

Lubomir Klimes

List of Publications by Year in descending order

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Version: 2024-02-01

45
papers

640
citations

759233

12
h-index

580821

25
g-index

46
all docs

46
docs citations

46
times ranked

668
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical and experimental investigation of a PCM-based thermal storage unit for solar air systems. <i>Energy and Buildings</i> , 2014, 68, 488-497.	6.7	108
2	Energy demand of liquefaction and regasification of natural gas and the potential of LNG for operative thermal energy storage. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 99, 1-15.	16.4	100
3	Computer modelling and experimental investigation of phase change hysteresis of PCMs: The state-of-the-art review. <i>Applied Energy</i> , 2020, 263, 114572.	10.1	69
4	PCM thermal energy storage in solar heating of ventilation air – Experimental and numerical investigations. <i>Sustainable Cities and Society</i> , 2018, 37, 104-115.	10.4	51
5	Solar air collector with the solar absorber plate containing a PCM – Environmental chamber experiments and computer simulations. <i>Renewable Energy</i> , 2019, 143, 731-740.	8.9	44
6	An overview of mercury emissions in the energy industry - A step to mercury footprint assessment. <i>Journal of Cleaner Production</i> , 2020, 267, 122087.	9.3	43
7	Optimal design of structure in rheological models: an automotive application to dampers with high viscosity silicone fluids. <i>Journal of Vibroengineering</i> , 2017, 19, 4459-4470.	1.0	30
8	Modeling of gas-phase heterogeneous photocatalytic oxidation reactor in the presence of mass transfer limitation and axial dispersion. <i>Chemical Engineering Journal</i> , 2020, 386, 124013.	12.7	29
9	A rapid GPU-based heat transfer and solidification model for dynamic computer simulations of continuous steel casting. <i>Journal of Materials Processing Technology</i> , 2015, 226, 1-14.	6.3	27
10	Identification of the effective heat capacity – temperature relationship and the phase change hysteresis in PCMs by means of an inverse heat transfer problem solved with metaheuristic methods. <i>Applied Thermal Engineering</i> , 2021, 197, 117392.	6.0	14
11	Front tracking in modelling of latent heat thermal energy storage: Assessment of accuracy and efficiency, benchmarking and GPU-based acceleration. <i>Energy</i> , 2018, 155, 297-311.	8.8	12
12	Development of PCM-to-air heat exchanger for integration in building envelope – modeling and validation. <i>Solar Energy</i> , 2019, 190, 367-385.	6.1	12
13	Thermally activated wall panels with microencapsulated PCM: comparison of 1D and 3D models. <i>Journal of Building Performance Simulation</i> , 2019, 12, 404-419.	2.0	9
14	Dry cooling as a way toward minimisation of water consumption in the steel industry: A case study for continuous steel casting. <i>Journal of Cleaner Production</i> , 2020, 275, 123109.	9.3	9
15	Semi-empirical balance-based computational model of air-cooled condensers with the A-frame layout. <i>Energy</i> , 2019, 182, 1013-1027.	8.8	8
16	Comparison of Optimization-Regulation Algorithms for Secondary Cooling in Continuous Steel Casting. <i>Metals</i> , 2021, 11, 237.	2.3	8
17	Melting front propagation in a paraffin-based phase change material: Lab-scale experiment and simulations. <i>Thermal Science</i> , 2018, 22, 2723-2732.	1.1	8
18	A solar air collector with integrated latent heat thermal storage. <i>EPJ Web of Conferences</i> , 2012, 25, 01028.	0.3	7

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19	Assessment of Basic Approaches to Numerical Modeling of Phase Change Problemsâ€”Accuracy, Efficiency, and Parallel Decomposition. <i>Journal of Heat Transfer</i> , 2017, 139, .	2.1	7
20	Comparison of the Energy Conversion Efficiency of a Solar Chimney and a Solar PV-Powered Fan for Ventilation Applications. <i>Energies</i> , 2018, 11, 912.	3.1	7
21	Experimental investigation of stabilization of flowing water temperature with a water-PCM heat exchanger. <i>EPJ Web of Conferences</i> , 2014, 67, 02046.	0.3	6
22	Visual monitoring of the melting front propagation in a paraffin-based PCM. <i>EPJ Web of Conferences</i> , 2017, 143, 02042.	0.3	6
23	Buried water-phase change material storage for load shifting: A parametric study. <i>Energy and Buildings</i> , 2020, 227, 110428.	6.7	6
24	A PCM-water heat exchanger with polymeric hollow fibres for latent heat thermal energy storage: a parametric study of discharging stage. <i>Journal of Theoretical and Applied Mechanics</i> , 0, , 1285.	0.5	6
25	Utilization of an Air-PCM Heat Exchanger in Passive Cooling of Buildings: A Simulation Study on the Energy Saving Potential in Different European Climates. <i>Energies</i> , 2019, 12, 1133.	3.1	5
26	An accuracy analysis of the front tracking method and interface capturing methods for the solution of heat transfer problems with phase changes. <i>Journal of Physics: Conference Series</i> , 2016, 745, 032136.	0.4	2
27	Feasibility of replacement of nuclear power with other energy sources in the Czech republic. <i>Thermal Science</i> , 2020, 24, 3543-3553.	1.1	2
28	Parallel Heat Transfer Model of a Panel with Phase Change Material for Thermal Storage Applications Computed on Graphics Processing Units. <i>Advanced Materials Research</i> , 2014, 1077, 118-123.	0.3	1
29	A Validated TRNSYS Model of Thermally Activated Layer With Phase Change Material. , 2015, , .		1
30	Robustness Analysis of Various Approaches to Modeling of the Phase Change Front Propagation. , 2017, , .		1
31	An optimization study into thermally activated wall system with latent heat thermal energy storage. <i>IOP Conference Series: Earth and Environmental Science</i> , 2019, 238, 012016.	0.3	1
32	Optimization of Material Properties of Phase Change Materials for Latent Heat Thermal Energy Storage. <i>Mendel</i> , 2018, 24, 47-54.	1.0	1
33	Mathematical Model of Multi-Layer Wall with Phase Change Material and its Use in Optimal Design. <i>Advanced Materials Research</i> , 0, 649, 295-298.	0.3	0
34	Latent Heat Storage Plaster: Lab-Scale Experiment and Simulation. <i>Advanced Materials Research</i> , 0, 1077, 124-128.	0.3	0
35	Steel Structure Prediction for Continuous Steel Casting by Means of a Parallel GPU-Based Heat Transfer and Solidification Model. , 2015, , .		0
36	Various Approaches to Numerical Discretization of Thermal Model With Phase Change. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
37	The real-time macro-solidification macro model for crack prediction. AIP Conference Proceedings, 2019, , .	0.4	0
38	History of simulation of transient temperature fields of solidifying metals with phase change. AIP Conference Proceedings, 2019, , .	0.4	0
39	Importance of the experimental investigation of a concasting technology. MATEC Web of Conferences, 2018, 168, 07009.	0.2	0
40	Two-stage stochastic programming approach to a PDE-constrained steel production problem with the moving interface. Kybernetika, 0, , 1047-1070.	0.0	0
41	Coupled real-time thermo-mechanical solidification model of continuously cast steel. , 2019, , .		0
42	The Influence of the Phase Change Temperature Range and the Phase Change Hysteresis of a PCM on the Performance of an Air-PCM Heat Storage Unit. , 2019, , .		0
43	Computational Design Optimization of PCM-Based Attenuator of Fluid Temperature Fluctuations. , 2019, , .		0
44	Comparison of temperature and mechanical stress-strain distributions of steel billets with sharp and rounded corners. , 2020, , .		0
45	Application of PCM-based Thermal Energy Storage System in Buildings: A State of the Art Review on the Mathematical Modeling Approaches and Experimental Investigations. Journal of Thermal Science, 0, , .	1.9	0