

Alessio Sapienza

List of Publications by Year in descending order

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77
papers

2,457
citations

159525

30
h-index

214721

47
g-index

80
all docs

80
docs citations

80
times ranked

1397
citing authors

#	ARTICLE	IF	CITATIONS
1	SAPO-34 coated adsorbent heat exchanger for adsorption chillers. Applied Thermal Engineering, 2015, 82, 1-7.	3.0	185
2	Comparative analysis of promising adsorbent/adsorbate pairs for adsorptive heat pumping, air conditioning and refrigeration. Applied Thermal Engineering, 2016, 104, 85-95.	3.0	111
3	Influence of the management strategy and operating conditions on the performance of an adsorption chiller. Energy, 2011, 36, 5532-5538.	4.5	94
4	Adsorption chilling driven by low temperature heat: New adsorbent and cycle optimization. Applied Thermal Engineering, 2012, 32, 141-146.	3.0	85
5	Water adsorption dynamics on representative pieces of real adsorbents for adsorptive chillers. Applied Energy, 2014, 134, 11-19.	5.1	78
6	An innovative adsorptive chiller prototype based on 3 hybrid coated/granular adsorbents. Applied Energy, 2016, 179, 929-938.	5.1	78
7	Development and lab-test of a mobile adsorption air-conditioner. International Journal of Refrigeration, 2012, 35, 701-708.	1.8	73
8	Dynamic study of adsorbents by a new gravimetric version of the Large Temperature Jump method. Applied Energy, 2014, 113, 1244-1251.	5.1	64
9	Experimental testing of a lab-scale adsorption chiller using a novel selective water sorbent CaSiO_3 modified by calcium nitrate. International Journal of Refrigeration, 2012, 35, 518-524.	1.8	63
10	Recent advancements in sorption technology for solar thermal energy storage applications. Solar Energy, 2019, 192, 69-105.	2.9	60
11	Design, realization and testing of an adsorption refrigerator based on activated carbon/ethanol working pair. Applied Energy, 2016, 174, 15-24.	5.1	59
12	Experimental and numerical analysis of a SOFC-CHP system with adsorption and hybrid chillers for telecommunication applications. Applied Energy, 2018, 216, 620-633.	5.1	55
13	Experimental and theoretical analysis of the kinetic performance of an adsorbent coating composition for use in adsorption chillers and heat pumps. Applied Thermal Engineering, 2014, 73, 1022-1031.	3.0	54
14	Experimental testing of a hybrid sensible-latent heat storage system for domestic hot water applications. Applied Energy, 2016, 183, 1157-1167.	5.1	53
15	Prediction of SCP and COP for adsorption heat pumps and chillers by combining the large-temperature-jump method and dynamic modeling. Applied Thermal Engineering, 2016, 98, 900-909.	3.0	53
16	Identification and characterization of promising phase change materials for solar cooling applications. Solar Energy Materials and Solar Cells, 2017, 160, 225-232.	3.0	52
17	$\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ filled macro cellular foams: An innovative composite sorbent for thermo-chemical energy storage applications for solar buildings. Solar Energy, 2018, 173, 1278-1286.	2.9	52
18	Tri-generation for industrial applications: Development of a simulation model for a gasification-SOFC based system. International Journal of Hydrogen Energy, 2017, 42, 27866-27883.	3.8	50

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19	Adsorption Heat Storage: State-of-the-Art and Future Perspectives. <i>Nanomaterials</i> , 2018, 8, 522.	1.9	50
20	“Water - Silica Siogel” working pair for adsorption chillers: Adsorption equilibrium and dynamics. <i>Renewable Energy</i> , 2017, 110, 40-46.	4.3	48
21	Experimental investigation of a latent heat storage for solar cooling applications. <i>Applied Energy</i> , 2017, 199, 347-358.	5.1	47
22	Adsorption-compression cascade cycles: An experimental study. <i>Energy Conversion and Management</i> , 2018, 156, 365-375.	4.4	46
23	Thermal performance of hybrid cement mortar-PCMs for warm climates application. <i>Solar Energy Materials and Solar Cells</i> , 2019, 193, 270-280.	3.0	44
24	A new management strategy based on the reallocation of ads-/desorption times: Experimental operation of a full-scale 3 beds adsorption chiller. <i>Applied Energy</i> , 2017, 205, 1081-1090.	5.1	39
25	An experimental study on the corrosion sensitivity of metal alloys for usage in PCM thermal energy storages. <i>Renewable Energy</i> , 2019, 138, 1018-1027.	4.3	37
26	Experimental testing of AQSOA FAM Z02/water adsorption system for heat and cold storage. <i>Applied Thermal Engineering</i> , 2017, 124, 967-974.	3.0	36
27	Novel experimental methodology for the characterization of thermodynamic performance of advanced working pairs for adsorptive heat transformers. <i>Applied Thermal Engineering</i> , 2014, 72, 229-236.	3.0	34
28	Experimental characterization of the LiCl/vermiculite composite for sorption heat storage applications. <i>International Journal of Refrigeration</i> , 2019, 105, 92-100.	1.8	34
29	Adsorption cooling utilizing the “LiBr/silica” ethanol working pair: Dynamic optimization of the adsorber/heat exchanger unit. <i>Energy</i> , 2014, 75, 390-399.	4.5	33
30	Increasing the share of renewables through adsorption solar cooling: A validated case study. <i>Renewable Energy</i> , 2017, 110, 126-140.	4.3	31
31	Water adsorption equilibrium and dynamics of LiCl/MWCNT/PVA composite for adsorptive heat storage. <i>Solar Energy Materials and Solar Cells</i> , 2019, 193, 133-140.	3.0	30
32	A CCHP system based on ORC cogenerator and adsorption chiller experimental prototypes: Energy and economic analysis for NZEB applications. <i>Applied Thermal Engineering</i> , 2021, 183, 116119.	3.0	30
33	On the impact of different management strategies on the performance of a two-bed activated carbon/ethanol refrigerator: An experimental study. <i>Energy Conversion and Management</i> , 2017, 142, 322-333.	4.4	29
34	Energy balance and life cycle assessment of small size residential solar heating and cooling systems equipped with adsorption chillers. <i>Solar Energy</i> , 2017, 158, 543-558.	2.9	29
35	Magnesium sulphate-silicone foam composites for thermochemical energy storage: Assessment of dehydration behaviour and mechanical stability. <i>Solar Energy Materials and Solar Cells</i> , 2019, 200, 109992.	3.0	28
36	Comparative analysis of thermal energy storage technologies through the definition of suitable key performance indicators. <i>Energy and Buildings</i> , 2019, 185, 88-102.	3.1	28

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37	A dynamic multi-level model for adsorptive solar cooling. <i>Renewable Energy</i> , 2012, 43, 301-312.	4.3	25
38	Atomistic modelling of water transport and adsorption mechanisms in silicoaluminophosphate for thermal energy storage. <i>Applied Thermal Engineering</i> , 2019, 160, 114075.	3.0	25
39	Dynamics and useful heat of the discharge stage of adsorptive cycles for long term thermal storage. <i>Applied Energy</i> , 2019, 248, 299-309.	5.1	25
40	Components and design guidelines for solar cooling systems: The experience of ZEOSOL. <i>Renewable Energy</i> , 2019, 141, 678-692.	4.3	25
41	Study of sorption systems for application on low-emission fishing vessels. <i>Energy</i> , 2017, 134, 554-565.	4.5	24
42	Hybrid Adsorption-Compression Systems for Air Conditioning in Efficient Buildings: Design through Validated Dynamic Models. <i>Energies</i> , 2019, 12, 1161.	1.6	23
43	Dynamics study of ethanol adsorption on microporous activated carbon for adsorptive cooling applications. <i>Applied Thermal Engineering</i> , 2016, 105, 28-38.	3.0	22
44	Development and experimental testing of an integrated prototype based on Stirling, ORC and a latent thermal energy storage system for waste heat recovery in naval application. <i>Applied Energy</i> , 2022, 311, 118673.	5.1	21
45	A simplified approach for modelling latent heat storages: Application and validation on two different fin-and-tubes heat exchangers. <i>Applied Thermal Engineering</i> , 2017, 125, 41-52.	3.0	19
46	Thermal performance of a latent thermal energy storage for exploitation of renewables and waste heat: An experimental investigation based on an asymmetric plate heat exchanger. <i>Energy Conversion and Management</i> , 2019, 200, 112121.	4.4	19
47	Dramatic effect of residual gas on dynamics of isobaric adsorption stage of an adsorptive chiller. <i>Applied Thermal Engineering</i> , 2016, 96, 385-390.	3.0	18
48	Corrosion assessment of promising hydrated salts as sorption materials for thermal energy storage systems. <i>Renewable Energy</i> , 2020, 150, 428-434.	4.3	17
49	Morphological and Structural Evaluation of Hydration/Dehydration Stages of MgSO ₄ Filled Composite Silicone Foam for Thermal Energy Storage Applications. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 453.	1.3	17
50	Design of an Innovative Graphite Exchanger for Adsorption Heat Pumps and Chillers. <i>Energy Procedia</i> , 2015, 81, 1030-1040.	1.8	16
51	Assessment of the hydration/dehydration behaviour of MgSO ₄ ·7H ₂ O filled cellular foams for sorption storage applications through morphological and thermo-gravimetric analyses. <i>Sustainable Materials and Technologies</i> , 2018, 17, e00073.	1.7	16
52	Techno-Economic Analysis of Solar Cooling Systems for Residential Buildings in Italy. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2016, 138, .	1.1	13
53	A Simulation Tool to Evaluate the Feasibility of a gasification-I.C.E. System to Produce Heat and Power for Industrial Applications. <i>Energy Procedia</i> , 2016, 101, 1256-1263.	1.8	13
54	Performance Results of a Solar Adsorption Cooling and Heating Unit. <i>Energies</i> , 2020, 13, 1630.	1.6	13

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55	An Innovative Solar-Biomass Energy System to Increase the Share of Renewables in Office Buildings. <i>Energies</i> , 2021, 14, 914.	1.6	13
56	Dynamic Simulation and Performance Analysis of Solar Cooling Systems in Italy. <i>Energy Procedia</i> , 2015, 81, 1171-1183.	1.8	12
57	Plastic heat exchangers for adsorption cooling: Thermodynamic and dynamic performance. <i>Applied Thermal Engineering</i> , 2021, 188, 116622.	3.0	12
58	Experimental comparison of two heat exchanger concepts for latent heat storage applications. <i>Energy Procedia</i> , 2017, 135, 183-192.	1.8	11
59	Latent Thermal Storage for Solar Cooling Applications: Materials Characterization and Numerical Optimization of Finned Storage Configurations. <i>Heat Transfer Engineering</i> , 2019, 40, 1033-1048.	1.2	11
60	Thermodynamic Performance of Adsorption Working Pairs for Low-Temperature Waste Heat Upgrading in Industrial Applications. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 3389.	1.3	10
61	Enabling Technologies for Sector Coupling: A Review on the Role of Heat Pumps and Thermal Energy Storage. <i>Energies</i> , 2021, 14, 8195.	1.6	10
62	Hybrid Cascade Heat Pump and Thermal-Electric Energy Storage System for Residential Buildings: Experimental Testing and Performance Analysis. <i>Energies</i> , 2021, 14, 2580.	1.6	9
63	Adsorption Cold Storage for Mobile Applications. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2044.	1.3	7
64	Innovative Adsorption Chiller for Marine Applications: Design and Building. <i>Energy Procedia</i> , 2015, 82, 432-438.	1.8	6
65	Dynamic simulation of a multi-generation system, for electric and cooling energy provision, employing a SOFC cogenerator and an adsorption chiller. <i>Energy Procedia</i> , 2017, 143, 416-423.	1.8	5
66	Experimental Validation and Numerical Simulation of a Hybrid Sensible-Latent Thermal Energy Storage for Hot Water Provision on Ships. <i>Energies</i> , 2022, 15, 2596.	1.6	5
67	Life Cycle Assessment (LCA) of an Innovative Compact Hybrid Electrical-Thermal Storage System for Residential Buildings in Mediterranean Climate. <i>Sustainability</i> , 2021, 13, 5322.	1.6	4
68	Evaluation of ad/desorption dynamics of S-PEEK/Zeolite composite coatings by T-LTJ method. <i>Applied Thermal Engineering</i> , 2022, 208, 118262.	3.0	4
69	A dynamic model of a solar driven trigeneration system based on micro-ORC and adsorption chiller prototypes. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	3
70	Sorption Thermal Energy Storage. <i>Green Energy and Technology</i> , 2019, , 33-54.	0.4	3
71	Life Cycle Assessment of an Innovative Hybrid Energy Storage System for Residential Buildings in Continental Climates. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 3820.	1.3	3
72	A Fast-Reduced Model for an Innovative Latent Thermal Energy Storage for Direct Integration in Heat Pumps. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 8972.	1.3	2

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73	Analysis of the Potential of Solar-Assisted Heat Pumps: Technical, Market, and Social Acceptance Aspects. Solar Rrl, 2022, 6, .	3.1	2
74	Study and Evaluation of Two Innovative Waste-heat Driven Refrigeration Systems for Fishing Vessels Applications. Energy Procedia, 2016, 101, 838-845.	1.8	1
75	Experimental Characterization of Sorption Thermal Energy Storage Systems. Green Energy and Technology, 2019, , 201-225.	0.4	0
76	Optimization of an Adsorbent/Heat Exchanger Unit. SpringerBriefs in Applied Sciences and Technology, 2018, , 69-87.	0.2	0
77	A New Methodological Approach for the Evaluation of Scaling Up a Latent Storage Module for Integration in Heat Pumps. Energies, 2021, 14, 7470.	1.6	0