

# Hendrik Simon Cornelis Metselaar

## List of Publications by Year in descending order

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112  
papers

10,760  
citations

30070

54  
h-index

30922

102  
g-index

114  
all docs

114  
docs citations

114  
times ranked

10337  
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly hydrophobic silanized melamine foam for facile and uniform assembly of graphene nanoplatelet towards efficient light-to-thermal energy storage. <i>Materials Today Energy</i> , 2022, 28, 101077.	4.7	10
2	Synthesis of europium-doped calcium silicate hydrate via hydrothermal and coprecipitation method. <i>Ceramics International</i> , 2021, 47, 4803-4812.	4.8	12
3	Recent Advances in Scaffolding from Natural-Based Polymers for Volumetric Muscle Injury. <i>Molecules</i> , 2021, 26, 699.	3.8	20
4	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.	7.2	20
5	Synthesis, Characterization and Filtration Properties of Ecofriendly Fe <sub>3</sub> O <sub>4</sub> Nanoparticles Derived from Olive Leaves Extract. <i>Materials</i> , 2021, 14, 4306.	2.9	8
6	Low-temperature green route synthesis of Fe <sub>3</sub> O <sub>4</sub> -C nanocomposite using Olive Leaves Extract. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2021, 271, 115276.	3.5	12
7	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.	4.8	6
8	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.	6.0	18
9	Antibacterial activity of graphene oxide nanosheet against multidrug resistant superbugs isolated from infected patients. <i>Royal Society Open Science</i> , 2020, 7, 200640.	2.4	69
10	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	19
11	Performance improvement of solar thermal systems integrated with phase change materials (PCM), a review. <i>Solar Energy</i> , 2020, 206, 330-352.	6.1	213
12	An overview of fluoride-based solid lubricants in sliding contacts. <i>Journal of the European Ceramic Society</i> , 2020, 40, 4974-4996.	5.7	28
13	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.	6.0	41
14	A review on insulation materials for energy conservation in buildings. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 73, 1352-1365.	16.4	485
15	Experimental study on heat transfer augmentation of graphene based ferrofluids in presence of magnetic field. <i>Applied Thermal Engineering</i> , 2017, 114, 415-427.	6.0	56
16	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.	8.8	60
17	Heat transfer and entropy generation analysis of hybrid graphene/Fe <sub>3</sub> O <sub>4</sub> ferro-nanofluid flow under the influence of a magnetic field. <i>Powder Technology</i> , 2017, 308, 149-157.	4.2	123
18	Extraction of silica content from the <i>Cymbopogon citratus</i> (lemon grass) and its performance as reinforcement for polymers. , 2017, , .		0

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19	Thermal Performance Study of Composite Phase Change Material with Polyacrylicand Conformal Coating. <i>Materials</i> , 2017, 10, 873.	2.9	21
20	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.	2.5	75
21	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.	9.2	87
22	From rice husk to high performance shape stabilized phase change materials for thermal energy storage. <i>RSC Advances</i> , 2016, 6, 45595-45604.	3.6	35
23	An ecofriendly graphene-based nanofluid for heat transfer applications. <i>Journal of Cleaner Production</i> , 2016, 137, 555-566.	9.3	72
24	A comprehensive review on graphene nanofluids: Recent research, development and applications. <i>Energy Conversion and Management</i> , 2016, 111, 466-487.	9.2	253
25	Mechanisms of interfacial bond in steel and polypropylene fiber reinforced geopolymer composites. <i>Composites Science and Technology</i> , 2016, 122, 73-81.	7.8	258
26	Preparation and thermal characteristics of eutectic fatty acids/ Shorea javanica composite for thermal energy storage. <i>Applied Thermal Engineering</i> , 2016, 100, 62-67.	6.0	25
27	Thermal properties and heat storage analysis of palmitic acid-TiO <sub>2</sub> composite as nano-enhanced organic phase change material (NEOPCM). <i>Applied Thermal Engineering</i> , 2016, 99, 1254-1262.	6.0	194
28	Experimental investigation of the effect of graphene nanofluids on heat pipe thermal performance. <i>Applied Thermal Engineering</i> , 2016, 100, 775-787.	6.0	115
29	The green reduction of graphene oxide. <i>RSC Advances</i> , 2016, 6, 27807-27828.	3.6	235
30	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.	4.1	43
31	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.	3.6	23
32	Electrophoretic deposition of calcium silicateâ€“reduced graphene oxide composites on titanium substrate. <i>Journal of the European Ceramic Society</i> , 2016, 36, 319-332.	5.7	67
33	Solar Hot Water Production by Using Latent Heat Storage Under Tropical Conditions. , 2016, , .		3
34	Solidification of Cu-Water nanofluid in a trapezoidal cavity: A CFD study. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015, 88, 012013.	0.6	1
35	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, 1-7.	2.1	10
36	Latent Heat Thermal Storage (LHTS) for Energy Sustainability. <i>Green Energy and Technology</i> , 2015, , 245-263.	0.6	6

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37	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.	5.6	84
38	Fabrication and Performances of Microencapsulated Palmitic Acid with Enhanced Thermal Properties. <i>Energy &amp; Fuels</i> , 2015, 29, 1010-1018.	5.1	52
39	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.	6.0	57
40	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.	9.2	597
41	Experimental and numerical investigation of the effective electrical conductivity of nitrogen-doped graphene nanofluids. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	1.9	41
42	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.	6.7	73
43	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.	2.7	103
44	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.	2.6	49
45	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.	6.1	502
46	Facile synthesis and thermal performances of stearic acid/titania core/shell nanocapsules by sol-gel method. <i>Energy</i> , 2015, 85, 635-644.	8.8	76
47	A review on thermophysical properties of nanoparticle dispersed phase change materials. <i>Energy Conversion and Management</i> , 2015, 95, 69-89.	9.2	241
48	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.	3.1	118
49	Theoretical model of an evacuated tube heat pipe solar collector integrated with phase change material. <i>Energy</i> , 2015, 91, 911-924.	8.8	78
50	Deoxygenation of graphene oxide using household baking soda as a reducing agent: a green approach. <i>RSC Advances</i> , 2015, 5, 70461-70472.	3.6	39
51	A state-of-the-art review on hybrid heat pipe latent heat storage systems. <i>Energy Conversion and Management</i> , 2015, 105, 1178-1204.	9.2	84
52	Characterization and Mechanical Properties of Calcium Silicate/Citric Acid-Based Polymer Composite Materials. <i>International Journal of Applied Ceramic Technology</i> , 2015, 12, 371-376.	2.1	12
53	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.	4.8	109
54	Mechanochemical Synthesis and Characterization of Silver (Ag) and Tantalum (Ta) Doped Calcium Silicate Nanopowders. <i>Science of Advanced Materials</i> , 2015, 7, 2664-2671.	0.7	9

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55	Mechanical and In Vitro Biological Performance of Graphene Nanoplatelets Reinforced Calcium Silicate Composite. PLoS ONE, 2014, 9, e106802.	2.5	53
56	Facile Preparation of Carbon Microcapsules Containing Phase-Change Material with Enhanced Thermal Properties. Scientific World Journal, The, 2014, 2014, 1-5.	2.1	9
57	Thermal Reliability of Myristic Acid/Palmitic Acid/Sodium Laurate Eutectic Mixture: A Feasibility Study of Accelerated Aging for Thermal Energy Storage Application. Energy Procedia, 2014, 61, 49-54.	1.8	8
58	Nanoscale domain structures in 0.91Pb(Zn1/3Nb2/3)O3-0.09PbTiO3(91PZN-9PT) single crystals studied by piezoresponse forcemicroscopy. Phase Transitions, 2014, 87, 419-426.	1.3	2
59	Preparation and characterisation of microencapsulated paraffin wax with polyaniline-based polymer shells for thermal energy storage. Materials Research Innovations, 2014, 18, S6-480-S6-484.	2.3	28
60	Thermo-physical stability of fatty acid eutectic mixtures subjected to accelerated aging for thermal energy storage (TES) application. Applied Thermal Engineering, 2014, 66, 328-334.	6.0	26
61	Palmitic acid/polypyrrole composites as form-stable phase change materials for thermal energy storage. Energy Conversion and Management, 2014, 80, 491-497.	9.2	83
62	Potential energy savings by radiative cooling system for a building in tropical climate. Renewable and Sustainable Energy Reviews, 2014, 32, 642-650.	16.4	90
63	Investigation of thermal conductivity and rheological properties of nanofluids containing graphene nanoplatelets. Nanoscale Research Letters, 2014, 9, 15.	5.7	341
64	A review of available methods and development on energy storage; technology update. Renewable and Sustainable Energy Reviews, 2014, 33, 532-545.	16.4	706
65	Numerical and experimental investigation of heat transfer in a shell and tube thermal energy storage system. International Communications in Heat and Mass Transfer, 2014, 53, 71-78.	5.6	73
66	Two parameter-tuned meta-heuristics for a discounted inventory control problem in a fuzzy environment. Information Sciences, 2014, 276, 42-62.	6.9	32
67	Facile synthesis of calcium silicate hydrate using sodium dodecyl sulfate as a surfactant assisted by ultrasonic irradiation. Ultrasonics Sonochemistry, 2014, 21, 735-742.	8.2	60
68	Compressive strength and microstructural analysis of fly ash/palm oil fuel ash based geopolymer mortar under elevated temperatures. Construction and Building Materials, 2014, 65, 114-121.	7.2	257
69	Mechanical and physical properties of calcium silicate/alumina composite for biomedical engineering applications. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 30, 168-175.	3.1	63
70	Sodium laurate enhancements the thermal properties and thermal conductivity of eutectic fatty acid as phase change material (PCM). Solar Energy, 2014, 102, 333-337.	6.1	43
71	Exergetic analysis of a solar thermal power system with PCM storage. Energy Conversion and Management, 2014, 78, 486-492.	9.2	94
72	Numerical study for enhancement of solidification of phase change materials using trapezoidal cavity. Powder Technology, 2014, 268, 38-47.	4.2	55

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73	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.	6.7	21
74	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.	9.2	78
75	Experimental Investigation of Convective Heat Transfer Using Graphene Nanoplatelet Based Nanofluids under Turbulent Flow Conditions. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 12455-12465.	3.7	88
76	<i>In vitro</i> characterization and mechanical properties of $\beta$ -calcium silicate/POC composite as a bone fixation device. <i>Journal of Biomedical Materials Research - Part A</i> , 2014, 102, 3973-3985.	4.0	31
77	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.	5.6	183
78	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.	10.1	134
79	Preparation, characterization, viscosity, and thermal conductivity of nitrogen-doped graphene aqueous nanofluids. <i>Journal of Materials Science</i> , 2014, 49, 7156-7171.	3.7	108
80	Viscosity analysis of polypropylene-kaolin composites measured using single-screw extruder. <i>Journal of Vinyl and Additive Technology</i> , 2014, 20, 275-283.	3.4	0
81	Synthesis, Mechanical Properties, and <i>In Vitro</i> Biocompatibility with Osteoblasts of Calcium Silicate-Reduced Graphene Oxide Composites. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 3947-3962.	8.0	153
82	Numerical study of freezing of Cu-water nanofluid in a trapezoidal cavity. , 2014, , .		0
83	Kinetics of Grain Growth in 718 Ni-Base Superalloy. <i>Archives of Metallurgy and Materials</i> , 2014, 59, 847-852.	0.6	17
84	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.	2.7	209
85	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.	1.4	18
86	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.	6.0	222
87	Synthesis, characterization and thermal properties of nanoencapsulated phase change materials via sol-gel method. <i>Energy</i> , 2013, 61, 664-672.	8.8	204
88	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.	9.2	15
89	Box-Behnken experimental design for investigation of stability and thermal conductivity of TiO <sub>2</sub> nanofluids. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	1.9	32
90	Performance and cost analysis of phase change materials with different melting temperatures in heating systems. <i>Energy</i> , 2013, 53, 173-178.	8.8	62

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91	Phase change material: Optimizing the thermal properties and thermal conductivity of myristic acid/palmitic acid eutectic mixture with acid-based surfactants. Applied Thermal Engineering, 2013, 60, 261-265.	6.0	48
92	Investigation of viscosity and thermal conductivity of alumina nanofluids with addition of SDBS. Heat and Mass Transfer, 2013, 49, 1109-1115.	2.1	69
93	Curbing global warming with phase change materials for energy storage. Renewable and Sustainable Energy Reviews, 2013, 18, 23-30.	16.4	149
94	Shape-stabilized phase change materials with high thermal conductivity based on paraffin/graphene oxide composite. Energy Conversion and Management, 2013, 67, 275-282.	9.2	306
95	Accelerated Thermal Cycling Test of Microencapsulated Paraffin Wax/Polyaniline Made by Simple Preparation Method for Solar Thermal Energy Storage. Materials, 2013, 6, 1608-1620.	2.9	83
96	Investigation of interfacial damping nanotube-based composite. Composites Part B: Engineering, 2013, 50, 354-361.	12.0	38
97	Preparation and properties of highly conductive palmitic acid/graphene oxide composites as thermal energy storage materials. Energy, 2013, 58, 628-634.	8.8	130
98	Dental implants from functionally graded materials. Journal of Biomedical Materials Research - Part A, 2013, 101, 3046-3057.	4.0	105
99	Modelling of PV module with incremental conductance MPPT controlled buck-boost converter. , 2013, , .		14
100	Domain structures on (001) and (111) planes in PZN-PT single crystal. Emerging Materials Research, 2013, 2, 104-108.	0.7	1
101	X-Ray Powder Diffraction Studies of Mechanically Milled Cobalt. Advanced Materials Research, 2012, 626, 913-917.	0.3	0
102	Comparison of nanostructured nickel zinc ferrite and magnesium copper zinc ferrite prepared by water-in-oil microemulsion. Electronic Materials Letters, 2012, 8, 639-642.	2.2	5
103	$\text{Al}_2\text{O}_3$ Fabrication and mechanical properties of $\text{Al}_2\text{O}_3$ functionally graded material. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 1, 1-10.	0.1	62
104	Organosulfonic acid functionalized zeolite ZSM-5 as temperature tolerant proton conducting material. International Journal of Hydrogen Energy, 2012, 37, 12513-12521.	7.1	38
105	Biphasic calcium phosphate (BCP) macroporous scaffold with different ratios of HA/ $\text{ZrO}_2$ -TCP by combination of gel casting and polymer sponge methods. Advances in Applied Ceramics, 2012, 111, 367-373.	1.1	31
106	A review of nanofluid stability properties and characterization in stationary conditions. International Journal of Heat and Mass Transfer, 2011, 54, 4051-4068.	4.8	940
107	Preparation of Nickel Zinc Ferrite by Electrophoretic Deposition. Journal of the Electrochemical Society, 2011, 159, E18-E22.	2.9	9
108	Residual stress and mechanical properties of $\text{Al}_2\text{O}_3/\text{ZrO}_2$ functionally graded material prepared by EPD from $\gamma$ -butanone based suspension. Advances in Applied Ceramics, 2011, 110, 35-40.	1.1	23

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109	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.	1.5	7
110	Evaluating a strain energy fatigue method using cyclic plasticity models. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2010, 33, 530-537.	3.4	10
111	Wear of ceramics due to thermal stress: a thermal severity parameter. <i>Wear</i> , 2001, 249, 962-970.	3.1	24
112	The mechanical properties of thin alumina films deposited by metal-organic chemical vapour deposition. <i>Thin Solid Films</i> , 1995, 254, 153-163.	1.8	23