

Piyush Sabharwall

List of Publications by Year in descending order

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73
papers

1,553
citations

393982

19
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344852

36
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93
all docs

93
docs citations

93
times ranked

1268
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonnuclear Experimental Capabilities to Support Design, Development, and Demonstration of Microreactors. Nuclear Technology, 2023, 209, S41-S59.	0.7	1
2	A Critical Review of Heat Pipe Experiments in Nuclear Energy Applications. Nuclear Science and Engineering, 2023, 197, 719-752.	0.5	1
3	A two-phase three-field modeling framework for heat pipe application in nuclear reactors. Annals of Nuclear Energy, 2022, 165, 108770.	0.9	12
4	Investigations into Plasma-Mediated Decomposition of Organoiodide Species as a Pretreatment for Mitigation of Radioiodine Emissions. Industrial & Engineering Chemistry Research, 2022, 61, 269-278.	1.8	0
5	Gamma-radiation-induced negative nonlinear absorption in quartz glass. Optical Materials Express, 2022, 12, 1188.	1.6	2
6	Numerical study of multi-component flow and mixing in a scaled fission product venting system. Nuclear Engineering and Design, 2022, 391, 111714.	0.8	2
7	Large eddy simulation of flow through an axisymmetric sudden expansion. Physics of Fluids, 2022, 34, .	1.6	4
8	Thermodynamics of Ca(OH) ₂ /CaO reversible reaction: Refinement of reaction equilibrium and implications for operation of chemical heat pump. Chemical Engineering Science, 2021, 230, 116227.	1.9	18
9	A <sc>chemical absorption</sc> heat pump for utilization of nuclear power in high temperature industrial processes. International Journal of Energy Research, 2021, 45, 14612-14629.	2.2	2
10	Post-irradiation examination of optical components for advanced fission reactor instrumentation. Review of Scientific Instruments, 2021, 92, 105107.	0.6	4
11	Photodecomposition of methyl iodide as pretreatment for adsorption of radioiodine species in used nuclear fuel recycling operations. Chemical Engineering Journal, 2020, 400, 125730.	6.6	7
12	Comparative review of hydrogen production technologies for nuclear hybrid energy systems. Progress in Nuclear Energy, 2020, 123, 103317.	1.3	186
13	Experimental and Scale Analysis of a Solid/Liquid Phase Change Thermal Energy Storage System. Heat Transfer Engineering, 2019, 40, 1600-1618.	1.2	2
14	Heat transfer and computational fluid dynamics for molten salt reactor technologies. , 2019, , 801-834.		1
15	Dynamic behavior of a high-temperature printed circuit heat exchanger: Numerical modeling and experimental investigation. Applied Thermal Engineering, 2018, 135, 246-256.	3.0	28
16	Mass transport analysis for tritium removal in FHRs. Annals of Nuclear Energy, 2018, 121, 250-259.	0.9	6
17	Development and validation of Nusselt number and friction factor correlations for laminar flow in semi-circular zigzag channel of printed circuit heat exchanger. Applied Thermal Engineering, 2017, 123, 1327-1344.	3.0	72
18	Adsorption of radioactive iodine and krypton from off-gas stream using continuous flow adsorption column. Chemical Engineering Journal, 2017, 320, 222-231.	6.6	27

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19	Economic comparison of current electricity generating technologies and advanced nuclear options. Electricity Journal, 2017, 30, 73-79.	1.3	6
20	Porous microsphere of magnesium oxide as an effective sorbent for removal of volatile iodine from off-gas stream. Adsorption, 2016, 22, 335-345.	1.4	31
21	Control of Advanced Reactor-Coupled Heat Exchanger System: Incorporation of Reactor Dynamics in System Response to Load Disturbances. Nuclear Engineering and Technology, 2016, 48, 1349-1359.	1.1	1
22	A phase-field approach to model multi-axial and microstructure dependent fracture in nuclear grade graphite. Journal of Nuclear Materials, 2016, 475, 200-208.	1.3	15
23	Fales Hot Springs: A case study in renewable augmented net zero energy. Electricity Journal, 2016, 29, 59-70.	1.3	0
24	Capture of harmful radioactive contaminants from off-gas stream using porous solid sorbents for clean environment – A review. Chemical Engineering Journal, 2016, 306, 369-381.	6.6	235
25	Pressure drop and heat transfer characteristics of a high-temperature printed circuit heat exchanger. Applied Thermal Engineering, 2016, 108, 1409-1417.	3.0	105
26	Experimental and numerical study of a printed circuit heat exchanger. Annals of Nuclear Energy, 2016, 97, 221-231.	0.9	68
27	Radiation Heat Transfer in the Molten Salt FLiNaK. Nuclear Technology, 2016, 196, 53-60.	0.7	21
28	Experimental Study of DRACS Thermal Performance in a Low-Temperature Test Facility. Nuclear Technology, 2016, 196, 319-337.	0.7	6
29	Thermodynamic exergy analysis for small modular reactor in nuclear hybrid energy system. EPJ Nuclear Sciences & Technologies, 2016, 2, 23.	0.3	4
30	Exergy analysis of thermal energy storage options with nuclear power plants. Annals of Nuclear Energy, 2016, 96, 104-111.	0.9	49
31	Activity of nanostructured C@ETS-10 sorbent for capture of volatile radioactive iodine from gas stream. Chemical Engineering Journal, 2016, 287, 593-601.	6.6	42
32	Modeling and simulation of control system response to temperature disturbances in a coupled heat exchangers-AHTR system. Nuclear Engineering and Design, 2016, 300, 161-172.	0.8	5
33	Synthesis and characterization of ETS-10: supported hollow carbon nano-polyhedrons nanosorbent for adsorption of krypton at near ambient temperatures. Adsorption, 2016, 22, 129-137.	1.4	14
34	Experimental facility for development of high-temperature reactor technology: instrumentation needs and challenges. EPJ Nuclear Sciences & Technologies, 2015, 1, 14.	0.3	1
35	Exergy Analysis for Small Modular Reactor Hybrid Energy System. , 2015, , .		0
36	Scaling analysis for the direct reactor auxiliary cooling system for FHRs. Nuclear Engineering and Design, 2015, 285, 197-206.	0.8	6

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37	Comparative analysis of compact heat exchangers for application as the intermediate heat exchanger for advanced nuclear reactors. <i>Annals of Nuclear Energy</i> , 2015, 81, 143-149.	0.9	63
38	Transient analysis of an FHR coupled to a helium Brayton power cycle. <i>Progress in Nuclear Energy</i> , 2015, 83, 283-293.	1.3	14
39	Nuclear Renewable Energy Integration: An Economic Case Study. <i>Electricity Journal</i> , 2015, 28, 85-95.	1.3	14
40	DRACS thermal performance evaluation for FHR. <i>Annals of Nuclear Energy</i> , 2015, 77, 115-128.	0.9	15
41	Development of a Multi-Loop Flow and Heat Transfer Facility for Advanced Nuclear Reactor Thermal Hydraulic and Hybrid Energy System Studies. , 2014, , .		0
42	Advanced heat exchanger development for molten salts. <i>Nuclear Engineering and Design</i> , 2014, 280, 42-56.	0.8	42
43	Oxidation and hydrogen uptake in zirconium, Zircaloy-2 and Zircaloy-4: Computational thermodynamics and ab initio calculations. <i>Journal of Nuclear Materials</i> , 2014, 444, 65-75.	1.3	38
44	Numerical study on crossflow printed circuit heat exchanger for advanced small modular reactors. <i>International Journal of Heat and Mass Transfer</i> , 2014, 70, 250-263.	2.5	25
45	Parametric study on maximum transportable distance and cost for thermal energy transportation using various coolants. <i>Progress in Nuclear Energy</i> , 2014, 74, 110-119.	1.3	4
46	RELAP5-3D modelling of heat transfer components (intermediate heat exchanger and helical-coil steam) Tj ETQq0 0 0 rgBT /Overlock 10 2014, 8, 72.	0.2	1
47	RELAP5-3D transient modelling for NGNP integrated plant. <i>International Journal of Nuclear Energy Science and Technology</i> , 2014, 8, 213.	0.2	0
48	Scale Analysis and Experimental Results of a Solid/Liquid Phase-Change Thermal Energy Storage System. , 2014, , .		1
49	Diffusion-Welded Microchannel Heat Exchanger for Industrial Processes. <i>Journal of Thermal Science and Engineering Applications</i> , 2013, 5, .	0.8	21
50	Challenges in the development of high temperature reactors. <i>Energy Conversion and Management</i> , 2013, 74, 574-581.	4.4	30
51	Tritium Production and Permeation in High-Temperature Reactor Systems. , 2013, , .		1
52	Design of Fluidic Diode for a High-Temperature DRACS Test Facility. , 2013, , .		2
53	ASME Material Challenges for Advance Reactor Concepts. , 2013, , .		1
54	Scale/Analytical Analyses of Freezing and Convective Melting With Internal Heat Generation. , 2013, , .		0

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55	Technologies for Upgrading Light Water Reactor Outlet Temperature. , 2013, , .		0
56	Natural Circulation and Linear Stability Analysis for Liquid-Metal Reactors with the Effect of Fluid Axial Conduction. Nuclear Technology, 2012, 178, 298-317.	0.7	13
57	Molten Salt Mixture Properties (KF-ZrF ₄ and KCl-MgCl ₂) for Use in RELAP5-3D for High-Temperature Reactor Application. Nuclear Technology, 2012, 178, 335-340.	0.7	9
58	Preliminary Design for Conventional and Compact Secondary Heat Exchanger in a Molten Salt Reactor. , 2012, , .		2
59	Evaluation methodology for advance heat exchanger concepts using analytical hierarchy process. Nuclear Engineering and Design, 2012, 248, 108-116.	0.8	4
60	Optimal artificial neural network architecture selection for performance prediction of compact heat exchanger with the EBaLM-OTR technique. Nuclear Engineering and Design, 2011, 241, 2549-2557.	0.8	36
61	Small Modular Molten Salt Reactor (SM-MSR). , 2011, , .		8
62	Computational Intelligence as a Tool for Small Modular Reactors. , 2011, , .		3
63	Phase change heat transfer device for process heat applications. Nuclear Engineering and Design, 2010, 240, 2409-2414.	0.8	21
64	Engineering design elements of a two-phase thermosyphon for the purpose of transferring NGNP thermal energy to a hydrogen plant. Nuclear Engineering and Design, 2009, 239, 2293-2301.	0.8	27
65	Design of Liquid Metal Phase Change Heat Exchanger for Next-Generation Nuclear Plant Process Heat Application. Journal of Nuclear Science and Technology, 2009, 46, 534-544.	0.7	7
66	Dimensionless Numbers in Phase-Change Thermosyphon and Heat-Pipe Heat Exchangers. Nuclear Technology, 2009, 167, 325-332.	0.7	7
67	Effect of Mass Flow Rate on the Convective Heat Transfer Coefficient: Analysis for Constant Velocity and Constant Area Case. Nuclear Technology, 2009, 166, 197-200.	0.7	24
68	Design of Liquid Metal Phase Change Heat Exchanger for Next-Generation Nuclear Plant Process Heat Application. Journal of Nuclear Science and Technology, 2009, 46, 534-544.	0.7	3
69	Theoretical Design of Thermosyphon for Process Heat Transfer From NGNP to Hydrogen Plant. , 2008, , .		9
70	NGNP Process Heat Utilization: Liquid Metal Phase Change Heat Exchanger. , 2008, , .		4
71	CFD Applications for Predicting Flow Behavior in Advanced Gas Cooled Reactors. , 0, , .		0
72	Preconceptual Design of Multifunctional Gas-Cooled Cartridge Loop for the Versatile Test Reactor: Instrumentation and Measurementâ€™Part II. Nuclear Science and Engineering, 0, , 1-19.	0.5	3

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73	Preconceptual Design of Multifunctional Gas-Cooled Cartridge Loop for the Versatile Test Reactor”Part I. Nuclear Science and Engineering, 0, , 1-32.	0.5	0