Frank Bruno

List of Publications by Year in Descending Order

129 papers	4,710 citations	37 h-index	66 g-index
137 ext. papers	5,691 ext. citations	7.3 avg, IF	6.2 L-index

#	Paper	IF	Citations
129	Review of analytical studies of melting rate enhancement with fin and/or foam inserts. *Applied Thermal Engineering*, **2022**, 207, 118154	5.8	1
128	Optimising a packed bed phase change material of spheres using effectiveness-number of transfer unit method. *Journal of Energy Storage*, **2022**, 49, 104019	7.8	0
127	A review of high temperature (□500□C) latent heat thermal energy storage. *Renewable and Sustainable Energy Reviews*, **2022**, 160, 112293	16.2	1
126	Orientation impact on structural integrity of a shell and tube latent heat thermal energy storage system. *Journal of Energy Storage*, **2022**, 52, 104829	7.8	
125	An optimisation study on a real-world transcritical CO2 heat pump system with a flash gas bypass. *Energy Conversion and Management*, **2021**, 251, 114995	10.6	0
124	Mathematical modelling of heat transmission in the temperature history apparatus by using inverse method to evaluate the latent heat of high temperature PCMs. *International Journal of Heat and Mass Transfer*, **2021**, 167, 120825	4.9	0
123	Simulations of melting performance enhancement for a PCM embedded in metal periodic structures. *International Journal of Heat and Mass Transfer*, **2021**, 168, 120853	4.9	12
122	Corrosion interface formation in thermally cycled stainless steel 316 with high-temperature phase change material. *Solar Energy Materials and Solar Cells*, **2021**, 225, 111062	6.4	1
121	Investigation of the effect of thermal resistance on the performance of phase change materials. *International Journal of Thermal Sciences*, **2021**, 164, 106852	4.1	4
120	Experimental phase diagram study of the binary KCl-Na2CO3 system. *Thermochimica Acta*, **2021**, 695, 178811	2.9	2
119	Technoeconomic Impacts of Storage System Design on the Viability of Concentrated Solar Power Plants. *Journal of Energy Storage*, **2021**, 34, 101987	7.8	2
118	Evaluating the utility of passive thermal storage as an energy storage system on the Australian energy market. *Renewable and Sustainable Energy Reviews*, **2021**, 137, 110615	16.2	5
117	Solid-liquid phase change materials for thermal energy storage **2021**, 221-268		0
116	A comprehensive study on a novel transcritical CO2 heat pump for simultaneous space heating and cooling □Concepts and initial performance. *Energy Conversion and Management*, **2021**, 243, 114397	10.6	5
115	Transient Thermo-mechanical analysis of a shell and tube latent heat thermal energy storage for CSP plants. *Applied Thermal Engineering*, **2021**, 196, 117327	5.8	4
114	Phase change behaviour study of PCM tanks partially filled with graphite foam. *Applied Thermal Engineering*, **2021**, 196, 117313	5.8	8
113	A novel, low-cost and robust method for determining molten salt density at high temperatures. *Journal of Energy Storage*, **2021**, 41, 102935	7.8	0

112	Chemical degradation in Thermally Cycled Stainless Steel 316 with High-Temperature Phase Change Material. *Solar Energy Materials and Solar Cells*, **2021**, 230, 111216	6.4	1
111	Thermal stability of a waste-based alkali-activated material for thermal energy storage. *Chemical Thermodynamics and Thermal Analysis*, **2021**, 3-4, 100014		0
110	Review and characterisation of high-temperature phase change material candidates between 500 C and 700°C. *Renewable and Sustainable Energy Reviews*, **2021**, 150, 111528	16.2	5
109	Techno-economic analysis on the design of sensible and latent heat thermal energy storage systems for concentrated solar power plants. *Renewable Energy*, **2021**, 178, 443-455	8.1	8
108	A review of numerical modelling of high-temperature phase change material composites for solar thermal energy storage. *Journal of Energy Storage*, **2020**, 29, 101378	7.8	28
107	Experimental Kinetic Analysis of Potassium Extraction from Ultrapotassic Syenite Using NaCl-CaCl Salt Mixture. *ACS Omega*, **2020**, 5, 16421-16429	3.9	2
106	Numerical study of melting performance enhancement for PCM in an annular enclosure with internal-external fins and metal foams. *International Journal of Heat and Mass Transfer*, **2020**, 150, 119348	4.9	45
105	A new methodology for designing and assessing latent heat thermal energy storage systems **2020**,		1
104	Novel geopolymer for use as a sensible storage option in high temperature thermal energy storage systems **2020**,		3
103	Design of sensible and latent heat thermal energy storage systems for concentrated solar power plants: Thermal performance analysis. *Renewable Energy*, **2020**, 151, 1286-1297	8.1	19
102	Assessment of exergy delivery of thermal energy storage systems for CSP plants: Cascade PCMs, graphite-PCMs and two-tank sensible heat storage systems. *Sustainable Energy Technologies and Assessments*, **2020**, 42, 100823	4.7	3
101	Experimental study of thermodynamic properties and phase equilibria in Na2CO3K2CO3 system. *Calphad: Computer Coupling of Phase Diagrams and Thermochemistry*, **2020**, 71, 101992	1.9	2
100	Maximising renewable gas export opportunities at wastewater treatment plants through the integration of alternate energy generation and storage options. *Science of the Total Environment*, **2020**, 742, 140580	10.2	5
99	Influence of cascaded graphite foams on thermal performance of high temperature phase change material storage systems. *Applied Thermal Engineering*, **2020**, 180, 115618	5.8	14
98	Should academic research be relevant and useful to practitioners? The contrasting difference between three applied disciplines. *Studies in Higher Education*, **2020**, 45, 129-144	2.6	9
97	CO2 Refrigeration and Heat Pump SystemsA Comprehensive Review. *Energies*, **2019**, 12, 2959	3.1	7
96	Performance Evaluation of a CO2 Refrigeration System Enhanced with a Dew Point Cooler. *Energies* , **2019**, 12, 1079	3.1	4
95	Thermochemical and Experimental Kinetic Analysis of Potassium Extraction from Ultrapotassic Syenite Using Molten Chloride Salts. *Industrial & Engineering Chemistry Research*, **2019**, 58, 7397-7407	3.9	7

94	Using renewables coupled with thermal energy storage to reduce natural gas consumption in higher temperature commercial/industrial applications. *Renewable Energy*, **2019**, 131, 1035-1046	8.1	21
93	Characterisation of promising phase change materials for high temperature thermal energy storage. *Journal of Energy Storage*, **2019**, 24, 100801	7.8	17
92	Experimental investigation of specific heat capacity improvement of a binary nitrate salt by addition of nanoparticles/microparticles. *Journal of Energy Storage*, **2019**, 22, 137-143	7.8	12
91	Novel solid□solid phase-change cascade systems for high-temperature thermal energy storage. *Solar Energy*, **2019**, 177, 274-283	6.8	16
90	Sensible and latent heat energy storage systems for concentrated solar power plants, exergy efficiency comparison. *Solar Energy*, **2019**, 180, 104-115	6.8	38
89	Novel Na2SO4-NaCl-ceramic composites as high temperature phase change materials for solar thermal power plants (Part I). *Solar Energy Materials and Solar Cells*, **2018**, 178, 74-83	6.4	45
88	Effect of inner coatings on the stability of chloride-based phase change materials encapsulated in geopolymers. *Solar Energy Materials and Solar Cells*, **2018**, 174, 271-276	6.4	10
87	Performance comparison of latent heat storage systems comprising plate fins with different shell and tube configurations. *Applied Energy*, **2018**, 212, 1095-1106	10.7	29
86	Effectiveness-NTU correlation for a TES tank comprising a PCM encapsulated in a sphere with heat transfer enhancement. *Applied Thermal Engineering*, **2018**, 143, 1003-1010	5.8	16
85	CFD simulation of a TES tank comprising a PCM encapsulated in sphere with heat transfer enhancement. *Applied Thermal Engineering*, **2018**, 143, 1085-1092	5.8	26
84	Static Concept at University of South Australia **2018**, 157-191		
83	Optimization of deterministic controls for a cooling radiant wall coupled to a PV array. *Applied Energy*, **2018**, 229, 1103-1110	10.7	6
82	Corrosion of AISI316 as containment material for latent heat thermal energy storage systems based on carbonates. *Solar Energy Materials and Solar Cells*, **2018**, 186, 1-8	6.4	8
81	Control concepts of a radiant wall working as thermal energy storage for peak load shifting of a heat pump coupled to a PV array. *Renewable Energy*, **2018**, 118, 489-501	8.1	23
80	Encapsulation of High-Temperature Phase Change Materials **2018**, 231-274		1
79	Economic Studies on High-Temperature Phase Change Storage Systems **2018**, 297-318		2
78	Direct Contact Phase Change Material Thermal Energy Storage **2018**, 7-37		
77	Dynamic Concept at University of South Australia **2018**, 39-92		1

76	Development and experimental validation of a CFD model for PCM in a vertical triplex tube heat exchanger. *Applied Thermal Engineering*, **2017**, 116, 344-354	5.8	29
75	Thermal stability of Na 2 CO 3 -Li 2 CO 3 as a high temperature phase change material for thermal energy storage. *Thermochimica Acta*, **2017**, 650, 88-94	2.9	37
74	Impact of periodic flow reversal of heat transfer fluid on the melting and solidification processes in a latent heat shell and tube storage system. *Applied Energy*, **2017**, 191, 276-286	10.7	22
73	Comparative study of melting and solidification processes in different configurations of shell and tube high temperature latent heat storage system. *Solar Energy*, **2017**, 150, 363-374	6.8	22
72	Design optimization method for tube and fin latent heat thermal energy storage systems. *Energy*, **2017**, 134, 585-594	7.9	28
71	A eutectic salt high temperature phase change material: Thermal stability and corrosion of SS316 with respect to thermal cycling. *Solar Energy Materials and Solar Cells*, **2017**, 170, 1-7	6.4	36
70	A critical review of eutectic salt property prediction for latent heat energy storage systems. *Renewable and Sustainable Energy Reviews*, **2017**, 70, 936-944	16.2	41
69	Optimum Facade Design for Minimization of Heating and Cooling Demand in Commercial Office Buildings in Australian Cities. *Journal of Architectural Engineering*, **2017**, 23, 04017025	1.5	2
68	Considerations for the use of metal alloys as phase change materials for high temperature applications. *Solar Energy Materials and Solar Cells*, **2017**, 171, 275-281	6.4	72
67	Numerical investigation of PCM in vertical triplex tube thermal energy storage system for CSP applications **2017**,		5
66	Capital cost expenditure of high temperature latent and sensible thermal energy storage systems **2017**,		7
65	Experimental investigation of the effect of dynamic melting in a cylindrical shell-and-tube heat exchanger using water as PCM. *Applied Energy*, **2017**, 185, 136-145	10.7	35
64	Review on transportable phase change material in thermal energy storage systems. *Renewable and Sustainable Energy Reviews*, **2017**, 75, 264-277	16.2	60
63	Stability and corrosion testing of a high temperature phase change material for CSP applications **2016**,		1
62	Performance enhancement of high temperature latent heat thermal storage systems using heat pipes with and without fins for concentrating solar thermal power plants. *Renewable Energy*, **2016**, 89, 36-50	8.1	50
61	Review on concentrating solar power plants and new developments in high temperature thermal energy storage technologies. *Renewable and Sustainable Energy Reviews*, **2016**, 53, 1411-1432	16.2	523
60	Effective tube-in-tank PCM thermal storage for CSP applications, Part 2: Parametric assessment and impact of latent fraction. *Solar Energy*, **2016**, 139, 744-756	6.8	12
59	Effective tube-in-tank PCM thermal storage for CSP applications, Part 1: Impact of tube configuration on discharging effectiveness. *Solar Energy*, **2016**, 139, 733-743	6.8	23

58	A New Phase Change Material for High Temperature Thermal Energy Storage **2016**,		1
57	A numerical model for thermal energy storage systems utilising encapsulated phase change materials **2016**,		1
56	Numerical modeling of inward and outward melting of high temperature PCM in a vertical cylinder **2016**,		10
55	Geopolymer encapsulation of a chloride salt phase change material for high temperature thermal energy storage **2016**,		9
54	Eutectic Na2CO3NaCl salt: A new phase change material for high temperature thermal storage. *Solar Energy Materials and Solar Cells*, **2016**, 152, 155-160	6.4	70
53	Maximising revenue via optimal control of a concentrating solar thermal power plant with limited storage capacity. *IET Renewable Power Generation*, **2016**, 10, 729-734	2.9	11
52	Comparing the energy performance of Australian houses using NatHERS modelling against measured household energy consumption for heating and cooling. *Energy and Buildings*, **2016**, 119, 173-182	7	11
51	Embodied energy and cost of high temperature thermal energy storage systems for use with concentrated solar power plants. *Applied Energy*, **2016**, 180, 586-597	10.7	49
50	Effectiveness of direct contact PCM thermal storage with a gas as the heat transfer fluid. *Applied Energy*, **2015**, 137, 748-757	10.7	19
49	Determination of thermo-physical properties and stability testing of high-temperature phase-change materials for CSP applications. *Solar Energy Materials and Solar Cells*, **2015**, 139, 81-87	6.4	69
48	Review on shell materials used in the encapsulation of phase change materials for high temperature thermal energy storage. *Renewable and Sustainable Energy Reviews*, **2015**, 48, 79-87	16.2	163
47	Review and evaluation of using household metered energy data for rating of building thermal efficiency of existing buildings. *Energy and Buildings*, **2015**, 108, 433-440	7	6
46	Investigation of Cascaded Shell and Tube Latent Heat Storage Systems for Solar Tower Power Plants. *Energy Procedia*, **2015**, 69, 913-924	2.3	22
45	Controlling stored energy in a concentrating solar thermal power plant to maximise revenue. *IET Renewable Power Generation*, **2015**, 9, 379-388	2.9	17
44	Investigation of the effect of dynamic melting in a tube-in-tank PCM system using a CFD model. *Applied Energy*, **2015**, 137, 738-747	10.7	42
43	Impact of climate change on the design of energy efficient residential building envelopes. *Energy and Buildings*, **2015**, 87, 142-154	7	62
42	Using solid-liquid phase change materials (PCMs) in thermal energy storage systems **2015**, 201-246		17
41	Experimental investigation of the effect of inclination angle on convection-driven melting of phase change material in a rectangular enclosure. *International Journal of Heat and Mass Transfer*, **2014**, 72, 186-200	4.9	153

40	Minimising the life cycle energy of buildings: Review and analysis. *Building and Environment*, **2014**, 73, 106-114	6.5	131
39	Impact of the heat transfer fluid in a flat plate phase change thermal storage unit for concentrated solar tower plants. *Solar Energy*, **2014**, 101, 220-231	6.8	44
38	An effectiveness-NTU model of a packed bed PCM thermal storage system. *Applied Energy*, **2014**, 134, 356-362	10.7	28
37	Computer simulation with TRNSYS for a mobile refrigeration system incorporating a phase change thermal storage unit. *Applied Energy*, **2014**, 132, 226-235	10.7	23
36	An effectiveness-NTU technique for characterising a finned tubes PCM system using a CFD model. *Applied Energy*, **2014**, 131, 377-385	10.7	55
35	Minimising energy usage for domestic cooling with off-peak PCM storage. *Energy and Buildings*, **2014**, 76, 347-353	7	33
34	Effective thermal conductivity for melting in PCM encapsulated in a sphere. *Applied Energy*, **2014**, 122, 280-287	10.7	64
33	Parametric Study on a Thermal Energy Storage Containing Single PCM Sphere. *Applied Mechanics and Materials*, **2014**, 695, 477-481	0.3	
32	Mathematical Modeling on Thermal Energy Storage Systems. *Applied Mechanics and Materials*, **2014** , 695, 553-557	0.3	
31	Optimisation of Storage for Concentrated Solar Power Plants. *Challenges*, **2014**, 5, 473-503	3.4	6
30	CFD Model Validation for Charging and Discharging of a PCM Encapsulated in Sphere. *Applied Mechanics and Materials*, **2014**, 699, 300-304	0.3	
29	Comparison of pinned and finned tubes in a phase change thermal energy storage system using CFD. *Applied Energy*, **2013**, 104, 79-86	10.7	102
28	Experimental investigation of dynamic melting in a tube-in-tank PCM system. *Applied Energy*, **2013**, 104, 137-148	10.7	60
27	Modelling the cooling energy of night ventilation and economiser strategies on façade selection of commercial buildings. *Energy and Buildings*, **2013**, 66, 562-570	7	25
26	Experimental Investigation of PCM Spheres in Thermal Energy Storage System. *Applied Mechanics and Materials*, **2013**, 367, 228-233	0.3	2
25	Review on storage materials and thermal performance enhancement techniques for high temperature phase change thermal storage systems. *Renewable and Sustainable Energy Reviews*, **2012**, 16, 2118-2132	16.2	524
24	Optimising PCM thermal storage systems for maximum energy storage effectiveness. *Solar Energy*, **2012**, 86, 2263-2272	6.8	47
23	Experimental validation of a CFD and an ε-NTU model for a large tube-in-tank PCM system. *International Journal of Heat and Mass Transfer*, **2012**, 55, 5931-5940	4.9	55

22	Designing a PCM storage system using the effectiveness-number of transfer units method in low energy cooling of buildings. *Energy and Buildings*, **2012**, 50, 234-242	7	70
21	Experimental validation of a CFD model for tubes in a phase change thermal energy storage system. *International Journal of Heat and Mass Transfer*, **2012**, 55, 574-585	4.9	83
20	Characterising PCM thermal storage systems using the effectiveness-NTU approach. *International Journal of Heat and Mass Transfer*, **2012**, 55, 3359-3365	4.9	41
19	Experimental investigation of tubes in a phase change thermal energy storage system. *Applied Energy*, **2012**, 90, 288-297	10.7	102
18	An effectiveness-NTU technique for characterising tube-in-tank phase change thermal energy storage systems. *Applied Energy*, **2012**, 91, 309-319	10.7	131
17	Development of a novel refrigeration system for refrigerated trucks incorporating phase change material. *Applied Energy*, **2012**, 92, 336-342	10.7	112
16	Effectiveness NTU correlation for low temperature PCM encapsulated in spheres. *Applied Energy*, **2012**, 93, 549-555	10.7	47
15	Investigation of Conducting Pins in Sphere Filled with Phase Change Material for Enhancing Heat Transfer in Thermal Energy Storage. *Advanced Materials Research*, **2012**, 472-475, 1693-1697	0.5	5
14	Thermal performance analysis of a flat slab phase change thermal storage unit with liquid-based heat transfer fluid for cooling applications. *Solar Energy*, **2011**, 85, 3017-3027	6.8	28
13	On-site experimental testing of a novel dew point evaporative cooler. *Energy and Buildings*, **2011**, 43, 3475-3483	7	114
12	Validation of a mathematical model for encapsulated phase change material flat slabs for cooling applications. *Applied Thermal Engineering*, **2011**, 31, 2340-2347	5.8	51
11	Investigation of the thermal resistance of timber attic spaces with reflective foil and bulk insulation, heat flow up. *Applied Energy*, **2011**, 88, 127-137	10.7	28
10	Maximisation of heat transfer in a coil in tank PCM cold storage system. *Applied Energy*, **2011**, 88, 4120-4127	10.7	102
9	A phase change processor method for solving a one-dimensional phase change problem with convection boundary. *Renewable Energy*, **2010**, 35, 1688-1695	8.1	35
8	Performance of jet impingement in unglazed air collectors. *Solar Energy*, **2008**, 82, 389-398	6.8	61
7	Thermal Performance Of A Pcm Thermal Storage Unit **2008**, 2766-2771		
6	Potential Application of Combisystem for an Australian Climatic Region **2008**, 876-880		
5	A Study on EGR Utilization in Natural Gas SI Engines Using a Two-Zone Combustion Model **2007**,		20

4	Thermal performance of PCM thermal storage unit for a roof integrated solar heating system. *Solar Energy*, **2005**, 78, 341-349	6.8	159
3	Numerical analysis of a PCM thermal storage system with varying wall temperature. *Energy Conversion and Management*, **2005**, 46, 2592-2604	10.6	75
2	Roof integrated solar heating system with glazed collector. *Solar Energy*, **2004**, 76, 61-69	6.8	27
1	Analysis of the operation of a high-pressure micro-compressor. *Energy Conversion and Management*, **1996**, 37, 1517-1524	10.6	3