1838.	2.2	23
54	Experimental and theoretical investigation of heat transfer in platform bed during polymer extrusion based additive manufacturing. <i>Polymer Testing</i> , 2019, 73, 439-446.	2.3	22

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55	Analytical modeling and optimization of phase change thermal management of a Li-ion battery pack. Applied Thermal Engineering, 2019, 148, 229-237.	3.0	42
56	(Invited) Exact and Approximate Methods for Analytical Modeling of Thermal and Electrochemical Transport in Li-Ion Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
57	Measurement of anisotropic thermal conductivity and inter-layer thermal contact resistance in polymer fused deposition modeling (FDM). Additive Manufacturing, 2018, 21, 84-90.	1.7	51
58	Measurement of radial thermal conductivity of a cylinder using a time-varying heat flux method. International Journal of Thermal Sciences, 2018, 129, 301-308.	2.6	14
59	Conjugate Heat Transfer Analysis of Thermal Management of a Li-Ion Battery Pack. Journal of Electrochemical Energy Conversion and Storage, 2018, 15, .	1.1	34
60	Measurement and modeling of filament temperature distribution in the standoff gap between nozzle and bed in polymer-based additive manufacturing. Additive Manufacturing, 2018, 24, 224-231.	1.7	21
61	Measurements and modeling to determine the critical temperature for preventing thermal runaway in Li-ion cells. Applied Thermal Engineering, 2018, 145, 287-294.	3.0	57
62	Investigation of process-structure-property relationships in polymer extrusion based additive manufacturing through in situ high speed imaging and thermal conductivity measurements. Additive Manufacturing, 2018, 23, 132-139.	1.7	23
63	(Invited) Analytical Methods for Understanding Multiscale Thermal Transport in Li-Ion Batteries Towards Improved Safety and Performance. ECS Meeting Abstracts, 2018, , .	0.0	0
64	Improved Thermal Performance of a Li-Ion Cell through Heat Pipe Insertion. Journal of the Electrochemical Society, 2017, 164, A961-A967.	1.3	20
65	An experimentally validated method for temperature prediction during cyclic operation of a Li-ion cell. International Journal of Heat and Mass Transfer, 2017, 112, 89-96.	2.5	24
66	Non-invasive measurement of internal temperature of a cylindrical Li-ion cell during high-rate discharge. International Journal of Heat and Mass Transfer, 2017, 111, 223-231.	2.5	45
67	Determination of the core temperature of a Li-ion cell during thermal runaway. Journal of Power Sources, 2017, 370, 27-35.	4.0	71
68	Enhancement of thermal transport in Gel Polymer Electrolytes with embedded BN/Al ₂ O ₃ nano- and micro-particles. Journal of Power Sources, 2017, 362, 219-227.	4.0	32
69	Experimental and Numerical Investigation of Interdie Thermal Resistance in Three-Dimensional Integrated Circuits. Journal of Electronic Packaging, Transactions of the ASME, 2017, 139, .	1.2	14
70	Measurement of Multiscale Thermal Transport Phenomena in Li-Ion Cells: A Review. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	1.1	58
71	Experimental and theoretical analysis of a method to predict thermal runaway in Li-ion cells. Journal of Power Sources, 2016, 330, 167-174.	4.0	110
72	Experimental and numerical investigation of core cooling of Li-ion cells using heat pipes. Energy, 2016, 113, 852-860.	4.5	85

#	ARTICLE	IF	CITATIONS
73	Far-Field Interrogation of Microstrip Patch Antenna for Temperature Sensing Without Electronics. IEEE Sensors Journal, 2016, 16, 7053-7060.	2.4	54
74	Non-invasive, transient determination of the core temperature of a heat-generating solid body. Scientific Reports, 2016, 6, 35886.	1.6	18
75	Contactless, non-intrusive core temperature measurement of a solid body in steady-state. International Journal of Heat and Mass Transfer, 2016, 101, 779-788.	2.5	5
76	Measurement of out-of-plane thermal conductivity of substrates for flexible electronics and displays. Microelectronic Engineering, 2015, 142, 36-39.	1.1	13
77	Heat transfer enhancement in a lithium-ion cell through improved material-level thermal transport. Journal of Power Sources, 2015, 300, 123-131.	4.0	63
78	An iterative, analytical method for solving conjugate heat transfer problems. International Journal of Heat and Mass Transfer, 2015, 90, 1232-1240.	2.5	12
79	Modeling of steady-state and transient thermal performance of a Li-ion cell with an axial fluidic channel for cooling. International Journal of Energy Research, 2015, 39, 573-584.	2.2	17
80	An explicit analytical model for rapid computation of temperature field in a three-dimensional integrated circuit (3D IC). International Journal of Thermal Sciences, 2015, 87, 103-109.	2.6	52
81	Measurement of anisotropic thermophysical properties of cylindrical Li-ion cells. Journal of Power Sources, 2014, 252, 298-304.	4.0	208
82	Analytical modeling of temperature distribution in an anisotropic cylinder with circumferentially-varying convective heat transfer. International Journal of Heat and Mass Transfer, 2014, 79, 1027-1033.	2.5	28
83	Measurement of in-plane thermal conductivity and heat capacity of separator in Li-ion cells using a transient DC heating method. Journal of Power Sources, 2014, 272, 378-385.	4.0	38
84	Microfluidic control of axonal guidance. Scientific Reports, 2014, 4, 6457.	1.6	17
85	Determination of temperature distribution in three-dimensional integrated circuits (3D ICs) with unequally-sized die. Applied Thermal Engineering, 2013, 56, 176-184.	3.0	26
86	Nano/microscale pyroelectric energy harvesting: challenges and opportunities. International Journal of Smart and Nano Materials, 2013, 4, 229-245.	2.0	89
87	Analytical Solution for Steady-State and Transient Temperature Fields in Vertically Stacked 3-D Integrated Circuits. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 2031-2039.	1.4	46
88	Analytical and Numerical Modeling of the Thermal Performance of Three-Dimensional Integrated Circuits. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 56-63.	1.4	134
89	Interstratum Connection Design Considerations for Cost-Effective 3-D System Integration. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2010, 18, 450-460.	2.1	14
90	Die/wafer stacking with reciprocal design symmetry (RDS) for mask reuse in three-dimensional (3D) integration technology. , 2009, , .		16

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91	Measurement of the Thermal Conductivity and Heat Capacity of Freestanding Shape Memory Thin Films Using the 3 \bar{I} % Method. Journal of Heat Transfer, 2008, 130, .	1.2	110
92	Analytical modeling of Li-ion diffusion in a three-layer electrode-separator-electrode stack with time-dependent current. Ionics, 0, , 1.	1.2	0
93	Modeling the Effect of In Situ Nozzle-Integrated Compression Rolling on the Void Reduction and Filaments-Filament Adhesion in Fused Filament Fabrication (FFF). Multiscale Science and Engineering, 0, , 1.	0.9	3