Frederic Topin

List of Publications by Year
in descending order

72 papers	1,562 citations	430874 18 h-index	315739 38 g-index
72 all docs	72 docs citations	72 times ranked	1287 citing authors

#	Article	IF	Citations
1	Comprehensive correlation for the prediction of the heat transfer through a single droplet in dropwise condensation regime. Applied Thermal Engineering, 2022, 209, 118233.	6.0	3
2	Analytical Modeling of Coupling Losses in CICCs, Extensive Study of the COLISEUM Model. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	2
3	Thermal Hydraulic Analysis of JT-60SA TFC02 Complementary Quench Tests in CTF. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	1
4	Numerical simulation of the sorption phenomena during the transport of VOCs inside a capillary GC column. Chemical Engineering Science, 2021, 234, 116445.	3.8	0
5	Analytical Coupling Losses Modelling With COLISEUM: Generalized Approach Upgrade to All Stages. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	0
6	Extensive Analyses of Superconducting Cables 3D Geometry With Advanced Tomographic Examinations. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	4
7	Liquid cooling of a microprocessor: experimentation and simulation of a sub-millimeter channel heat exchanger. Heat Transfer Engineering, 2020, 41, 1365-1381.	1.9	3
8	Void Fraction Influence on CICCs Coupling Losses: Analysis of Experimental Results With MPAS Model. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-5.	1.7	12
9	Analytical Modelling of CICCs Coupling Losses: Broad Investigation of Two-Stage Model. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.7	7
10	Heat transfer intensification in an actuated heat exchanger submitted to an imposed pressure drop. PLoS ONE, 2019, 14, e0219441.	2.5	1
11	Determining permeability tensors of porous media: A novel â€˜vector kineticâ€™ numerical approach. International Journal of Multiphase Flow, 2019, 110, 198-217.	3.4	16
12	Development of a New Generic Analytical Modeling of AC Coupling Losses in Cable-in-Conduit Conductors. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.7	2
13	Transport properties of solid foams having circular strut cross section using pore scale numerical simulations. Heat and Mass Transfer, 2018, 54, 2351-2370.	2.1	6
14	AC Coupling Losses in CICCs: Analytical Modeling at Different Stages. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.7	7
15	Different arrangements of simplified models to predict effective thermal conductivity of open-cell foams. Heat and Mass Transfer, 2017, 53, 2473-2486.	2.1	3
16	Thermo-hydraulic characterization of a self-pumping corrugated wall heat exchanger. Energy, 2017, 128, 713-728.	8.8	3
17	Predicting pressure drop in open-cell foams by adopting Forchheimer number. International Journal of Multiphase Flow, 2017, 94, 123-136.	3.4	18
18	State-of-the-Art of Pressure Drop in Open-Cell Porous Foams: Review of Experiments and Correlations. Journal of Fluids Engineering, Transactions of the ASME, 2017, 139, .	1.5	33

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19	Studying impacts of travelling wave shape on pumping for active cooling. , 2017, , .		2
20	Influence of Morphology on Flow Law Characteristics in Open-Cell Foams: An Overview of Usual Approaches and Correlations. Journal of Fluids Engineering, Transactions of the ASME, 2017, 139, .	1.5	5
21	Impact of substrate diffusion and enzyme distribution in 3D-porous electrodes: a combined electrochemical and modelling study of a thermostable H₂/O₂enzymatic fuel cell. Energy and Environmental Science, 2017, 10, 1966-1982.	30.8	93
22	Predicting permeability tensors of foams using vector kinetic method. Journal of Physics: Conference Series, 2016, 745, 032140.	0.4	1
23	Using the HELIOS facility for assessment of bundle-jacket thermal coupling in a CICC. Cryogenics, 2016, 80, 374-384.	1.7	5
24	Heat transfer enhancement by dynamic corrugated heat exchanger wall: Numerical study. Journal of Physics: Conference Series, 2016, 745, 032061.	0.4	3
25	Development of an Analytical-Oriented Extensive Model for AC Coupling Losses in Multilayer Superconducting Composites. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	8
26	Thermal conductivity correlations of open-cell foams: Extension of Hashinâ€“Shtrikman model and introduction of effective solid phase tortuosity. International Journal of Heat and Mass Transfer, 2016, 92, 539-549.	4.8	13
27	NUMERICAL ANALYSIS OF HEAT EXCHANGE IN A POROUS CHANNEL WITH HEAT GENERATION AND LOCAL THERMAL NONEQUILIBRIUM. Heat Transfer Research, 2015, 46, 969-994.	1.6	1
28	IMPACT OF ANISOTROPY ON GEOMETRICAL AND THERMAL CONDUCTIVITY OF METALLIC FOAM STRUCTURES. Journal of Porous Media, 2015, 18, 949-970.	1.9	8
29	GEOMETRICAL CHARACTERIZATION OF KELVIN-LIKE METAL FOAMS FOR DIFFERENT STRUT SHAPES AND POROSITY. Journal of Porous Media, 2015, 18, 637-652.	1.9	8
30	DYNAMIC ACTIVATION OF SINGLE VAPOR EMBRYO GROWTH: ANALYSES OF THERMAL AND MOMENTUM INERTIA EFFECTS. Interfacial Phenomena and Heat Transfer, 2014, 2, 139-154.	0.8	1
31	Micro-structural Impact of Different Strut Shapes and Porosity on Hydraulic Properties of Kelvin-Like Metal Foams. Transport in Porous Media, 2014, 105, 57-81.	2.6	29
32	Determination of effective thermal conductivity from geometrical properties: Application to open cell foams. International Journal of Thermal Sciences, 2014, 81, 13-28.	4.9	48
33	Investigation of fluid flow properties in open cell foams: Darcy and weak inertia regimes. Chemical Engineering Science, 2014, 116, 793-805.	3.8	34
34	Simultaneous determination of intrinsic solid phase conductivity and effective thermal conductivity of Kelvin like foams. Applied Thermal Engineering, 2014, 71, 536-547.	6.0	38
35	The geometric and thermohydraulic characterization of ceramic foams: An analytical approach. Acta Materialia, 2014, 75, 273-286.	7.9	19
36	An overview of heat transfer enhancement methods and new perspectives: Focus on active methods using electroactive materials. International Journal of Heat and Mass Transfer, 2013, 61, 505-524.	4.8	157

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37	Experimental analysis of upward flow boiling heat transfer in a channel provided with copper metallic foam. Applied Thermal Engineering, 2013, 52, 336-344.	6.0	31
38	Simultaneous integration, control and enhancement of both fluid flow and heat transfer in small scale heat exchangers: A numerical study. International Communications in Heat and Mass Transfer, 2013, 49, 36-40.	5.6	11
39	Multicellular piezoelectric actuator for setting in motion fluids, and heat exchange enhancement. , 2013, , .		0
40	CONJUGATE HEAT TRANSFER IN METAL FOAM: GRAVITY DRIVEN AND FORCED FLOW HEAT EXCHANGE COEFFICIENTS DETERMINATION. Journal of Porous Media, 2013, 16, 41-58.	1.9	3
41	Influence of pore and strut shape on open cell metal foam bulk properties. , 2012, , .		3
42	Heat Transfer Enhancement in Short Corrugated Mini-Tubes. Advanced Structured Materials, 2012, , 181-208.	0.5	8
43	Enhancement of Heat Transfer over Spatial Stationary and Moving Sinusoidal Wavy Wall: A Numerical Analysis. Defect and Diffusion Forum, 2012, 326-328, 341-347.	0.4	1
44	Investigations About Quench Detection in the ITER TF Coil System. IEEE Transactions on Applied Superconductivity, 2012, 22, 4702404-4702404.	1.7	15
45	Metal Foams Design for Heat Exchangers: Structure and Effectives Transport Properties. Advanced Structured Materials, 2012, , 219-244.	0.5	6
46	Determination of Effective Transport Properties of Metallic Foams: Morphology and Flow Laws. , 2012, , 292-331.		0
47	Selection of a quench detection system for the ITER CS magnet. Fusion Engineering and Design, 2011, 86, 1418-1421.	1.9	16
48	Conjugate Heat and Mass Transfer in Metal Foams: A Numerical Study for Heat Exchangers Design. Defect and Diffusion Forum, 2010, 297-301, 960-965.	0.4	5
49	From Pore Scale Numerical Simulation of Conjugate Heat Transfer in Cellular Material to Effectives Transport Properties of Real Structures. , 2010, , .		4
50	COCURRENT GAS-LIQUID FLOW IN METAL FOAM: AN EXPERIMENTAL INVESTIGATION OF PRESSURE GRADIENT. Journal of Porous Media, 2010, 13, 497-510.	1.9	2
51	Microstructure and Transport Properties of Cellular Materials: Representative Volume Element. Advanced Engineering Materials, 2009, 11, 805-810.	3.5	43
52	Separation of particles from hot gases using metallic foams. Journal of Materials Processing Technology, 2009, 209, 3859-3868.	6.3	17
53	Flow Laws in Metal Foams: Compressibility and Pore Size Effects. Transport in Porous Media, 2008, 73, 233-254.	2.6	124
54	Flow Laws in Metallic Foams: Experimental Determination of Inertial and Viscous Contributions. Journal of Porous Media, 2007, 10, 51-70.	1.9	22

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55	Open Celled Material Structural Properties Measurement: From Morphology To Transport Properties. Materials Transactions, 2006, 47, 2195-2202.	1.2	67
56	Experiments on flows, boiling and heat transfer in porous media: Emphasis on bottom injection. Nuclear Engineering and Design, 2006, 236, 2084-2103.	1.7	30
57	Experimental Analysis of Multiphase Flow in Metallic foam: Flow Laws, Heat Transfer and Convective Boiling. Advanced Engineering Materials, 2006, 8, 890-899.	3.5	79
58	THERMAL CONDUCTIVITY OF METALLIC FOAM: SIMULATION ON REAL X-RAY TOMOGRAPHIED POROUS MEDIUM AND PHOTOTHERMAL EXPERIMENTS. , 2006, , .		7
59	About the use of fibrous materials in compact heat exchangers. Experimental Thermal and Fluid Science, 2004, 28, 193-199.	2.7	184
60	Transient method for the liquid laminar flow friction factor in microtubes. AICHE Journal, 2003, 49, 2759-2767.	3.6	10
61	Experimental study of unsteady convective boiling in heated minichannels. International Journal of Heat and Mass Transfer, 2003, 46, 2957-2965.	4.8	201
62	Transient Model of Heat, Mass, and Charge Transfer as Well as Electrochemistry in the Cathode Catalyst Layer of a PEMFC. , 2002, , 393.		11
63	Convective Boiling Phenomena in a Sintered Fibrous Channel: Study of Thermal Non-Equilibrium Behavior. Journal of Porous Media, 2002, 5, 11.	1.9	5
64	Experimental and Numerical Analysis of Drying of Particles in Superheated Steam. Journal of Porous Media, 1999, 2, 205-229.	1.9	3
65	MODELING OF COUPLED HEAT AND MASS TRANSFERS WITH PHASE CHANGE IN A POROUS MEDIUM: APPLICATION TO SUPERHEATED STEAM DRYING. Numerical Heat Transfer; Part A: Applications, 1998, 33, 39-63.	2.1	12
66	ANALYSIS OF TRANSPORT PHENOMENA DURING THE CONVECTIVE DRYING IN SUPERHEATED STEAM. Drying Technology, 1997, 15, 2239-2261.	3.1	15
67	ModÃ©lisation des transferts couplÃ©s de chaleur et de masse avec changement de phase en milieux poreux. Revue Europeenne Des Elements, 1997, 6, 71-98.	0.1	0
68	Temperature and pressure field visualizations in a porous medium dried in superheated steam. Experimental Thermal and Fluid Science, 1997, 15, 359-374.	2.7	1
69	Experimental Study of Convective Boiling in a Porous Medium: Temperature Field Analysis. Journal of Heat Transfer, 1996, 118, 230-233.	2.1	10
70	Analysis of heat transfer with liquid-vapor phase change in a forced-flow fluid moving through porous media. International Journal of Heat and Mass Transfer, 1996, 39, 3959-3975.	4.8	22
71	Dispersion in Metal Foam: A Pore Scale Numerical Study. Defect and Diffusion Forum, 0, 326-328, 410-415.	0.4	0
72	About Thermo-Hydraulic Properties of Open Cell Foams: Pore Scale Numerical Analysis of Strut Shapes. Defect and Diffusion Forum, 0, 354, 195-200.	0.4	0