

# Alessio Sapienza

## List of Publications by Citations

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78  
papers

1,862  
citations

27  
h-index

40  
g-index

80  
ext. papers

2,187  
ext. citations

5.6  
avg, IF

5.38  
L-index

#	Paper	IF	Citations
78	SAPO-34 coated adsorbent heat exchanger for adsorption chillers. <i>Applied Thermal Engineering</i> , <b>2015</b> , 82, 1-7	5.8	148
77	Comparative analysis of promising adsorbent/adsorbate pairs for adsorptive heat pumping, air conditioning and refrigeration. <i>Applied Thermal Engineering</i> , <b>2016</b> , 104, 85-95	5.8	83
76	Influence of the management strategy and operating conditions on the performance of an adsorption chiller. <i>Energy</i> , <b>2011</b> , 36, 5532-5538	7.9	78
75	Water adsorption dynamics on representative pieces of real adsorbers for adsorptive chillers. <i>Applied Energy</i> , <b>2014</b> , 134, 11-19	10.7	70
74	Adsorption chilling driven by low temperature heat: New adsorbent and cycle optimization. <i>Applied Thermal Engineering</i> , <b>2012</b> , 32, 141-146	5.8	70
73	Development and lab-test of a mobile adsorption air-conditioner. <i>International Journal of Refrigeration</i> , <b>2012</b> , 35, 701-708	3.8	61
72	Dynamic study of adsorbers by a new gravimetric version of the Large Temperature Jump method. <i>Applied Energy</i> , <b>2014</b> , 113, 1244-1251	10.7	60
71	An innovative adsorptive chiller prototype based on 3 hybrid coated/granular adsorbers. <i>Applied Energy</i> , <b>2016</b> , 179, 929-938	10.7	59
70	Experimental testing of a lab-scale adsorption chiller using a novel selective water sorbent silica modified by calcium nitrate. <i>International Journal of Refrigeration</i> , <b>2012</b> , 35, 518-524	3.8	56
69	Design, realization and testing of an adsorption refrigerator based on activated carbon/ethanol working pair. <i>Applied Energy</i> , <b>2016</b> , 174, 15-24	10.7	50
68	Experimental and theoretical analysis of the kinetic performance of an adsorbent coating composition for use in adsorption chillers and heat pumps. <i>Applied Thermal Engineering</i> , <b>2014</b> , 73, 1022-1031	5.8	47
67	Prediction of SCP and COP for adsorption heat pumps and chillers by combining the large-temperature-jump method and dynamic modeling. <i>Applied Thermal Engineering</i> , <b>2016</b> , 98, 900-909	5.8	43
66	Identification and characterization of promising phase change materials for solar cooling applications. <i>Solar Energy Materials and Solar Cells</i> , <b>2017</b> , 160, 225-232	6.4	43
65	Recent advancements in sorption technology for solar thermal energy storage applications. <i>Solar Energy</i> , <b>2019</b> , 192, 69-105	6.8	42
64	Experimental and numerical analysis of a SOFC-CHP system with adsorption and hybrid chillers for telecommunication applications. <i>Applied Energy</i> , <b>2018</b> , 216, 620-633	10.7	40
63	Experimental testing of a hybrid sensible-latent heat storage system for domestic hot water applications. <i>Applied Energy</i> , <b>2016</b> , 183, 1157-1167	10.7	38
62	Adsorption-compression cascade cycles: An experimental study. <i>Energy Conversion and Management</i> , <b>2018</b> , 156, 365-375	10.6	38

61	Experimental investigation of a latent heat storage for solar cooling applications. <i>Applied Energy</i> , <b>2017</b> , 199, 347-358	10.7	37
60	Tri-generation for industrial applications: Development of a simulation model for a gasification-SOFC based system. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 27866-27883	6.7	37
59	MgSO <sub>4</sub> ·7H <sub>2</sub> O filled macro cellular foams: An innovative composite sorbent for thermo-chemical energy storage applications for solar buildings. <i>Solar Energy</i> , <b>2018</b> , 173, 1278-1286	6.8	37
58	Adsorption Heat Storage: State-of-the-Art and Future Perspectives. <i>Nanomaterials</i> , <b>2018</b> , 8,	5.4	36
57	Water - Silica Siogel working pair for adsorption chillers: Adsorption equilibrium and dynamics. <i>Renewable Energy</i> , <b>2017</b> , 110, 40-46	8.1	35
56	Novel experimental methodology for the characterization of thermodynamic performance of advanced working pairs for adsorptive heat transformers. <i>Applied Thermal Engineering</i> , <b>2014</b> , 72, 229-238	5.8	34
55	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> , <b>2017</b> , 205, 1081-1090	10.7	30
54	Experimental testing of AQSOA FAM Z02/water adsorption system for heat and cold storage. <i>Applied Thermal Engineering</i> , <b>2017</b> , 124, 967-974	5.8	28
53	Increasing the share of renewables through adsorption solar cooling: A validated case study. <i>Renewable Energy</i> , <b>2017</b> , 110, 126-140	8.1	27
52	Adsorption cooling utilizing the LiBr/silica ethanol working pair: Dynamic optimization of the adsorber/heat exchanger unit. <i>Energy</i> , <b>2014</b> , 75, 390-399	7.9	27
51	Experimental characterization of the LiCl/vermiculite composite for sorption heat storage applications. <i>International Journal of Refrigeration</i> , <b>2019</b> , 105, 92-100	3.8	26
50	Thermal performance of hybrid cement mortar-PCMs for warm climates application. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 193, 270-280	6.4	24
49	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> , <b>2017</b> , 142, 322-333	10.6	23
48	Energy balance and life cycle assessment of small size residential solar heating and cooling systems equipped with adsorption chillers. <i>Solar Energy</i> , <b>2017</b> , 158, 543-558	6.8	23
47	A dynamic multi-level model for adsorptive solar cooling. <i>Renewable Energy</i> , <b>2012</b> , 43, 301-312	8.1	23
46	Water adsorption equilibrium and dynamics of LiCl/MWCNT/PVA composite for adsorptive heat storage. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 193, 133-140	6.4	20
45	Magnesium sulphate-silicone foam composites for thermochemical energy storage: Assessment of dehydration behaviour and mechanical stability. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 200, 109992	6.4	20
44	An experimental study on the corrosion sensitivity of metal alloys for usage in PCM thermal energy storages. <i>Renewable Energy</i> , <b>2019</b> , 138, 1018-1027	8.1	20

43	Dynamics study of ethanol adsorption on microporous activated carbon for adsorptive cooling applications. <i>Applied Thermal Engineering</i> , <b>2016</b> , 105, 28-38	5.8	20
42	Dynamics and useful heat of the discharge stage of adsorptive cycles for long term thermal storage. <i>Applied Energy</i> , <b>2019</b> , 248, 299-309	10.7	19
41	Components and design guidelines for solar cooling systems: The experience of ZEOSOL. <i>Renewable Energy</i> , <b>2019</b> , 141, 678-692	8.1	18
40	Atomistic modelling of water transport and adsorption mechanisms in silicoaluminophosphate for thermal energy storage. <i>Applied Thermal Engineering</i> , <b>2019</b> , 160, 114075	5.8	18
39	Hybrid Adsorption-Compression Systems for Air Conditioning in Efficient Buildings: Design through Validated Dynamic Models. <i>Energies</i> , <b>2019</b> , 12, 1161	3.1	17
38	Dramatic effect of residual gas on dynamics of isobaric adsorption stage of an adsorptive chiller. <i>Applied Thermal Engineering</i> , <b>2016</b> , 96, 385-390	5.8	16
37	Comparative analysis of thermal energy storage technologies through the definition of suitable key performance indicators. <i>Energy and Buildings</i> , <b>2019</b> , 185, 88-102	7	16
36	A simplified approach for modelling latent heat storages: Application and validation on two different fin-and-tubes heat exchangers. <i>Applied Thermal Engineering</i> , <b>2017</b> , 125, 41-52	5.8	15
35	Study of sorption systems for application on low-emission fishing vessels. <i>Energy</i> , <b>2017</b> , 134, 554-565	7.9	15
34	Design of an Innovative Graphite Exchanger for Adsorption Heat Pumps and Chillers. <i>Energy Procedia</i> , <b>2015</b> , 81, 1030-1040	2.3	13
33	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> , <b>2019</b> , 200, 112121	10.6	12
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> , <b>2021</b> , 183, 116119	5.8	12
31	Assessment of the hydration/dehydration behaviour of MgSO <sub>4</sub> ·7H <sub>2</sub> O filled cellular foams for sorption storage applications through morphological and thermo-gravimetric analyses. <i>Sustainable Materials and Technologies</i> , <b>2018</b> , 17, e00073	5.3	11
30	Techno-Economic Analysis of Solar Cooling Systems for Residential Buildings in Italy. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , <b>2016</b> , 138, 031005	2.3	11
29	Experimental comparison of two heat exchanger concepts for latent heat storage applications. <i>Energy Procedia</i> , <b>2017</b> , 135, 183-192	2.3	10
28	Morphological and Structural Evaluation of Hydration/Dehydration Stages of MgSO <sub>4</sub> Filled Composite Silicone Foam for Thermal Energy Storage Applications. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 453	2.6	10
27	Corrosion assessment of promising hydrated salts as sorption materials for thermal energy storage systems. <i>Renewable Energy</i> , <b>2020</b> , 150, 428-434	8.1	10
26	Latent Thermal Storage for Solar Cooling Applications: Materials Characterization and Numerical Optimization of Finned Storage Configurations. <i>Heat Transfer Engineering</i> , <b>2019</b> , 40, 1033-1048	1.7	10

25	Dynamic Simulation and Performance Analysis of Solar Cooling Systems in Italy. <i>Energy Procedia</i> , <b>2015</b> , 81, 1171-1183	2.3	9
24	Performance Results of a Solar Adsorption Cooling and Heating Unit. <i>Energies</i> , <b>2020</b> , 13, 1630	3.1	8
23	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> , <b>2016</b> , 101, 1256-1263	2.3	8
22	Hybrid Cascade Heat Pump and Thermal-Electric Energy Storage System for Residential Buildings: Experimental Testing and Performance Analysis. <i>Energies</i> , <b>2021</b> , 14, 2580	3.1	7
21	An Innovative Solar-Biomass Energy System to Increase the Share of Renewables in Office Buildings. <i>Energies</i> , <b>2021</b> , 14, 914	3.1	7
20	Plastic heat exchangers for adsorption cooling: Thermodynamic and dynamic performance. <i>Applied Thermal Engineering</i> , <b>2021</b> , 188, 116622	5.8	6
19	Thermodynamic Performance of Adsorption Working Pairs for Low-Temperature Waste Heat Upgrading in Industrial Applications. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 3389	2.6	5
18	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> , <b>2017</b> , 143, 416-423	2.3	4
17	Innovative Adsorption Chiller for Marine Applications: Design and Building. <i>Energy Procedia</i> , <b>2015</b> , 82, 432-438	2.3	4
16	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> , <b>2022</b> , 311, 118673	10.7	3
15	Adsorption Cold Storage for Mobile Applications. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 2044	2.6	2
14	Life Cycle Assessment (LCA) of an Innovative Compact Hybrid Electrical-Thermal Storage System for Residential Buildings in Mediterranean Climate. <i>Sustainability</i> , <b>2021</b> , 13, 5322	3.6	2
13	A dynamic model of a solar driven trigeneration system based on micro-ORC and adsorption chiller prototypes <b>2019</b> ,		2
12	A Fast-Reduced Model for an Innovative Latent Thermal Energy Storage for Direct Integration in Heat Pumps. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 8972	2.6	2
11	Enabling Technologies for Sector Coupling: A Review on the Role of Heat Pumps and Thermal Energy Storage. <i>Energies</i> , <b>2021</b> , 14, 8195	3.1	2
10	Life Cycle Assessment of an Innovative Hybrid Energy Storage System for Residential Buildings in Continental Climates. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 3820	2.6	1
9	Study and Evaluation of Two Innovative Waste-heat Driven Refrigeration Systems for Fishing Vessels Applications. <i>Energy Procedia</i> , <b>2016</b> , 101, 838-845	2.3	1
8	Experimental Validation and Numerical Simulation of a Hybrid Sensible-Latent Thermal Energy Storage for Hot Water Provision on Ships. <i>Energies</i> , <b>2022</b> , 15, 2596	3.1	1

7	Sorption Thermal Energy Storage. <i>Green Energy and Technology</i> , <b>2019</b> , 33-54	0.6	o
6	Evaluation of ad/desorption dynamics of S-PEEK/Zeolite composite coatings by T-LTJ method. <i>Applied Thermal Engineering</i> , <b>2022</b> , 208, 118262	5.8	o
5	A New Methodological Approach for the Evaluation of Scaling Up a Latent Storage Module for Integration in Heat Pumps. <i>Energies</i> , <b>2021</b> , 14, 7470	3.1	
4	Optimization of an Adsorbent/Heat Exchanger Unit. <i>SpringerBriefs in Applied Sciences and Technology</i> , <b>2018</b> , 69-87	0.4	
3	Experimental Characterization of Latent Thermal Energy Storage Systems. <i>Green Energy and Technology</i> , <b>2019</b> , 173-200	0.6	
2	Experimental Characterization of Sorption Thermal Energy Storage Systems. <i>Green Energy and Technology</i> , <b>2019</b> , 201-225	0.6	
1	Definition of Performance Indicators for Thermal Energy Storage. <i>Green Energy and Technology</i> , <b>2019</b> , 227-242	0.6	