

Hendrik Simon Cornelis Metselaar

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109
papers

8,090
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48
h-index

89
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114
ext. papers

9,422
ext. citations

5.6
avg, IF

6.37
L-index

#	Paper	IF	Citations
109	A review of nanofluid stability properties and characterization in stationary conditions. <i>International Journal of Heat and Mass Transfer</i> , 2011 , 54, 4051-4068	4.9	750
108	A review of available methods and development on energy storage; technology update. <i>Renewable and Sustainable Energy Reviews</i> , 2014 , 33, 532-545	16.2	511
107	Developments in organic solid-liquid phase change materials and their applications in thermal energy storage. <i>Energy Conversion and Management</i> , 2015 , 95, 193-228	10.6	456
106	A review on powder-based additive manufacturing for tissue engineering: selective laser sintering and inkjet 3D printing. <i>Science and Technology of Advanced Materials</i> , 2015 , 16, 033502	7.1	384
105	A review on insulation materials for energy conservation in buildings. <i>Renewable and Sustainable Energy Reviews</i> , 2017 , 73, 1352-1365	16.2	298
104	Investigation of thermal conductivity and rheological properties of nanofluids containing graphene nanoplatelets. <i>Nanoscale Research Letters</i> , 2014 , 9, 15	5	270
103	Shape-stabilized phase change materials with high thermal conductivity based on paraffin/graphene oxide composite. <i>Energy Conversion and Management</i> , 2013 , 67, 275-282	10.6	250
102	A comprehensive review on graphene nanofluids: Recent research, development and applications. <i>Energy Conversion and Management</i> , 2016 , 111, 466-487	10.6	202
101	Compressive strength and microstructural analysis of fly ash/palm oil fuel ash based geopolymer mortar under elevated temperatures. <i>Construction and Building Materials</i> , 2014 , 65, 114-121	6.7	193
100	Preparation and characterization of palmitic acid/graphene nanoplatelets composite with remarkable thermal conductivity as a novel shape-stabilized phase change material. <i>Applied Thermal Engineering</i> , 2013 , 61, 633-640	5.8	189
99	A review on thermophysical properties of nanoparticle dispersed phase change materials. <i>Energy Conversion and Management</i> , 2015 , 95, 69-89	10.6	183
98	Mechanisms of interfacial bond in steel and polypropylene fiber reinforced geopolymer composites. <i>Composites Science and Technology</i> , 2016 , 122, 73-81	8.6	163
97	Synthesis, characterization and thermal properties of nanoencapsulated phase change materials via sol-gel method. <i>Energy</i> , 2013 , 61, 664-672	7.9	160
96	The green reduction of graphene oxide. <i>RSC Advances</i> , 2016 , 6, 27807-27828	3.7	159
95	The influence of surfactant and ultrasonic processing on improvement of stability, thermal conductivity and viscosity of titania nanofluid. <i>Experimental Thermal and Fluid Science</i> , 2013 , 51, 1-9	3	158
94	Thermal properties and heat storage analysis of palmitic acid-TiO ₂ composite as nano-enhanced organic phase change material (NEOPCM). <i>Applied Thermal Engineering</i> , 2016 , 99, 1254-1262	5.8	139
93	Performance investigation of thermal energy storage system with Phase Change Material (PCM) for solar water heating application. <i>International Communications in Heat and Mass Transfer</i> , 2014 , 57, 132-139	5.8	137

92	Synthesis, mechanical properties, and in vitro biocompatibility with osteoblasts of calcium silicate-reduced graphene oxide composites. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 3947-62	9.5	131
91	Preparation of nitrogen-doped graphene/palmitic acid shape stabilized composite phase change material with remarkable thermal properties for thermal energy storage. <i>Applied Energy</i> , 2014 , 135, 339-349	10.7	115
90	Curbing global warming with phase change materials for energy storage. <i>Renewable and Sustainable Energy Reviews</i> , 2013 , 18, 23-30	16.2	112
89	Preparation and properties of highly conductive palmitic acid/graphene oxide composites as thermal energy storage materials. <i>Energy</i> , 2013 , 58, 628-634	7.9	107
88	One-Step Preparation of Form-Stable Phase Change Material through Self-Assembly of Fatty Acid and Graphene. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 22787-22796	3.8	96
87	Heat transfer and entropy generation analysis of hybrid graphene/Fe ₃ O ₄ ferro-nanofluid flow under the influence of a magnetic field. <i>Powder Technology</i> , 2017 , 308, 149-157	5.2	92
86	An experimental and numerical investigation of heat transfer enhancement for graphene nanoplatelets nanofluids in turbulent flow conditions. <i>International Journal of Heat and Mass Transfer</i> , 2015 , 81, 41-51	4.9	89
85	Experimental investigation of the effect of graphene nanofluids on heat pipe thermal performance. <i>Applied Thermal Engineering</i> , 2016 , 100, 775-787	5.8	86
84	Performance improvement of solar thermal systems integrated with phase change materials (PCM), a review. <i>Solar Energy</i> , 2020 , 206, 330-352	6.8	82
83	Preparation, characterization, viscosity, and thermal conductivity of nitrogen-doped graphene aqueous nanofluids. <i>Journal of Materials Science</i> , 2014 , 49, 7156-7171	4.3	82
82	Dental implants from functionally graded materials. <i>Journal of Biomedical Materials Research - Part A</i> , 2013 , 101, 3046-57	5.4	82
81	Effect of specific surface area on convective heat transfer of graphene nanoplatelet aqueous nanofluids. <i>Experimental Thermal and Fluid Science</i> , 2015 , 68, 100-108	3	79
80	Experimental Investigation of Convective Heat Transfer Using Graphene Nanoplatelet Based Nanofluids under Turbulent Flow Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 12455-12465	3.9	74
79	Exergetic analysis of a solar thermal power system with PCM storage. <i>Energy Conversion and Management</i> , 2014 , 78, 486-492	10.6	71
78	Effect of carbon nanospheres on shape stabilization and thermal behavior of phase change materials for thermal energy storage. <i>Energy Conversion and Management</i> , 2014 , 88, 206-213	10.6	71
77	Palmitic acid/polypyrrole composites as form-stable phase change materials for thermal energy storage. <i>Energy Conversion and Management</i> , 2014 , 80, 491-497	10.6	69
76	Accelerated Thermal Cycling Test of Microencapsulated Paraffin Wax/Polyaniline Made by Simple Preparation Method for Solar Thermal Energy Storage. <i>Materials</i> , 2013 , 6, 1608-1620	3.5	69
75	Potential energy savings by radiative cooling system for a building in tropical climate. <i>Renewable and Sustainable Energy Reviews</i> , 2014 , 32, 642-650	16.2	67

74	A state-of-the-art review on hybrid heat pipe latent heat storage systems. <i>Energy Conversion and Management</i> , 2015 , 105, 1178-1204	10.6	66
73	Heat transfer and entropy generation for laminar forced convection flow of graphene nanoplatelets nanofluids in a horizontal tube. <i>International Communications in Heat and Mass Transfer</i> , 2015 , 66, 23-31	5.8	65
72	Effect of nitrogen-doped graphene nanofluid on the thermal performance of the grooved copper heat pipe. <i>Energy Conversion and Management</i> , 2016 , 118, 459-473	10.6	60
71	Theoretical model of an evacuated tube heat pipe solar collector integrated with phase change material. <i>Energy</i> , 2015 , 91, 911-924	7.9	59
70	Electrophoretic deposition of calcium silicate-reduced graphene oxide composites on titanium substrate. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 319-332	6	58
69	An ecofriendly graphene-based nanofluid for heat transfer applications. <i>Journal of Cleaner Production</i> , 2016 , 137, 555-566	10.3	58
68	Performance and cost analysis of phase change materials with different melting temperatures in heating systems. <i>Energy</i> , 2013 , 53, 173-178	7.9	57
67	Investigation of viscosity and thermal conductivity of alumina nanofluids with addition of SDBS. <i>Heat and Mass Transfer</i> , 2013 , 49, 1109-1115	2.2	57
66	Preparation and thermal properties of form-stable phase change materials composed of palmitic acid/polypyrrole/graphene nanoplatelets. <i>Energy and Buildings</i> , 2015 , 99, 189-195	7	53
65	Facile synthesis and thermal performances of stearic acid/titania core/shell nanocapsules by sol-gel method. <i>Energy</i> , 2015 , 85, 635-644	7.9	52
64	Facile synthesis of calcium silicate hydrate using sodium dodecyl sulfate as a surfactant assisted by ultrasonic irradiation. <i>Ultrasonics Sonochemistry</i> , 2014 , 21, 735-42	8.9	52
63	Fabrication and mechanical properties of Al ₂ O ₃ /SiC/ZrO ₂ functionally graded material by electrophoretic deposition. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012 , 12, 144-50	4.1	50
62	Numerical and experimental investigation of heat transfer in a shell and tube thermal energy storage system. <i>International Communications in Heat and Mass Transfer</i> , 2014 , 53, 71-78	5.8	48
61	Thermal characteristic reliability of fatty acid binary mixtures as phase change materials (PCMs) for thermal energy storage applications. <i>Applied Thermal Engineering</i> , 2015 , 80, 127-131	5.8	47
60	Mechanical and in vitro biological performance of graphene nanoplatelets reinforced calcium silicate composite. <i>PLoS ONE</i> , 2014 , 9, e106802	3.7	47
59	Temperature Regulation of Photovoltaic Module Using Phase Change Material: A Numerical Analysis and Experimental Investigation. <i>International Journal of Photoenergy</i> , 2016 , 2016, 1-8	2.1	47
58	Mechanical and physical properties of calcium silicate/alumina composite for biomedical engineering applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014 , 30, 168-75	4.1	46
57	Numerical study for enhancement of solidification of phase change materials using trapezoidal cavity. <i>Powder Technology</i> , 2014 , 268, 38-47	5.2	45

56	Nitrogen doped activated carbon/graphene with high nitrogen level: Green synthesis and thermo-electrical properties of its nanofluid. <i>Materials Letters</i> , 2015 , 152, 192-195	3.3	44
55	Phase change material: Optimizing the thermal properties and thermal conductivity of myristic acid/palmitic acid eutectic mixture with acid-based surfactants. <i>Applied Thermal Engineering</i> , 2013 , 60, 261-265	5.8	41
54	Experimental study on heat transfer augmentation of graphene based ferrofluids in presence of magnetic field. <i>Applied Thermal Engineering</i> , 2017 , 114, 415-427	5.8	40
53	Experimental and numerical investigation of the effective electrical conductivity of nitrogen-doped graphene nanofluids. <i>Journal of Nanoparticle Research</i> , 2015 , 17, 1	2.3	39
52	Thermal performance of a compact design heat pipe solar collector with latent heat storage in charging/discharging modes. <i>Energy</i> , 2017 , 127, 101-115	7.9	38
51	Fabrication and Performances of Microencapsulated Palmitic Acid with Enhanced Thermal Properties. <i>Energy & Fuels</i> , 2015 , 29, 1010-1018	4.1	38
50	Organosulfonic acid functionalized zeolite ZSM-5 as temperature tolerant proton conducting material. <i>International Journal of Hydrogen Energy</i> , 2012 , 37, 12513-12521	6.7	35
49	Experimental investigation of thermophysical properties, entropy generation and convective heat transfer for a nitrogen-doped graphene nanofluid in a laminar flow regime. <i>Advanced Powder Technology</i> , 2016 , 27, 717-727	4.6	33
48	Sodium laurate enhancements the thermal properties and thermal conductivity of eutectic fatty acid as phase change material (PCM). <i>Solar Energy</i> , 2014 , 102, 333-337	6.8	33
47	Investigation of interfacial damping nanotube-based composite. <i>Composites Part B: Engineering</i> , 2013 , 50, 354-361	10	32
46	Deoxygenation of graphene oxide using household baking soda as a reducing agent: a green approach. <i>RSC Advances</i> , 2015 , 5, 70461-70472	3.7	31
45	BoxBehnken experimental design for investigation of stability and thermal conductivity of TiO ₂ nanofluids. <i>Journal of Nanoparticle Research</i> , 2013 , 15, 1	2.3	31
44	Two parameter-tuned meta-heuristics for a discounted inventory control problem in a fuzzy environment. <i>Information Sciences</i> , 2014 , 276, 42-62	7.7	30
43	Biphasic calcium phosphate (BCP) macroporous scaffold with different ratios of HA/βTCP by combination of gel casting and polymer sponge methods. <i>Advances in Applied Ceramics</i> , 2012 , 111, 367-373	2.3	28
42	In vitro characterization and mechanical properties of calcium silicate/POC composite as a bone fixation device. <i>Journal of Biomedical Materials Research - Part A</i> , 2014 , 102, 3973-85	5.4	27
41	Thermo-physical stability of fatty acid eutectic mixtures subjected to accelerated aging for thermal energy storage (TES) application. <i>Applied Thermal Engineering</i> , 2014 , 66, 328-334	5.8	25
40	Antibacterial activity of graphene oxide nanosheet against multidrug resistant superbugs isolated from infected patients. <i>Royal Society Open Science</i> , 2020 , 7, 200640	3.3	25
39	From rice husk to high performance shape stabilized phase change materials for thermal energy storage. <i>RSC Advances</i> , 2016 , 6, 45595-45604	3.7	23

38	Parametric study on the thermal performance enhancement of a thermosyphon heat pipe using covalent functionalized graphene nanofluids. <i>Applied Thermal Engineering</i> , 2020 , 175, 115385	5.8	22
37	Preparation and thermal characteristics of eutectic fatty acids/Shorea javanica composite for thermal energy storage. <i>Applied Thermal Engineering</i> , 2016 , 100, 62-67	5.8	22
36	Residual stress and mechanical properties of Al ₂ O ₃ /ZrO ₂ functionally graded material prepared by EPD from 2-butanone based suspension. <i>Advances in Applied Ceramics</i> , 2011 , 110, 35-40	2.3	22
35	Preparation and characterisation of microencapsulated paraffin wax with polyaniline-based polymer shells for thermal energy storage. <i>Materials Research Innovations</i> , 2014 , 18, S6-480-S6-484	1.9	21
34	The mechanical properties of thin alumina films deposited by metal-organic chemical vapour deposition. <i>Thin Solid Films</i> , 1995 , 254, 153-163	2.2	21
33	Wear of ceramics due to thermal stress: a thermal severity parameter. <i>Wear</i> , 2001 , 249, 962-970	3.5	20
32	Ion size, loading, and charge determine the mechanical properties, surface apatite, and cell growth of silver and tantalum doped calcium silicate. <i>RSC Advances</i> , 2016 , 6, 190-200	3.7	19
31	Cooling of air using heptadecane phase change material in shell and tube arrangement: Analytical and experimental study. <i>Energy and Buildings</i> , 2014 , 85, 98-106	7	16
30	Prediction and optimization of stability parameters for titanium dioxide nanofluid using response surface methodology and artificial neural networks. <i>Science and Engineering of Composite Materials</i> , 2013 , 20, 319-330	1.5	15
29	Kinetics of Grain Growth in 718 Ni-Base Superalloy. <i>Archives of Metallurgy and Materials</i> , 2014 , 59, 847-852		14
28	On-demand dynamic performance of a thermal battery in tankless domestic solar water heating in the tropical region. <i>Applied Thermal Engineering</i> , 2020 , 167, 114790	5.8	13
27	An overview of fluoride-based solid lubricants in sliding contacts. <i>Journal of the European Ceramic Society</i> , 2020 , 40, 4974-4996	6	12
26	Thermal Performance Study of Composite Phase Change Material with Polyacrylicand Conformal Coating. <i>Materials</i> , 2017 , 10,	3.5	12
25	Analysis of a thermal energy storage system for air cooling/heating application through cylindrical tube. <i>Energy Conversion and Management</i> , 2013 , 76, 732-737	10.6	11
24	Characterization and Mechanical Properties of Calcium Silicate/Citric AcidBased Polymer Composite Materials. <i>International Journal of Applied Ceramic Technology</i> , 2015 , 12, 371-376	2	10
23	Evaluating a strain energy fatigue method using cyclic plasticity models. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2010 , 33, 530-537	3	9
22	Thermal Performance and Numerical Simulation of the 1-Pyrene Carboxylic-Acid Functionalized Graphene Nanofluids in a Sintered Wick Heat Pipe. <i>Energies</i> , 2020 , 13, 6542	3.1	9
21	Thermophysical properties of sustainable cement mortar containing oil palm boiler clinker (OPBC) as a fine aggregate. <i>Construction and Building Materials</i> , 2021 , 268, 121091	6.7	9

20	Indoor solar thermal energy saving time with phase change material in a horizontal shell and finned-tube heat exchanger. <i>Scientific World Journal, The</i> , 2015 , 2015, 291657	2.2	8
19	Facile preparation of carbon microcapsules containing phase-change material with enhanced thermal properties. <i>Scientific World Journal, The</i> , 2014 , 2014, 379582	2.2	8
18	Modelling of PV module with incremental conductance MPPT controlled buck-boost converter 2013 ,		7
17	Preparation of Nickel Zinc Ferrite by Electrophoretic Deposition. <i>Journal of the Electrochemical Society</i> , 2011 , 159, E18-E22	3.9	7
16	Evaluation of cyclic plasticity models of multi-surface and non-linear hardening by an energy-based fatigue criterion. <i>Journal of Mechanical Science and Technology</i> , 2010 , 24, 1255-1260	1.6	7
15	Thermal Reliability of Myristic Acid/Palmitic Acid/Sodium Laurate Eutectic Mixture: A Feasibility Study of Accelerated Aging for Thermal Energy Storage Application. <i>Energy Procedia</i> , 2014 , 61, 49-54	2.3	6
14	Mechanochemical Synthesis and Characterization of Silver (Ag+) and Tantalum (Ta5+) Doped Calcium Silicate Nanopowders. <i>Science of Advanced Materials</i> , 2015 , 7, 2664-2671	2.3	6
13	Recent Advances in Scaffolding from Natural-Based Polymers for Volumetric Muscle Injury. <i>Molecules</i> , 2021 , 26,	4.8	6
12	Comparison of nanostructured nickel zinc ferrite and magnesium copper zinc ferrite prepared by water-in-oil microemulsion. <i>Electronic Materials Letters</i> , 2012 , 8, 639-642	2.9	5
11	Latent Heat Thermal Storage (LHTS) for Energy Sustainability. <i>Green Energy and Technology</i> , 2015 , 245-263		3
10	Solar Hot Water Production by Using Latent Heat Storage Under Tropical Conditions 2016 ,		3
9	Elastic properties of electrospun PVDF nanofibrous membranes: Experimental investigation and numerical modelling using pixel-based finite element method. <i>Polymer Testing</i> , 2020 , 81, 106218	4.5	3
8	Synthesis of europium-doped calcium silicate hydrate via hydrothermal and coprecipitation method. <i>Ceramics International</i> , 2021 , 47, 4803-4812	5.1	3
7	Low-temperature green route synthesis of Fe ₃ O ₄ -C nanocomposite using Olive Leaves Extract. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2021 , 271, 115276	3.1	2
6	Solidification of Cu-Water nanofluid in a trapezoidal cavity: A CFD study. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015 , 88, 012013	0.4	1
5	Nanoscale domain structures in 0.91Pb(Zn _{1/3} Nb _{2/3})O ₃ -0.09PbTiO ₃ (91PZN-9PT) single crystals studied by piezoresponse forcemicroscopy. <i>Phase Transitions</i> , 2014 , 87, 419-426	1.3	1
4	Domain structures on (001) and (111) planes in PZN-PT single crystal. <i>Emerging Materials Research</i> , 2013 , 2, 104-108	1.4	0
3	Viscosity analysis of polypropylene-kaolin composites measured using single-screw extruder. <i>Journal of Vinyl and Additive Technology</i> , 2014 , 20, 275-283	2	

- 2 X-Ray Powder Diffraction Studies of Mechanically Milled Cobalt. *Advanced Materials Research*, **2012**, 626, 913-917 0.5
- 1 Clustering Theory Evaluation for Thermal Conductivity Enhancement of Titania Nanofluid. *Ceramic Transactions*, 219-227 0.1