

# Anutosh Chakraborty

## List of Publications by Year in descending order

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101  
papers

4,995  
citations

53660

45  
h-index

95083

68  
g-index

104  
all docs

104  
docs citations

104  
times ranked

2509  
citing authors

#	ARTICLE	IF	CITATIONS
1	Isosteric Heats and Entropy of Adsorption in Henry's Law Region for Carbon and MOFs Structures for Energy Conversion Applications. International Journal of Heat and Mass Transfer, 2022, 182, 122000.	2.5	10
2	Experimental investigation for water adsorption characteristics on functionalized MIL-125 (Ti) MOFs: Enhanced water transfer and kinetics for heat transformation systems. International Journal of Heat and Mass Transfer, 2022, 186, 122473.	2.5	16
3	Insights of the adsorbents surface chemical properties effect on water adsorption isotherms. International Journal of Heat and Mass Transfer, 2022, 192, 122842.	2.5	11
4	Evaluation of defect induced surface heterogeneity in Metal-Organic Framework materials with alkali dopants employing adsorption isotherm modelling. Journal of the Indian Chemical Society, 2022, 99, 100493.	1.3	2
5	Design principles for synthesizing high grade activated carbons for adsorption heat pumps. Chemical Engineering Journal Advances, 2021, 6, 100086.	2.4	10
6	Evaluation of energy flow, dissipation and performances for advanced adsorption assisted heat transformation systems: Temperature-entropy frameworks. Energy Conversion and Management, 2021, 240, 114264.	4.4	10
7	Tailoring Zirconium-based metal organic frameworks for enhancing Hydrophilic/Hydrophobic Characteristics: Simulation and experimental investigation. Journal of Molecular Liquids, 2021, 341, 117381.	2.3	7
8	Adsorption characteristics of methyl-functional ligand MOF-801 and water systems: Adsorption chiller modelling and performances. Applied Thermal Engineering, 2020, 175, 115393.	3.0	41
9	Advanced cooling heat pump and desalination employing functional UiO-66 (Zr) metal-organic frameworks. Energy Conversion and Management, 2020, 213, 112825.	4.4	54
10	Water adsorption studies on synthesized alkali-ions doped Al-fumarate MOFs and Al-fumarate + zeolite composites for higher water uptakes and faster kinetics. Microporous and Mesoporous Materials, 2019, 288, 109590.	2.2	25
11	Thermodynamic property surfaces for various adsorbent/adsorbate pairs for cooling applications. International Journal of Heat and Mass Transfer, 2019, 144, 118579.	2.5	25
12	Green synthesis and characterization of aluminium fumarate metal-organic framework for heat transformation applications. Materials Letters, 2018, 221, 165-167.	1.3	36
13	Activated carbon (type Maxsorb-III) and MIL-101(Cr) metal organic framework based composite adsorbent for higher CH <sub>4</sub> storage and CO <sub>2</sub> capture. Chemical Engineering Journal, 2018, 334, 780-788.	6.6	113
14	Isosteric heat of adsorption at zero coverage for AQSOA-Z01/Z02/Z05 zeolites and water systems. Microporous and Mesoporous Materials, 2018, 260, 201-207.	2.2	23
15	Impact of Alkali-Metal Impregnation on MIL-101 (Cr) Metal-Organic Frameworks for CH <sub>4</sub> and CO <sub>2</sub> Adsorption Studies. ChemPhysChem, 2018, 19, 3158-3165.	1.0	11
16	Theoretical and experimental investigations of isosteric heats for water adsorption on silica gel surfaces. Applied Thermal Engineering, 2018, 141, 134-142.	3.0	10
17	Formic acid modulated (fam) aluminium fumarate MOF for improved isotherms and kinetics with water adsorption: Cooling/heat pump applications. Microporous and Mesoporous Materials, 2018, 272, 109-116.	2.2	43
18	Adsorption Kinetics Emulation With Lattice Gas Cellular Automata. Heat Transfer Engineering, 2017, 38, 409-416.	1.2	3

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19	Improved adsorption characteristics data for AQSOA types zeolites and water systems under static and dynamic conditions. <i>Microporous and Mesoporous Materials</i> , 2017, 242, 109-117.	2.2	100
20	Experimental investigation of multi-effect regenerator for desiccant dehumidifier: Effects of various regeneration temperatures and solution flow rates on system performances. <i>International Journal of Refrigeration</i> , 2017, 76, 7-18.	1.8	9
21	Post synthetic modification of MIL-101(Cr) for S-shaped isotherms and fast kinetics with water adsorption. <i>Applied Thermal Engineering</i> , 2017, 120, 453-462.	3.0	53
22	CO <sub>2</sub> -assisted compression-adsorption hybrid for cooling and desalination. <i>Energy Conversion and Management</i> , 2017, 143, 538-552.	4.4	25
23	Water adsorption on CHA and AFI types zeolites: Modelling and investigation of adsorption chiller under static and dynamic conditions. <i>Applied Thermal Engineering</i> , 2017, 127, 35-45.	3.0	42
24	Experimental study of isotherms and kinetics for adsorption of water on Aluminium Fumarate. <i>International Journal of Heat and Mass Transfer</i> , 2017, 114, 621-627.	2.5	69
25	Two-Dimensional Numerical Analysis of Membrane-Based Heat and Mass Cross-Flow Exchanger. <i>Heat Transfer Engineering</i> , 2017, 38, 438-445.	1.2	5
26	Evaluation of CH <sub>4</sub> and CO <sub>2</sub> adsorption on HKUST-1 and MIL-101(Cr) MOFs employing Monte Carlo simulation and comparison with experimental data. <i>Applied Thermal Engineering</i> , 2017, 110, 891-900.	3.0	66
27	Dehumidifier desiccant concentration soft-sensor for a distributed operating Liquid Desiccant Dehumidification System. <i>Energy and Buildings</i> , 2016, 129, 215-226.	3.1	8
28	Investigation of the Interaction of Polar Molecules on Graphite Surface: Prediction of Isostatic Heat of Adsorption at Zero Surface Coverage. <i>Journal of Physical Chemistry C</i> , 2016, 120, 23490-23499.	1.5	20
29	Prediction of phase transitions by investigating CO <sub>2</sub> adsorption on 1% lithium doped MIL-101 (Cr) MOF with anomalous type isosteric heat of adsorption. <i>Microporous and Mesoporous Materials</i> , 2016, 236, 21-27.	2.2	10
30	Revisiting adsorption cooling cycle from mathematical modelling to system development. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 63, 315-332.	8.2	20
31	Thermally driven adsorption cooling and desalination employing multi-bed dual-evaporator system. <i>Applied Thermal Engineering</i> , 2016, 106, 1136-1147.	3.0	26
32	Thermodynamic trends for the adsorption of non polar gases on activated carbons employing a new adsorption isotherm modelling. <i>Applied Thermal Engineering</i> , 2016, 105, 189-197.	3.0	18
33	Adsorption assisted double stage cooling and desalination employing silica gel + water and AQSOA-Z02 + water systems. <i>Energy Conversion and Management</i> , 2016, 117, 193-205.	4.4	75
34	Design and development of a volumetric apparatus for the measurement of methane uptakes under cryogenic conditions. <i>Applied Thermal Engineering</i> , 2016, 93, 1175-1182.	3.0	9
35	Adsorption cooling cycles: Insights into carbon dioxide adsorption on activated carbons. <i>Energy</i> , 2016, 102, 491-501.	4.5	46
36	Thermodynamic modelling and performance study of an engine waste heat driven adsorption cooling for automotive air-conditioning. <i>Applied Thermal Engineering</i> , 2015, 90, 54-63.	3.0	54

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37	Thermodynamic frameworks of adsorption kinetics modeling: Dynamic water uptakes on silica gel for adsorption cooling applications. <i>Energy</i> , 2015, 84, 296-302.	4.5	73
38	Study of metal-organic framework MIL-101(Cr) for natural gas (methane) storage and compare with other MOFs (metal-organic frameworks). <i>Energy</i> , 2015, 91, 772-781.	4.5	131
39	Thermodynamic formalism of water uptakes on solid porous adsorbents for adsorption cooling applications. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	71
40	Study of HKUST (Copper benzene-1,3,5-tricarboxylate, Cu-BTC MOF)-1 metal organic frameworks for CH4 adsorption: An experimental Investigation with GCMC (grand canonical Monte-carlo) simulation. <i>Energy</i> , 2014, 76, 419-427.	4.5	93
41	Dynamic behaviors of adsorption chiller: Effects of the silica gel grain size and layers. <i>Energy</i> , 2014, 78, 304-312.	4.5	44
42	Experimental Study on the Performance of Membrane based Multi- effect Dehumidifier Regenerator Powered by Solar Energy. <i>Energy Procedia</i> , 2014, 48, 535-542.	1.8	17
43	An adsorption isotherm equation for multi-types adsorption with thermodynamic correctness. <i>Applied Thermal Engineering</i> , 2014, 72, 190-199.	3.0	78
44	Thermo-physical properties of silica gel for adsorption desalination cycle. <i>Applied Thermal Engineering</i> , 2013, 50, 1596-1602.	3.0	97
45	Numerical simulation and performance investigation of an advanced adsorption desalination cycle. <i>Desalination</i> , 2013, 308, 209-218.	4.0	94
46	Adsorption desalination: An emerging low-cost thermal desalination method. <i>Desalination</i> , 2013, 308, 161-179.	4.0	252
47	Study on solar driven combined adsorption refrigeration cycles in tropical climate. <i>Applied Thermal Engineering</i> , 2013, 50, 1582-1589.	3.0	31
48	Study on activated carbon/HFO-1234ze(E) based adsorption cooling cycle. <i>Applied Thermal Engineering</i> , 2013, 50, 1570-1575.	3.0	54
49	Selected Papers from the International Symposium on Innovative Materials for Processes in Energy Systems 2010 (IMPRES2010): Part II. <i>Heat Transfer Engineering</i> , 2013, 34, 948-949.	1.2	0
50	Performance investigation of advanced adsorption desalination cycle with condenserâ€“evaporator heat recovery scheme. <i>Desalination and Water Treatment</i> , 2013, 51, 150-163.	1.0	34
51	Experimental and Theoretical Insight of Nonisothermal Adsorption Kinetics for a Single Component Adsorbentâ€“Adsorbate System. <i>Journal of Chemical &amp; Engineering Data</i> , 2012, 57, 1174-1185.	1.0	3
52	On thermodynamics of methane+carbonaceous materials adsorption. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 565-573.	2.5	66
53	Study on a waste heat-driven adsorption cooling cum desalination cycle. <i>International Journal of Refrigeration</i> , 2012, 35, 685-693.	1.8	151
54	A second law analysis and entropy generation minimization of an absorption chiller. <i>Applied Thermal Engineering</i> , 2011, 31, 2405-2413.	3.0	76

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55	Study on an advanced adsorption desalination cycle with evaporatorâ€œcondenser heat recovery circuit. International Journal of Heat and Mass Transfer, 2011, 54, 43-51.	2.5	104
56	Performance evaluation of combined adsorption refrigeration cycles. International Journal of Refrigeration, 2011, 34, 129-137.	1.8	55
57	Thermal enhancement of charge and discharge cycles for adsorbed natural gas storage. Applied Thermal Engineering, 2011, 31, 1630-1639.	3.0	48
58	Theoretical insight of adsorption cooling. Applied Physics Letters, 2011, 98, .	1.5	42
59	Adsorption Desalination: A Novel Method. , 2011, , 391-431.		1
60	Adsorption Thermodynamics of Natural Gas Storage onto Pitch-Based Activated Carbons. , 2010, , 187-195.		1
61	Performance Analysis of Waste Heat Driven Pressurized Adsorption Chiller. Journal of Thermal Science and Technology, 2010, 5, 252-265.	0.6	10
62	Experimental study on adsorption kinetics of activated carbon/R134a and activated carbon/R507A pairs. International Journal of Refrigeration, 2010, 33, 706-713.	1.8	46
63	Life-cycle cost analysis of adsorption cycles for desalination. Desalination and Water Treatment, 2010, 20, 1-10.	1.0	46
64	Experimental Adsorption Isotherm of Methane onto Activated Carbon at Sub- and Supercritical Temperatures. Journal of Chemical & Engineering Data, 2010, 55, 4961-4967.	1.0	54
65	Thermodynamic Property Surfaces for Adsorption of R507A, R134a, and n-Butane on Pitch-Based Carbonaceous Porous Materials. Heat Transfer Engineering, 2010, 31, 917-923.	1.2	8
66	Improved Isotherm Data for Adsorption of Methane on Activated Carbons. Journal of Chemical & Engineering Data, 2010, 55, 2840-2847.	1.0	75
67	PARAMETRIC STUDIES OF CHARGING AND DISCHARGING IN ADSORBED NATURAL GAS VESSEL USING ACTIVATED CARBON. Modern Physics Letters B, 2010, 24, 1421-1424.	1.0	7
68	MODELING OF A NOVEL DESORPTION CYCLE BY DIELECTRIC HEATING. Modern Physics Letters B, 2009, 23, 425-428.	1.0	8
69	Solar-assisted dual-effect adsorption cycle for the production of cooling effect and potable water. International Journal of Low-Carbon Technologies, 2009, 4, 61-67.	1.2	106
70	A new cycle time allocation for enhancing the performance of two-bed adsorption chillers. International Journal of Refrigeration, 2009, 32, 846-853.	1.8	112
71	A new generation cooling device employing CaCl <sub>2</sub> -in-silica gelâ€œwater system. International Journal of Heat and Mass Transfer, 2009, 52, 516-524.	2.5	178
72	Operational strategy of adsorption desalination systems. International Journal of Heat and Mass Transfer, 2009, 52, 1811-1816.	2.5	139

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73	Adsorption Thermodynamics of Silica Gel-Water Systems. Journal of Chemical & Engineering Data, 2009, 54, 448-452.	1.0	53
74	Theoretical Insight of Physical Adsorption for a Single-Component Adsorbent + Adsorbate System: I. Thermodynamic Property Surfaces. Langmuir, 2009, 25, 2204-2211.	1.6	78
75	Theoretical Insight of Physical Adsorption for a Single Component Adsorbent + Adsorbate System: II. The Henry Region. Langmuir, 2009, 25, 7359-7367.	1.6	31
76	Isotherms and thermodynamics for the adsorption of n-butane on pitch based activated carbon. International Journal of Heat and Mass Transfer, 2008, 51, 1582-1589.	2.5	73
77	Thermodynamic trends in the uptake capacity of porous adsorbents on methane and hydrogen. Applied Physics Letters, 2008, 92, 201911.	1.5	7
78	Adsorption Desalination Quenches Global Thirst. Heat Transfer Engineering, 2008, 29, 845-848.	1.2	38
79	On Thermodynamics of Advanced Adsorption Cooling Devices. , 2008, , .		1
80	Study on Single- and Multi-Stage Adsorption Cooling Cycles Working at Sub and Above Atmospheric Conditions. , 2008, , .		0
81	How Heat and Mass Recovery Strategies Impact the Performance of Adsorption Desalination Plant: Theory and Experiments. Heat Transfer Engineering, 2007, 28, 147-153.	1.2	62
82	Adsorption characteristics of parent and copper-sputtered RD silica gels. Philosophical Magazine, 2007, 87, 1113-1121.	0.7	6
83	Adsorption Characteristics of Maxsorb-III + Methane Systems by Desorption Experiments. , 2007, , 415.		2
84	Specific heat capacity of a single component adsorbent-adsorbate system. Applied Physics Letters, 2007, 90, 171902.	1.5	48
85	Thermodynamic formalism of minimum heat source temperature for driving advanced adsorption cooling device. Applied Physics Letters, 2007, 91, 111902.	1.5	50
86	Thin-Film Thermoelectric Cooler: Thermodynamic Modelling and its Temperature-entropy Flux Formulation. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2007, 221, 33-46.	1.4	9
87	Theoretical Insight of Physical Adsorption for a Single Component Adsorbent+Adsorbate System. , 2007, , 503.		2
88	Study on an activated carbon fiber-ethanol adsorption chiller: Part I - system description and modelling. International Journal of Refrigeration, 2007, 30, 86-95.	1.8	124
89	Study on an activated carbon fiber-ethanol adsorption chiller: Part II - performance evaluation. International Journal of Refrigeration, 2007, 30, 96-102.	1.8	72
90	Adsorption Rate of Ethanol on Activated Carbon Fiber. Journal of Chemical & Engineering Data, 2006, 51, 1587-1592.	1.0	42

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91	On the thermodynamic modeling of the isosteric heat of adsorption and comparison with experiments. <i>Applied Physics Letters</i> , 2006, 89, 171901.	1.5	118
92	Evaluation of minimum desorption temperatures of thermal compressors in adsorption refrigeration cycles. <i>International Journal of Refrigeration</i> , 2006, 29, 1175-1181.	1.8	60
93	Thermodynamic formulation of temperature-entropy diagram for the transient operation of a pulsed thermoelectric cooler. <i>International Journal of Heat and Mass Transfer</i> , 2006, 49, 1845-1850.	2.5	34
94	New pool boiling data for water with copper-foam metal at sub-atmospheric pressures: Experiments and correlation. <i>Applied Thermal Engineering</i> , 2006, 26, 1286-1290.	3.0	68
95	Experimental study on performance improvement of a four-bed adsorption chiller by using heat and mass recovery. <i>International Journal of Heat and Mass Transfer</i> , 2006, 49, 3343-3348.	2.5	82
96	Thermodynamic modelling of a solid state thermoelectric cooling device: Temperature-entropy analysis. <i>International Journal of Heat and Mass Transfer</i> , 2006, 49, 3547-3554.	2.5	70
97	The Electro-Adsorption Chiller: Performance Rating of a Novel Miniaturized Cooling Cycle for Electronics Cooling. <i>Journal of Heat Transfer</i> , 2006, 128, 889-896.	1.2	28
98	Performance modelling of an electro-adsorption chiller. <i>Philosophical Magazine</i> , 2006, 86, 3613-3632.	0.7	27
99	Thermodynamic Property Fields of an Adsorbate-Adsorbent System. <i>Langmuir</i> , 2003, 19, 2254-2259.	1.6	20
100	Adsorption Characteristics of Silica Gel + Water Systems. <i>Journal of Chemical &amp; Engineering Data</i> , 2002, 47, 1177-1181.	1.0	223
101	The electro-adsorption chiller: a miniaturized cooling cycle with applications to micro-electronics. <i>International Journal of Refrigeration</i> , 2002, 25, 1025-1033.	1.8	47