Sunil Kumar

List of Publications by Year
in descending order

114 papers	3,578 citations	109137 35 h-index	143772 57 g-index
121 all docs	121 docs citations	121 times ranked	2494 citing authors

#	Article	IF	Citations
1	Experimental Evidence of Hyperbolic Heat Conduction in Processed Meat. Journal of Heat Transfer, 1995, 117, 568-573.	1.2	529
2	Significance of Non-Fourier Heat Waves in Conduction. Journal of Heat Transfer, 1994, 116, 221-224.	1.2	128
3	Discrete-ordinates solution of short-pulsed laser transport in two-dimensional turbid media. Applied Optics, 2001, 40, 3156.	2.1	123
4	Development and comparison of models for light-pulse transport through scatteringâ€“absorbing media. Applied Optics, 1999, 38, 188.	2.1	121
5	Microscale Aspects of Thermal Radiation Transport and Laser Applications. Advances in Heat Transfer, 1999, 33, 187-294.	0.4	100
6	Allosteric Activation Dictates PRC2 Activity Independent of Its Recruitment to Chromatin. Molecular Cell, 2018, 70, 422-434.e6.	4.5	100
7	Monte Carlo simulation and experiments of pulsed radiative transfer. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 73, 159-168.	1.1	95
8	Three-Dimensional Discrete Ordinates Method in Transient Radiative Transfer. Journal of Thermophysics and Heat Transfer, 2002, 16, 289-296.	0.9	93
9	Dependent Absorption and Extinction of Radiation by Small Particles. Journal of Heat Transfer, 1990, 112, 178-185.	1.2	81
10	Multidimensional Monte Carlo Simulation of Short-Pulse Laser Transport in Scattering Media. Journal of Thermophysics and Heat Transfer, 2000, 14, 504-511.	0.9	78
11	Î±-Helix Mimetics as Modulators of AÎ² Self-Assembly. Journal of the American Chemical Society, 2017, 139, 5744-5755.	6.6	73
12	Neomycinâ^'Neomycin Dimer: An All-Carbohydrate Scaffold with High Affinity for AT-Rich DNA Duplexes. Journal of the American Chemical Society, 2011, 133, 7361-7375.	6.6	71
13	The Differential-Discrete-Ordinate Method for Solutions of the Equation of Radiative Transfer. Journal of Heat Transfer, 1990, 112, 424-429.	1.2	67
14	Thermal Conductivity of Thin Metallic Films. Journal of Heat Transfer, 1994, 116, 28-34.	1.2	65
15	Entrance pipe flow and heat transfer for a Bingham plastic. International Journal of Heat and Mass Transfer, 1993, 36, 543-552.	2.5	64
16	Aminoglycoside Binding toOxytricha novaTelomeric DNA. Biochemistry, 2010, 49, 9891-9903.	1.2	61
17	Foldamer-Mediated Structural Rearrangement Attenuates AÎ² Oligomerization and Cytotoxicity. Journal of the American Chemical Society, 2017, 139, 17098-17108.	6.6	61
18	Transient Radiation Transport in Participating Media Within a Rectangular Enclosure. Journal of Thermophysics and Heat Transfer, 1997, 11, 409-414.	0.9	57

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19	Foldamer-mediated manipulation of a pre-amyloid toxin. Nature Communications, 2016, 7, 11412.	5.8	56
20	Click Dimers To Target HIV TAR RNA Conformation. Biochemistry, 2012, 51, 2331-2347.	1.2	55
21	Islet Amyloid-Induced Cell Death and Bilayer Integrity Loss Share a Molecular Origin Targetable with Oligopyridylamide-Based Î±-Helical Mimetics. Chemistry and Biology, 2015, 22, 369-378.	6.2	55
22	Protein mimetic amyloid inhibitor potently abrogates cancer-associated mutant p53 aggregation and restores tumor suppressor function. Nature Communications, 2021, 12, 3962.	5.8	53
23	Hyperbolic damped-wave models for transient light-pulse propagation in scattering media. Applied Optics, 1996, 35, 3372.	2.1	52
24	Probing the Recognition Surface of a DNA Triplex: Binding Studies with Intercalatorâ^'Neomycin Conjugates. Biochemistry, 2010, 49, 5540-5552.	1.2	52
25	Conformational switching within dynamic oligomers underpins toxic gain-of-function by diabetes-associated amyloid. Nature Communications, 2018, 9, 1312.	5.8	50
26	Peptidomimetic-Based Multidomain Targeting Offers Critical Evaluation of AÎ² Structure and Toxic Function. Journal of the American Chemical Society, 2018, 140, 6562-6574.	6.6	49
27	Designed Cell-Penetrating Peptide Inhibitors of Amyloid-beta Aggregation and Cytotoxicity. Cell Reports Physical Science, 2020, 1, 100014.	2.8	47
28	Molecular recognition of singleâ€stranded RNA: Neomycin binding to poly(A). FEBS Letters, 2009, 583, 2269-2275.	1.3	46
29	Hyperbolic temperature profiles for laser surface interactions. Journal of Applied Physics, 1994, 76, 5014-5021.	1.1	44
30	Recognition of HIV TAR RNA by triazole linked neomycin dimers. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 4788-4792.	1.0	44
31	A foldamer approach to targeting membrane bound helical states of islet amyloid polypeptide. Chemical Communications, 2013, 49, 4749.	2.2	42
32	Equivalent isotropic scattering formulation for transient short-pulse radiative transfer in anisotropic scattering planar media. Applied Optics, 2000, 39, 4411.	2.1	39
33	Recognition of HIV-TAR RNA using neomycinâ€“benzimidazole conjugates. Bioorganic and Medicinal Chemistry Letters, 2013, 23, 5689-5693.	1.0	39
34	Crystal Structure of theHomo sapiensKynureninase-3-Hydroxyhippuric Acid Inhibitor Complex: Insights into the Molecular Basis Of Kynureninase Substrate Specificity. Journal of Medicinal Chemistry, 2009, 52, 389-396.	2.9	38
35	Analysis of Combined Radiation and Convection in a Particulate-Laden Liquid Film. Journal of Solar Energy Engineering, Transactions of the ASME, 1990, 112, 293-300.	1.1	36
36	A fluorescence-based screen for ribosome binding antibiotics. Analytical Biochemistry, 2013, 434, 300-307.	1.1	36

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37	Multivalency in the recognition and antagonism of a HIV TAR RNAâ€“TAT assembly using an aminoglycoside benzimidazole scaffold. Organic and Biomolecular Chemistry, 2016, 14, 2052-2056.	1.5	36
38	Noninvasive detection of inhomogeneities in turbid media with time-resolved log-slope analysis. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 84, 493-500.	1.1	35
39	Calorimetric and spectroscopic studies of aminoglycoside binding to AT-rich DNA triple helices. Biochimie, 2010, 92, 514-529.	1.3	34
40	Numerical modeling of two-dimensional smoldering processes. Combustion and Flame, 1993, 95, 170-182.	2.8	31
41	Amphiphilic oligoamide Î±-helix peptidomimetics inhibit islet amyloid polypeptide aggregation. Tetrahedron Letters, 2015, 56, 3670-3673.	0.7	31
42	Effective heat capacity of ferrofluids â€“ Analytical approach. International Journal of Thermal Sciences, 2014, 84, 267-274.	2.6	30
43	Effective Diameter of Agglomerates for Radiative Extinction and Scattering. Combustion Science and Technology, 1989, 66, 199-216.	1.2	28
44	Semiconductor-superconductor hybrid electronics. Cryogenics, 1990, 30, 1014-1023.	0.9	28
45	Direct observations of field-induced assemblies in magnetite ferrofluids. Journal of Applied Physics, 2015, 117, 103907.	1.1	28
46	Permeability of a fracture with cylindrical asperities. Fluid Dynamics Research, 1991, 7, 131-137.	0.6	25
47	Folded Small Molecule Manipulation of Islet Amyloid Polypeptide. Chemistry and Biology, 2014, 21, 775-781.	6.2	24
48	Positive Pressure Ventilation for fighting wind-driven high-rise fires: Simulation-based analysis and optimization. Fire Safety Journal, 2017, 87, 57-64.	1.4	21
49	Effective in-field thermal conductivity of ferrofluids. Journal of Applied Physics, 2018, 123, 043902.	1.1	21
50	Foldamer scaffolds suggest distinct structures are associated with alternative gains-of-function in a preamyloid toxin. Chemical Communications, 2016, 52, 6391-6394.	2.2	20
51	Influence of Linker Length and Composition on Enzymatic Activity and Ribosomal Binding of Neomycin Dimers. Antimicrobial Agents and Chemotherapy, 2015, 59, 3899-3905.	1.4	18
52	Improvement of Positive Pressure Ventilation by optimizing stairwell door opening area. Fire Safety Journal, 2017, 92, 195-198.	1.4	18
53	Photochemical and Photothermal Model for Pulsed-Laser Ablation. Journal of Thermophysics and Heat Transfer, 2002, 16, 193-199.	0.9	17
54	Influence of linker length in shape recognition of Bâ^— DNA by dimeric aminoglycosides. Bioorganic and Medicinal Chemistry, 2015, 23, 3105-3109.	1.4	17

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55	Substituent Effects on the Reaction of Î²-Benzoylalanines withPseudomonas fluorescensKynureninase. Biochemistry, 2010, 49, 7913-7919.	1.2	16
56	Î±â€Helixâ€Mimetic Foldamers for Targeting HIVâ€1 TAR RNA. Chemistry - A European Journal, 2019, 25, 7265-7269.	2.7	16
57	Sub-stoichiometric inhibition of IAPP aggregation: a peptidomimetic approach to anti-amyloid agents. RSC Chemical Biology, 2020, 1, 225-232.	2.0	16
58	Fractal study and simulation of fracture roughness. Geophysical Research Letters, 1990, 17, 701-704.	1.5	15
59	Dependent Scattering Properties of Woven Fibrous Insulations for Normal Incidence. Journal of Heat Transfer, 1995, 117, 160-166.	1.2	14
60	Characterization of Ribosomal Binding and Antibacterial Activities Using Two Orthogonal High-Throughput Screens. Antimicrobial Agents and Chemotherapy, 2013, 57, 4717-4726.	1.4	14
61	Foldamers reveal and validate therapeutic targets associated with toxic Î±-synuclein self-assembly. Nature Communications, 2022, 13, 2273.	5.8	14
62	Radiative transport in a planar medium exposed to azimuthally unsymmetric incident radiation. Journal of Quantitative Spectroscopy and Radiative Transfer, 1986, 35, 187-212.	1.1	13
63	Effect of rounding corners on optical resonances in single-mode sharp-cornered microresonators. Optics Letters, 2016, 41, 878.	1.7	13
64	Radiative transfer in thermal insulations of hollow and coated fibers. Journal of Thermophysics and Heat Transfer, 1987, 1, 289-295.	0.9	12
65	Flow field characteristics of a supersonic jet influenced by downstream microjet fluidic injection. Aerospace Science and Technology, 2019, 93, 105281.	2.5	12
66	Rapid and inexpensive process to fabricate paper based microfluidic devices using a cut and heat plastic lamination process. Lab on A Chip, 2022, 22, 3377-3389.	3.1	11
67	A tenuous, collisional atmosphere on Callisto. Icarus, 2021, 368, 114597.	1.1	10
68	Laser transport through thin scattering layers. Applied Optics, 2010, 49, 358.	2.1	9
69	Optimization of a Single-Cell Solid-Oxide Fuel Cell Using Computational Fluid Dynamics. Journal of Fuel Cell Science and Technology, 2011, 8, .	0.8	9
70	Thermal Analysis of the Hot Dip-Coating Process. Journal of Heat Transfer, 1993, 115, 453-460.	1.2	8
71	Interaction of Vortex with Bow Shock Wave: Computational Model, Experimental Validation, Enhanced Mixing. AIAA Journal, 2018, 56, 3071-3085.	1.5	8
72	Parametric aspects of electronâ€“phonon temperature model for short pulse laser interactions with thin metallic films. Journal of Applied Physics, 1996, 80, 675-680.	1.1	7

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73	Shape readout of ATâ€rich DNA by carbohydrates. Biopolymers, 2014, 101, 720-732.	1.2	7
74	Teaching an old scaffold new recognition tricks: oligopyrrolamide antagonists of IAPP aggregation. Organic and Biomolecular Chemistry, 2018, 16, 733-741.	1.5	7
75	Use of downstream fluid injection to reduce subsonic jet noise. International Journal of Aeroacoustics, 2019, 18, 554-574.	0.8	7
76	Enhanced Intracellular Uptake of Indocyanine Green by Polymeric Nanoparticulate Delivery Systems. Journal of Biomedical Nanotechnology, 2005, 1, 168-175.	0.5	7
77	On computing radiative heat flux distributions using the method. International Journal of Heat and Mass Transfer, 1986, 29, 635-637.	2.5	6
78	Interference effects on scattering by parallel fibers at normal incidence. Journal of Thermophysics and Heat Transfer, 1990, 4, 305-310.	0.9	6
79	Optical sensor for temperature measurement using bimetallic concept. Optical Fiber Technology, 2011, 17, 315-320.	1.4	6
80	Assessment of web-based interactive game system methodology for dissemination and diffusion to improve firefighter safety and wellness. Fire Safety Journal, 2015, 72, 59-67.	1.4	6
81	Multivalent amino sugars to recognize different TAR RNA conformations. MedChemComm, 2014, 5, 1235-1246.	3.5	5
82	Experimental Modeling of Circular Hydraulic Jump by the Impingement of a Water Column on a Horizontal Disk. Journal of Fluids Engineering, Transactions of the ASME, 1999, 121, 86-92.	0.8	4
83	Fuel Cells as an Alternative to Cold Ironing. Journal of Fuel Cell Science and Technology, 2009, 6, .	0.8	4
84	Experiments on dependent scattering of radiation. , 1987, , .		2
85	Stability of a free convection density-extremum flow in a porous medium. International Journal of Heat and Mass Transfer, 1987, 30, 351-361.	2.5	2
86	Optimization of a Single-Cell Solid-Oxide Fuel Cell Using Computational Fluid Dynamics. , 2010, , .		2
87	Optimization of Positive Pressure Ventiliation Tactic for Wind Driven High Rise Fires. , 2011, , .		2
88	Directional Noise Reduction via Asymmetric Downstream Fluidic Injection. , 2017, , .		2
89	Directionally Targeted Jet Noise Suppression: Benefits of Asymmetric Downstream Fluidic Injection. , 2018, , .		2
90	Modification of Results From Computational-Fluid-Dynamics Simulations of Single-Cell Solid-Oxide Fuel Cells to Estimate Multicell Stack Performance. Journal of Fuel Cell Science and Technology, 2011, 8, .	0.8	2

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91	Experimental and Numerical Studies of Short Pulse Propagation in Model Systems. , 2002, , .		2
92	Design optimization of a single-mode microring resonator for label-free detection of biomarkers within a tunable spectral range of 2 nm. , 2018, , .		2
93	Modeling of Ultrashort Light Pulse Propagation in Light Scattering Media. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 1997, 63, 895-900.	0.2	1
94	Novel near-infrared nanoparticlulate biomarker: preparation and stability studies. , 2004, , .		1
95	Optical Resonance in Dielectric Micro-Sphere for Temperature Measurement. , 2007, , 303.		1
96	An Optical Fiber Biosensor for Monitoring Drug Delivery. , 2007, , 155.		1
97	Modification of Results From Computational-Fluid-Dynamics Simulations of Single-Cell Solid-Oxide Fuel Cells to Estimate Multi-Cell Stack Performance. , 2010, , .		1
98	Technique to Improve Performance of Positive Pressure Ventilation Tactic in High-Rise Fires. , 2011, , .		1
99	Temperature Effects on Optical Resonances in Single-Mode Circular Ring and Squircular Resonators. , 2017, , .		1
100	Study of Shock Wave/Vortex Interaction for Supersonic Mixing Enhancement. , 2017, , .		1
101	Jet Noise Reduction by Downstream Fluidic Injection: Effect of Injection Pressure Ratio and Number of Injection Ports. , 2018, , .		1
102	Coupling and Optical Analysis of a Round-Cornered Square-Shaped Microresonator. Applied Sciences (Switzerland), 2021, 11, 8659.	1.3	1
103	Effect of rotation on quality factor of single-mode optical resonances in round-cornered square-shaped resonators. , 2018, , .		1
104	Rapid Diagnosis of Inhomogeneity in Turbid Media. , 2003, , .		1
105	Optical properties by time-resolved fluorescence Monte Carlo simulation. , 2003, , .		0
106	Spatial sensitivity profiles by time-resolved fluorescence Monte Carlo simulation. , 2003, 4955, 581.		0
107	Heat Transfer in Ultrafast Laser Tissue Welding. , 2005, , 287.		0
108	New approach for optical resonances in dielectric circular cylinder based on whispering gallery mode. Proceedings of SPIE, 2007, , .	0.8	0

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109	An Opto-Thermal Micro-Disk Resonator for Temperature Detection. , 2009, , .		0
110	Positive Pressurization and Ventilation for Fighting Fires in High-Rise Structures with Multiple Stairwells. Journal of Physics: Conference Series, 2018, 1107, 042037.	0.3	0
111	Bow Shock/Vortex Interaction: Effect of Reducing the Vortex Height on Structure of the Generated Flow Field. , 2019, , .		0
112	Modeling Energy Deposition in Very Thin Layered Media by Monte Carlo Simulation. , 2007, , .		0
113	Phase sensitive diffraction sensor for high sensitivity refractive index measurement. , 2018, , .		0
114	Downstream fluidic injection based directionally targeted jet noise reduction system. , 2022, , .		0