Yuri I Aristov

List of Publications by Year
in descending order

230 papers	9,154 citations	28190 55 h-index	54797 84 g-index
231 all docs	231 docs citations	231 times ranked	2578 citing authors

#	Article	IF	Citations
1	A family of new working materials for solid sorption air conditioning systems. Applied Thermal Engineering, 2002, 22, 191-204.	3.0	297
2	Challenging offers of material science for adsorption heat transformation: A review. Applied Thermal Engineering, 2013, 50, 1610-1618.	3.0	265
3	Selective water sorbents for multiple applications, 1. CaCl2 confined in mesopores of silica gel: Sorption properties. Reaction Kinetics and Catalysis Letters, 1996, 59, 325-333.	0.6	197
4	SAPO-34 coated adsorbent heat exchanger for adsorption chillers. Applied Thermal Engineering, 2015, 82, 1-7.	3.0	185
5	A new generation cooling device employing CaCl2-in-silica gelâ€"water system. International Journal of Heat and Mass Transfer, 2009, 52, 516-524.	2.5	178
6	Composites â€˜salt inside porous matrixâ€™ for adsorption heat transformation: a current state-of-the-art and new trends. International Journal of Low-Carbon Technologies, 2012, 7, 288-302.	1.2	164
7	A new methodology of studying the dynamics of water sorption/desorption under real operating conditions of adsorption heat pumps: Experiment. International Journal of Heat and Mass Transfer, 2008, 51, 4966-4972.	2.5	148
8	Experimental study on the kinetics of water vapor sorption on selective water sorbents, silica gel and alumina under typical operating conditions of sorption heat pumps. International Journal of Heat and Mass Transfer, 2003, 46, 273-281.	2.5	145
9	Kinetics of water adsorption on silica Fuji Davison RD. Microporous and Mesoporous Materials, 2006, 96, 65-71.	2.2	140
10	Optimization of adsorption dynamics in adsorptive chillers: Loose grains configuration. Energy, 2012, 46, 484-492.	4.5	131
11	New materials for adsorption heat transformation and storage. Renewable Energy, 2017, 110, 59-68.	4.3	124
12	Selective water sorbent for solid sorption chiller: experimental results and modelling. International Journal of Refrigeration, 2004, 27, 284-293.	1.8	121
13	Reallocation of adsorption and desorption times for optimisation of cooling cycles. International Journal of Refrigeration, 2012, 35, 525-531.	1.8	121
14	MOF-801 as a promising material for adsorption cooling: Equilibrium and dynamics of water adsorption. Energy Conversion and Management, 2018, 174, 356-363.	4.4	121
15	Kinetics of water sorption on SWS-1L (calcium chloride confined to mesoporous silica gel): Influence of grain size and temperature. Chemical Engineering Science, 2006, 61, 1453-1458.	1.9	120
16	New composite sorbent CaCl2 in mesopores for sorption cooling/heating. International Journal of Thermal Sciences, 2002, 41, 470-474.	2.6	115
17	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
18	An advanced solid sorption chiller using SWS-1L. Applied Thermal Engineering, 2007, 27, 2200-2204.	3.0	110

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19	New family of solid sorbents for adsorptive cooling: Material scientist approach. Journal of Engineering Thermophysics, 2007, 16, 63-72.	0.6	110
20	Metal-organic frameworks for energy conversion and water harvesting: A bridge between thermal engineering and material science. Nano Energy, 2021, 84, 105946.	8.2	110
21	Water sorption on composite â€œsilica modified by calcium nitrateâ€. Microporous and Mesoporous Materials, 2009, 122, 223-228.	2.2	108
22	Optimal adsorbent for adsorptive heat transformers: Dynamic considerations. International Journal of Refrigeration, 2009, 32, 675-686.	1.8	106
23	?Chemical Heat Accumulators?: A new approach to accumulating low potential heat. Solar Energy Materials and Solar Cells, 1996, 44, 219-235.	3.0	101
24	Concept of adsorbent optimal for adsorptive cooling/heating. Applied Thermal Engineering, 2014, 72, 166-175.	3.0	101
25	Synthesis and water sorption properties of a new composite â€œCaCl2 confined into SBA-15 poresâ€. Microporous and Mesoporous Materials, 2010, 129, 243-250.	2.2	97
26	Influence of the management strategy and operating conditions on the performance of an adsorption chiller. Energy, 2011, 36, 5532-5538.	4.5	94
27	Selective water sorbents for multiple applications, 5. LiBr confined in mesopores of silica gel: Sorption properties. Reaction Kinetics and Catalysis Letters, 1998, 63, 81-88.	0.6	87
28	NEW COMPOSITE SORBENTS FOR SOLAR-DRIVEN TECHNOLOGY OF FRESH WATER PRODUCTION FROM THE ATMOSPHERE. Solar Energy, 1999, 66, 165-168.	2.9	86
29	Adsorption chilling driven by low temperature heat: New adsorbent and cycle optimization. Applied Thermal Engineering, 2012, 32, 141-146.	3.0	85
30	NH 2 -MIL-125 as a promising material for adsorptive heat transformation and storage. Energy, 2016, 100, 18-24.	4.5	84
31	Ultrahigh-Energy-Density Sorption Thermal Battery Enabled by Graphene Aerogel-Based Composite Sorbents for Thermal Energy Harvesting from Air. ACS Energy Letters, 2021, 6, 1795-1802.	8.8	82
32	Selective water sorbents for multiple applications, 2. CaCl2 confined in micropores of silica gel: Sorption properties. Reaction Kinetics and Catalysis Letters, 1996, 59, 335-342.	0.6	81
33	The effect of cycle boundary conditions and adsorbent grain size on the water sorption dynamics in adsorption chillers. International Journal of Heat and Mass Transfer, 2010, 53, 1893-1898.	2.5	78
34	Composite material â€œMg(OH)2/vermiculiteâ€. A promising new candidate for storage of middle temperature heat. Energy, 2012, 44, 1028-1034.	4.5	78
35	Water adsorption dynamics on representative pieces of real adsorbers for adsorptive chillers. Applied Energy, 2014, 134, 11-19.	5.1	78
36	An innovative adsorptive chiller prototype based on 3 hybrid coated/granular adsorbers. Applied Energy, 2016, 179, 929-938.	5.1	78

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37	Water sorption on composites â€œLiBr in a porous carbonâ€• Fuel Processing Technology, 2002, 79, 225-231.	3.7	75
38	Adsorptive transformation of heat: Principles of construction of adsorbents database. Applied Thermal Engineering, 2012, 42, 18-24.	3.0	73
39	Development and lab-test of a mobile adsorption air-conditioner. International Journal of Refrigeration, 2012, 35, 701-708.	1.8	73
40	Isothermal sorption characteristics of the BaCl2â€"NH3 pair in a vermiculite host matrix. Applied Thermal Engineering, 2007, 27, 2455-2462.	3.0	72
41	Selective Water Sorbents for Multiple Applications. 11. CaCl2 Confined to Expanded Vermiculite. Reaction Kinetics and Catalysis Letters, 2000, 71, 377-384.	0.6	70
42	Sorption of Carbon Dioxide from Wet Gases by K2CO3-in-Porous Matrix: Influence of the Matrix Nature. Reaction Kinetics and Catalysis Letters, 2000, 71, 355-362.	0.6	70
43	Dynamic study of methanol adsorption on activated carbon ACM-35.4 for enhancing the specific cooling power of adsorptive chillers. Applied Energy, 2014, 117, 127-133.	5.1	70
44	Modification of magnesium and calcium hydroxides with salts: An efficient way to advanced materials for storage of middle-temperature heat. Energy, 2015, 85, 667-676.	4.5	69
45	Rational design of a robust aluminum metal-organic framework for multi-purpose water-sorption-driven heat allocations. Nature Communications, 2020, 11, 5112.	5.8	68
46	Impact of phase composition on water adsorption on inorganic hybrids â€œsalt/silicaâ€• Journal of Colloid and Interface Science, 2006, 301, 685-691.	5.0	66
47	Adsorption properties of composite materials (LiCl+LiBr)/silica. Microporous and Mesoporous Materials, 2009, 126, 262-267.	2.2	66
48	Composite â€œLiCl/vermiculiteâ€•as advanced water sorbent for thermal energy storage. Applied Thermal Engineering, 2017, 124, 1401-1408.	3.0	65
49	Composite materials based on zeolite 4A for adsorption heat pumps. Adsorption, 1997, 3, 33-40.	1.4	64
50	Novel ammonia sorbents â€œporous matrix modified by active saltâ€•for adsorptive heat transformation: 3. Testing of â€œBaCl2/vermiculiteâ€•composite in a lab-scale adsorption chiller. Applied Thermal Engineering, 2010, 30, 1188-1192.	3.0	64
51	Dynamic study of adsorbers by a new gravimetric version of the Large Temperature Jump method. Applied Energy, 2014, 113, 1244-1251.	5.1	64
52	Composite sorbent of methanol â€œLiCl in mesoporous silica gelâ€•for adsorption cooling: Dynamic optimization. Energy, 2011, 36, 1273-1279.	4.5	63
53	Experimental testing of a lab-scale adsorption chiller using a novel selective water sorbent â€œsilica modified by calcium nitrateâ€• International Journal of Refrigeration, 2012, 35, 518-524.	1.8	63
54	Thermal conductivity of composite sorbents â€œsalt in porous matrixâ€•for heat storage and transformation. Applied Thermal Engineering, 2013, 61, 401-407.	3.0	59

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55	Thermal conductivity of selective water sorbents under the working conditions of a sorption chiller. Applied Thermal Engineering, 2002, 22, 1631-1642.	3.0	58
56	Composites â€œlithium halides in silica gel poresâ€: Methanol sorption equilibrium. Microporous and Mesoporous Materials, 2008, 112, 254-261.	2.2	55
57	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
58	Composites CaCl2/SBA-15 for adsorptive transformation of low temperature heat: Pore size effect. International Journal of Refrigeration, 2011, 34, 1244-1250.	1.8	53
59	Experimental testing of a hybrid sensible-latent heat storage system for domestic hot water applications. Applied Energy, 2016, 183, 1157-1167.	5.1	53
60	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
61	Simulation of a solid sorption ice-maker based on the novel composite sorbent â€œlithium chloride in silica gel poresâ€. Applied Thermal Engineering, 2009, 29, 1714-1720.	3.0	52
62	Dynamic optimization of adsorptive chillers: The â€œAQSOAâ„¢-FAM-Z02 â€“ Waterâ€•working pair. Energy, 2016, 106, 13-22.	4.5	52
63	Composite sorbents â€œLi/Ca halogenides inside Multi-wall Carbon Nano-tubesâ€•for Thermal Energy Storage. Solar Energy Materials and Solar Cells, 2016, 155, 176-183.	3.0	52
64	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
65	Composites â€œbinary salts in porous matrixâ€•for adsorption heat transformation. Applied Thermal Engineering, 2013, 50, 1633-1638.	3.0	51
66	Adsorptive transformation and storage of renewable heat: Review of current trends in adsorption dynamics. Renewable Energy, 2017, 110, 105-114.	4.3	51
67	Adsorptive transformation of ambient heat: A new cycle. Applied Thermal Engineering, 2017, 124, 521-524.	3.0	51
68	Simulation of water sorption dynamics in adsorption chillers: One, two and four layers of loose silica grains. Applied Thermal Engineering, 2012, 44, 69-77.	3.0	50
69	Adsorption Heat Storage: State-of-the-Art and Future Perspectives. Nanomaterials, 2018, 8, 522.	1.9	50
70	Potable water extraction from the atmosphere: Potential of MOFs. Renewable Energy, 2020, 148, 72-80.	4.3	50
71	A stand-alone solar adsorption refrigerator for humanitarian aid. Solar Energy, 2014, 100, 172-178.	2.9	49
72	â€œWater - Silica Siogelâ€•working pair for adsorption chillers: Adsorption equilibrium and dynamics. Renewable Energy, 2017, 110, 40-46.	4.3	48

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73	Selective water sorbents for multiple application, 6. Freshwater production from the atmosphere. Reaction Kinetics and Catalysis Letters, 1998, 65, 153-159.	0.6	47
74	Adsorptive heat storage and amplification: New cycles and adsorbents. Energy, 2019, 167, 440-453.	4.5	47
75	Effective Inorganic Hybrid Adsorbents of Water Vapor by the Solâˆ'Gel Method. Chemistry of Materials, 1997, 9, 2486-2490.	3.2	45
76	Selective water sorbents for multiple applications, 3. CaCl2 solution confined in micro- and mesoporous silica gels: Pore size effect on the â€œsolidification-meltingâ€• diagram. Reaction Kinetics and Catalysis Letters, 1997, 61, 147-154.	0.6	45
77	Selective Water Sorbents for Multiple Applications, 10. Energy Storage Ability. Reaction Kinetics and Catalysis Letters, 2000, 69, 345-353.	0.6	44
78	A new methodology of studying the dynamics of water sorption/desorption under real operating conditions of adsorption heat pumps: Modelling of coupled heat and mass transfer in a single adsorbent grain. International Journal of Heat and Mass Transfer, 2008, 51, 246-252.	2.5	44
79	Dynamic behaviors of adsorption chiller: Effects of the silica gel grain size and layers. Energy, 2014, 78, 304-312.	4.5	44
80	Ammonia adsorption by MgCl2, CaCl2 and BaCl2 confined to porous alumina: the fixed bed adsorber. Reaction Kinetics and Catalysis Letters, 2005, 85, 183-188.	0.6	43
81	Universal relation between the boundary temperatures of a basic cycle of sorption heat machines. Chemical Engineering Science, 2008, 63, 2907-2912.	1.9	43
82	Experimental and numerical study of adsorptive chiller dynamics: Loose grains configuration. Applied Thermal Engineering, 2013, 61, 841-847.	3.0	43
83	Doping Magnesium Hydroxide with Sodium Nitrate: A New Approach to Tune the Dehydration Reactivity of Heat-Storage Materials. ACS Applied Materials & Interfaces, 2014, 6, 19966-19977.	4.0	42
84	Selective water sorbents for multiple applications, 4. CaCl2 confined in silica gel pores: Sorption/desorption kinetics. Reaction Kinetics and Catalysis Letters, 1997, 62, 143-150.	0.6	40
85	Influence of Characteristics of Methanol Sorbents â€œSalts in Mesoporous Silicaâ€• on the Performance of Adsorptive Air Conditioning Cycle. Industrial & Engineering Chemistry Research, 2007, 46, 2747-2752.	1.8	40
86	A new management strategy based on the reallocation of ads-/desorption times: Experimental operation of a full-scale 3 beds adsorption chiller. Applied Energy, 2017, 205, 1081-1090.	5.1	39
87	Sorption of carbon dioxide by the composite sorbent â€œpotassium carbonate in porous matrixâ€• Russian Chemical Bulletin, 2003, 52, 359-363.	0.4	38
88	Kinetics of water adsorption on loose grains of SWS-1L under isobaric stages of adsorption heat pumps: The effect of residual air. International Journal of Heat and Mass Transfer, 2008, 51, 5823-5827.	2.5	38
89	Adapting the MgO-CO2 working pair for thermochemical energy storage by doping with salts. Energy Conversion and Management, 2019, 185, 473-481.	4.4	38
90	Chemical and adsorption heat pumps: Comments on the second law efficiency. Chemical Engineering Journal, 2008, 136, 419-424.	6.6	37

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91	Kinetics of water adsorption/desorption under isobaric stages of adsorption heat transformers: The effect of isobar shape. International Journal of Heat and Mass Transfer, 2009, 52, 1774-1777.	2.5	37
92	Composite â€œLiCl/MWCNTâ€•as advanced water sorbent for thermal energy storage: Sorption dynamics. Solar Energy Materials and Solar Cells, 2018, 176, 273-279.	3.0	37
93	Novel ammonia sorbents â€œporous matrix modified by active saltâ€•for adsorptive heat transformation. Applied Thermal Engineering, 2010, 30, 584-589.	3.0	36
94	Novel experimental methodology for the characterization of thermodynamic performance of advanced working pairs for adsorptive heat transformers. Applied Thermal Engineering, 2014, 72, 229-236.	3.0	34
95	Experimental characterization of the LiCl/vermiculite composite for sorption heat storage applications. International Journal of Refrigeration, 2019, 105, 92-100.	1.8	34
96	Adsorption cooling utilizing the â€œLiBr/silica â€“ ethanolâ€•working pair: Dynamic optimization of the adsorber/heat exchanger unit. Energy, 2014, 75, 390-399.	4.5	33
97	Adsorption cycle â€œheat from coldâ€•for upgrading the ambient heat: The testing a lab-scale prototype with the composite sorbent CaClBr/silica. Applied Energy, 2018, 211, 136-145.	5.1	33
98	An 1H NMR Microimaging Study of Water Vapor Sorption by Individual Porous Pellets. Journal of Physical Chemistry B, 2000, 104, 1695-1700.	1.2	32
99	A new approach to regenerating heat and moisture in ventilation systems. Energy and Buildings, 2008, 40, 204-208.	3.1	32
100	Novel ammonia sorbents â€œporous matrix modified by active saltâ€•for adsorptive heat transformation: 2. Calcium chloride in ACF felt. Applied Thermal Engineering, 2010, 30, 845-849.	3.0	31
101	Porous texture characteristics of a homologous series of base-catalyzed silica aerogels. Journal of Non-Crystalline Solids, 1995, 190, 198-205.	1.5	30
102	Water adsorption equilibrium and dynamics of LICL/MWCNT/PVA composite for adsorptive heat storage. Solar Energy Materials and Solar Cells, 2019, 193, 133-140.	3.0	30
103	NH 2 -MIL-125 as promising adsorbent for adsorptive cooling: Water adsorption dynamics. Applied Thermal Engineering, 2017, 116, 541-548.	3.0	29
104	Kinetics of carbon dioxide sorption by the composite material K2CO3in Al2O3. Reaction Kinetics and Catalysis Letters, 2004, 82, 363-369.	0.6	28
105	Composite Sorbent of Methanol â€œLithium Chloride in Mesoporous Silica Gelâ€•for Adsorption Cooling Machines: Performance and Stability Evaluation. Industrial & Engineering Chemistry Research, 2009, 48, 6197-6202.	1.8	28
106	â€œMIL-101(Cr)â€“methanolâ€•as working pair for adsorption heat transformation cycles: Adsorbent shaping, adsorption equilibrium and dynamics. Energy Conversion and Management, 2019, 182, 299-306.	4.4	27
107	Sorption equilibrium of methanol on new composite sorbents â€œCaCl2/silica gelâ€• Adsorption, 2007, 13, 121-127.	1.4	26
108	Dynamic optimization of adsorptive chillers: Compact layer vs. bed of loose grains. Applied Thermal Engineering, 2017, 125, 823-829.	3.0	26

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109	Dynamics and useful heat of the discharge stage of adsorptive cycles for long term thermal storage. Applied Energy, 2019, 248, 299-309.	5.1	25
110	Water Vapor Adsorption on CAU-10-<i>X</i>: Effect of Functional Groups on Adsorption Equilibrium and Mechanisms. Langmuir, 2021, 37, 693-702.	1.6	25
111	SiO2â€“LiBr Nanocomposite Solâ€“Gel Adsorbents of Water Vapor: Preparation and Properties. Journal of Colloid and Interface Science, 1999, 218, 500-503.	5.0	24
112	Dynamics of water sorption on a single adsorbent grain caused by a large pressure jump: Modeling of coupled heat and mass transfer. International Journal of Heat and Mass Transfer, 2008, 51, 5872-5876.	2.5	24
113	Dynamics of water vapour adsorption by a monolayer of loose AQSOAâ„¢-FAM-Z02 grains: Indication of inseparably coupled heat and mass transfer. Energy, 2016, 114, 767-773.	4.5	24
114	Calcium hydroxide doped by KNO₃as a promising candidate for thermochemical storage of solar heat. RSC Advances, 2017, 7, 42929-42939.	1.7	24
115	Novel sorbents of ethanol â€œsalt confined to porous matrixâ€•for adsorptive cooling. Energy, 2010, 35, 2703-2708.	4.5	23
116	Testing the lab-scale â€œHeat from Coldâ€•prototype with the â€œLiCl/silica â€“ methanolâ€•working pair. Energy Conversion and Management, 2018, 159, 213-220.	4.4	23
117	Dynamics study of ethanol adsorption on microporous activated carbon for adsorptive cooling applications. Applied Thermal Engineering, 2016, 105, 28-38.	3.0	22
118	Thermochemical Energy Storage using LiNO₃â€Doped Mg(OH)₂: A Dehydration Study. Energy Technology, 2018, 6, 1844-1851.	1.8	22
119	Methane processing under microwave radiation: Recent findings and problems. Catalysis Today, 1998, 42, 333-336.	2.2	21
120	Water Dynamics in Bulk and Dispersed in Silica CaCl₂ Hydrates Studied by ²H NMR. Journal of Physical Chemistry C, 2008, 112, 12853-12860.	1.5	21
121	Effect of Residual Gas on Water Adsorption Dynamics Under Typical Conditions of an Adsorption Chiller. Heat Transfer Engineering, 2010, 31, 924-930.	1.2	21
122	Preparation and study of porous uranium oxides as supports for new catalysts of stream reforming of methane. Journal of Nuclear Materials, 1995, 218, 202-209.	1.3	20
123	â€œSalt in a porous matrixâ€•adsorbents: Design of the phase composition and sorption properties. Kinetics and Catalysis, 2009, 50, 65-72.	0.3	20
124	Intensification of hydrogen production via methane reforming and the optimization of H2:CO ratio in a catalytic reactor with a hydrogen-permeable membrane wall. International Journal of Hydrogen Energy, 1992, 17, 275-279.	3.8	19
125	Water sorption by the calcium chloride/silica gel composite: The accelerating effect of the salt solution present in the pores. Kinetics and Catalysis, 2011, 52, 620-628.	0.3	19
126	High-temperature chemical heat pump based on reversible catalytic reactions of cyclohexane-dehydrogenation/benzene-hydrogenation: Comparison of the potentialities of different flow diagrams. International Journal of Energy Research, 1993, 17, 293-303.	2.2	18

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127	Sorption of CO2 from Humid Gases on Potassium Carbonate Supported by Porous Matrix. Russian Journal of Applied Chemistry, 2001, 74, 409-413.	0.1	18
128	Adsorption Dynamics in Adsorptive Heat Transformers: Review of New Trends. Heat Transfer Engineering, 2014, 35, 1014-1027.	1.2	18
129	Dramatic effect of residual gas on dynamics of isobaric adsorption stage of an adsorptive chiller. Applied Thermal Engineering, 2016, 96, 385-390.	3.0	18
130	A new version of the Large Temperature Jump method: The thermal response (Tâ€"LTJ). Energy, 2017, 140, 481-487.	4.5	18
131	MIL-160 as an Adsorbent for Atmospheric Water Harvesting. Energies, 2021, 14, 3586.	1.6	18
132	High-density conversion of light energy via direct illumination of catalyst. International Journal of Hydrogen Energy, 1997, 22, 869-874.	3.8	17
133	Selective water sorbents for multiple applications, 7. Heat conductivity of CaCl2â^'SiO2 composites. Reaction Kinetics and Catalysis Letters, 1998, 65, 277-284.	0.6	17
134	Formation of Porous Vermiculite Structure in the Course of Swelling. Russian Journal of Applied Chemistry, 2002, 75, 357-361.	0.1	17
135	Modelling of isobaric stages of adsorption cooling cycle: An optimal shape of adsorption isobar. Applied Thermal Engineering, 2013, 53, 89-95.	3.0	17
136	Making adsorptive chillers more fast and efficient: The effect of bi-dispersed adsorbent bed. Applied Thermal Engineering, 2016, 106, 254-256.	3.0	17
137	Thermochemical energy storage by LiNO3-doped Mg(OH)2: Rehydration study. Journal of Energy Storage, 2019, 22, 302-310.	3.9	17
138	Novel adsorption method for moisture and heat recuperation in ventilation: Composites â€œLiCl/matrixâ€• tailored for cold climate. Energy, 2020, 201, 117595.	4.5	17
139	Electron spin echo as a tool for investigation of surface structure of finely dispersed fractal solids. Reaction Kinetics and Catalysis Letters, 1990, 42, 19-24.	0.6	16
140	Influence of hydrogen-permeable membranes upon the efficiency of the high-temperature chemical heat pumps based on cyclohexane dehydrogenation-benzene hydrogenation reactions. International Journal of Hydrogen Energy, 1993, 18, 673-680.	3.8	16
141	New composite sorbents of water and methanol â€œsalt in anodic aluminaâ€• Evaluation for adsorption heat transformation. Energy, 2016, 106, 231-239.	4.5	15
142	High-temperature catalysis driven by the direct action of concentrated light or a high-density electron beam. Catalysis Today, 1997, 39, 251-260.	2.2	14
143	Title is missing!. Journal of Solution Chemistry, 2000, 29, 633-649.	0.6	14
144	Dynamics of pressure- and temperature-initiated adsorption cycles for transformation of low temperature heat: Flat bed of loose grains. Applied Thermal Engineering, 2020, 165, 114654.	3.0	14

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145	Dynamics of adsorptive heat conversion systems: Review of basics and recent advances. Energy, 2020, 205, 117998.	4.5	14
146	Selective water sorbents for multiple applications, 8. sorption properties of CaCl2â^'SiO2 sol-gel composites. Reaction Kinetics and Catalysis Letters, 1999, 66, 113-120.	0.6	13
147	Composite Water Sorbents of the Salt in Silica Gel Pores Type: The Effect of the Interaction between the Salt and the Silica Gel Surface on the Chemical and Phase Compositions and Sorption Properties. Kinetics and Catalysis, 2005, 46, 736-742.	0.3	13
148	Kinetics of water sorption on a CaCl2-in-silica-gel-pores sorbent: The effects of the pellet size and temperature. Kinetics and Catalysis, 2006, 47, 770-775.	0.3	13
149	â€œLiCl/vermiculite - Methanolâ€•as working pair for adsorption heat storage: Adsorption equilibrium and dynamics. Energy, 2019, 186, 115775.	4.5	13
150	A new adsorptive cycle "HeCol" for upgrading the ambient heat: The current state of the art. International Journal of Refrigeration, 2019, 105, 19-32.	1.8	13
151	Performance Results of a Solar Adsorption Cooling and Heating Unit. Energies, 2020, 13, 1630.	1.6	13
152	Adsorption heat conversion and storage in closed systems: What have we learned over the past decade of this century?. Energy, 2022, 239, 122142.	4.5	13
153	Adsorptive Air Conditioning Systems Driven by Low Temperature Energy Sources: Choice of the Working Pairs. Journal of Chemical Engineering of Japan, 2007, 40, 1287-1291.	0.3	12
154	Simulation and design of a solar driven thermochemical refrigerator using new chemisorbents. Chemical Engineering Journal, 2007, 134, 58-65.	6.6	12
155	Effect of residual gas on the dynamics of water adsorption under isobaric stages of adsorption heat pumps: Mathematical modelling. International Journal of Heat and Mass Transfer, 2010, 53, 1283-1289.	2.5	12
156	Composite â€œLiCl/MWCNT/PVAâ€•for adsorption thermal battery: Dynamics of methanol sorption. Renewable and Sustainable Energy Reviews, 2020, 123, 109748.	8.2	12
157	Plastic heat exchangers for adsorption cooling: Thermodynamic and dynamic performance. Applied Thermal Engineering, 2021, 188, 116622.	3.0	12
158	Adsorption of Aliphatic Alcohols, Alkanoic Acids and Acetone on the Silica Surface: Chemical and Steric Factors of Monolayer Formation; Apparent Fractal Dimension. Molecular Crystals and Liquid Crystals, 1994, 248, 159-171.	0.3	11
159	Acetone adsorption on hydroxylated silica gel: Correlation of sorption isotherms and IR spectra. Reaction Kinetics and Catalysis Letters, 1998, 65, 161-167.	0.6	11
160	Kinetics of the SiO2 aerogel dissolution in aqueous NaOH solutions: experiment and model. Journal of Non-Crystalline Solids, 1999, 260, 21-30.	1.5	11
161	New composite sorbents of water and ammonia for chemical and adsorption heat pumps. Journal of Engineering Physics and Thermophysics, 2006, 79, 1214-1229.	0.2	11
162	Chemical and adsorption heat pumps: Cycle efficiency and boundary temperatures. Theoretical Foundations of Chemical Engineering, 2008, 42, 873-881.	0.2	11

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163	A compact layer of alumina modified by CaCl2: The influence of composition and porous structure on water transport. Microporous and Mesoporous Materials, 2010, 131, 358-365.	2.2	11
164	A HeCol cycle for upgrading the ambient heat: The dynamic verification of desorption stage. Applied Thermal Engineering, 2019, 146, 608-612.	3.0	11
165	Adsorptive conversion of ultralow-temperature heat: Thermodynamic issues. Energy, 2021, 236, 121892.	4.5	11
166	Abnormally high fractal dimension of silica surfaces measured by adsorption of aliphatic alcohols. Reaction Kinetics and Catalysis Letters, 1992, 46, 57-64.	0.6	10
167	Investigation of the Moisture Exchange in a Stationary Adsorbent Layer Through which Air is Passed. Journal of Engineering Physics and Thermophysics, 2005, 78, 248-255.	0.2	10
168	Dynamics of hydration water in CaCl2 complexes. Chemical Physics Letters, 2006, 419, 111-114.	1.2	10
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