

# Anil Kumar

## List of Publications by Year in descending order

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142  
papers

5,474  
citations

71097

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98792

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144  
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144  
docs citations

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times ranked

3648  
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on biomass energy resources, potential, conversion and policy in India. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 45, 530-539.	16.4	372
2	Natural dyes for dye sensitized solar cell: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 69, 705-718.	16.4	307
3	Solar stills system design: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 51, 153-181.	16.4	156
4	Experimental investigation on heat transfer and fluid flow characteristics of air flow in a rectangular duct with Multi v-shaped rib with gap roughness on the heated plate. <i>Solar Energy</i> , 2012, 86, 1733-1749.	6.1	152
5	Exergo-environmental analysis of an indirect forced convection solar dryer for drying bitter gourd slices. <i>Renewable Energy</i> , 2020, 146, 2210-2223.	8.9	152
6	Experimental and analytical studies of earth-air heat exchanger (EAHE) systems in India: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2013, 19, 238-246.	16.4	151
7	Historical and recent development of photovoltaic thermal (PVT) technologies. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 42, 1428-1436.	16.4	151
8	Mathematical modeling and performance analysis of thin layer drying of bitter gourd in sensible storage based indirect solar dryer. <i>Innovative Food Science and Emerging Technologies</i> , 2016, 36, 59-67.	5.6	144
9	Thermal energy storage based solar drying systems: A review. <i>Innovative Food Science and Emerging Technologies</i> , 2016, 34, 86-99.	5.6	142
10	Solar greenhouse drying: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 29, 905-910.	16.4	138
11	Historical Review and Recent Trends in Solar Drying Systems. <i>International Journal of Green Energy</i> , 2013, 10, 690-738.	3.8	131
12	Recent developments in greenhouse solar drying: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 82, 3250-3262.	16.4	96
13	Effect of mass on convective mass transfer coefficient during open sun and greenhouse drying of onion flakes. <i>Journal of Food Engineering</i> , 2007, 79, 1337-1350.	5.2	91
14	Thermal modeling of a natural convection greenhouse drying system for jaggery: An experimental validation. <i>Solar Energy</i> , 2006, 80, 1135-1144.	6.1	84
15	Performance of modified greenhouse dryer with thermal energy storage. <i>Energy Reports</i> , 2016, 2, 155-162.	5.1	81
16	A review of thermohydraulic performance of artificially roughened solar air heaters. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 37, 100-122.	16.4	78
17	Thermo-environmental and drying kinetics of bitter gourd flakes drying under north wall insulated greenhouse dryer. <i>Solar Energy</i> , 2018, 162, 205-216.	6.1	78
18	Review on solar Stirling engine: Development and performance. <i>Thermal Science and Engineering Progress</i> , 2018, 8, 244-256.	2.7	78

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19	Wind energy status in India: A short review. <i>Renewable and Sustainable Energy Reviews</i> , 2012, 16, 1157-1164.	16.4	76
20	Environomical Analysis and Mathematical Modelling for Tomato Flakes Drying in a Modified Greenhouse Dryer under Active Mode. <i>International Journal of Food Engineering</i> , 2014, 10, 669-681.	1.5	75
21	Applications of software in solar drying systems: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 51, 1326-1337.	16.4	74
22	Review on various modelling techniques for the solar dryers. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 62, 396-417.	16.4	74
23	Calculation of total solar fraction for different orientation of greenhouse using 3D-shadow analysis in Auto-CAD. <i>Energy and Buildings</i> , 2012, 47, 27-34.	6.7	71
24	Mathematical modeling and performance investigation of mixed-mode and indirect solar dryers for natural rubber sheet drying. <i>Energy for Sustainable Development</i> , 2016, 34, 44-53.	4.5	62
25	Energy metrics of earth-air heat exchanger system for hot and dry climatic conditions of India. <i>Energy and Buildings</i> , 2015, 86, 214-221.	6.7	61
26	Performance analysis of greenhouse dryer by using insulated north-wall under natural convection mode. <i>Energy Reports</i> , 2016, 2, 107-116.	5.1	61
27	A review on progress of concentrated solar power in India. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 79, 304-307.	16.4	60
28	Computational fluid dynamic analysis of innovative design of solar-biomass hybrid dryer: An experimental validation. <i>Renewable Energy</i> , 2016, 92, 185-191.	8.9	56
29	Development of indirect type solar dryer and experiments for estimation of drying parameters of apple and watermelon. <i>Thermal Science and Engineering Progress</i> , 2020, 16, 100477.	2.7	56
30	A review on exergy analysis of solar parabolic collectors. <i>Solar Energy</i> , 2020, 197, 411-432.	6.1	56
31	Review on biodiesel production by two-step catalytic conversion. <i>Biocatalysis and Agricultural Biotechnology</i> , 2019, 18, 101023.	3.1	51
32	ANFIS modelling of a natural convection greenhouse drying system for jaggery: an experimental validation. <i>International Journal of Sustainable Energy</i> , 2014, 33, 316-335.	2.4	50
33	Heat transfer augmentation in solar thermal collectors using impinging air jets: A comprehensive review. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 82, 3179-3190.	16.4	50
34	Thermal modeling and drying kinetics of gooseberry drying inside north wall insulated greenhouse dryer. <i>Applied Thermal Engineering</i> , 2018, 130, 587-597.	6.0	49
35	Heat transfer analysis of PV integrated modified greenhouse dryer. <i>Renewable Energy</i> , 2018, 121, 53-65.	8.9	48
36	Physical and Mechanical Properties of Natural Leaf Fiber-Reinforced Epoxy Polyester Composites. <i>Polymers</i> , 2021, 13, 1369.	4.5	48

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37	Using renewable energy technologies for domestic cooking in India: a methodology for potential estimation. <i>Renewable Energy</i> , 2002, 26, 235-246.	8.9	47
38	Heat transfer analysis of north wall insulated greenhouse dryer under natural convection mode. <i>Energy</i> , 2017, 118, 1264-1274.	8.8	46
39	A review on thermal models for greenhouse dryers. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 75, 548-558.	16.4	45
40	Embodied energy analysis of the indirect solar drying unit. <i>International Journal of Ambient Energy</i> , 2017, 38, 280-285.	2.5	44
41	Effect of shape and size on convective mass transfer coefficient during greenhouse drying (GHD) of Jaggery. <i>Journal of Food Engineering</i> , 2006, 73, 121-134.	5.2	43
42	Optimizing discrete V obstacle parameters using a novel Entropy-VIKOR approach in a solar air flow channel. <i>Renewable Energy</i> , 2017, 106, 310-320.	8.9	43
43	Medium temperature application of concentrated solar thermal technology: Indian perspective. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 76, 369-378.	16.4	43
44	Experimental Investigation on Modified Solar Still Using Nanoparticles and Water Sprinkler Attachment. <i>Frontiers in Materials</i> , 2017, 4, .	2.4	41
45	Thermodynamic analysis of Organic Rankine cycle driven by reversed absorber hybrid photovoltaic thermal compound parabolic concentrator system. <i>Renewable Energy</i> , 2020, 147, 2118-2127.	8.9	39
46	Thermal modeling and drying kinetics of bitter gourd flakes drying in modified greenhouse dryer. <i>Renewable Energy</i> , 2018, 118, 799-813.	8.9	39
47	Optimization of single arc protrusion ribs parameters in solar air heater with impinging air jets based upon PSI approach. <i>Thermal Science and Engineering Progress</i> , 2018, 7, 146-154.	2.7	38
48	Fabrication and characterization of mixed dye: Natural and synthetic organic dye. <i>Optical Materials</i> , 2018, 79, 296-301.	3.6	34
49	Bamboo as a complementary crop to address climate change and livelihoods – Insights from India. <i>Forest Policy and Economics</i> , 2019, 102, 66-74.	3.4	34
50	Investigation of thermal and hydrodynamic performance of impingement jets solar air passage with protrusion with combination arc obstacle on the heated plate. <i>Experimental Heat Transfer</i> , 2018, 31, 232-250.	3.2	33
51	Thermal Modeling and Parametric Study of a Forced Convection Greenhouse Drying System for Jaggery: An Experimental Validation. <i>International Journal of Agricultural Research</i> , 2006, 1, 265-279.	0.1	33
52	Role of Greenhouse Technology in Agricultural Engineering. <i>International Journal of Agricultural Research</i> , 2006, 1, 364-372.	0.1	33
53	Annual Performance of a Modified Greenhouse Dryer Under Passive Mode In No-Load Conditions. <i>International Journal of Green Energy</i> , 2015, 12, 1091-1099.	3.8	32
54	Experimental and thermal performance investigations on sensible storage based solar air heater. <i>Journal of Energy Storage</i> , 2020, 31, 101620.	8.1	32

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55	Study on Calculation Models of Earth-Air Heat Exchanger Systems. <i>Journal of Energy</i> , 2014, 2014, 1-15.	3.2	30
56	Application of artificial neural network for the prediction of jaggery mass during drying inside the natural convection greenhouse dryer. <i>International Journal of Ambient Energy</i> , 2014, 35, 186-192.	2.5	30
57	Investigation of physicochemical properties of oil palm biomass for evaluating potential of biofuels production via pyrolysis processes. <i>Biomass Conversion and Biorefinery</i> , 2021, 11, 1987-2001.	4.6	30
58	Cycle test stability and corrosion evaluation of phase change materials used in thermal energy storage systems. <i>Journal of Energy Storage</i> , 2021, 39, 102664.	8.1	30
59	Performance evaluation of greenhouse dryer with opaque north wall. <i>Heat and Mass Transfer</i> , 2014, 50, 493-500.	2.1	28
60	A Novel Chemical Method for Determining Ester Content in Biodiesel. <i>Energy Procedia</i> , 2017, 138, 536-543.	1.8	28
61	Comparative Investigation of Yield and Quality of Bio-Oil and Biochar from Pyrolysis of Woody and Non-Woody Biomasses. <i>Energies</i> , 2021, 14, 1092.	3.1	27
62	Effect of ventilated solar-geothermal drying on 3E (exergy, energy, and economic analysis), and quality attributes of tomato paste. <i>Energy</i> , 2022, 243, 122764.	8.8	27
63	Experimental investigation of effect of flow attack angle on thermohydraulic performance of air flow in a rectangular channel with discrete V-pattern baffle on the heated plate. <i>Advances in Mechanical Engineering</i> , 2016, 8, 168781401664105.	1.6	26
64	Properties of functionally gradient composites reinforced with waste natural fillers. <i>Acta Periodica Technologica</i> , 2019, , 250-259.	0.2	26
65	Developing heat transfer and pressure loss in an air passage with multi discrete V-blockages. <i>Experimental Thermal and Fluid Science</i> , 2017, 84, 266-278.	2.7	25
66	A novel two-step transesterification process catalyzed by homogeneous base catalyst in the first step and heterogeneous acid catalyst in the second step. <i>Fuel Processing Technology</i> , 2017, 168, 97-104.	7.2	25
67	Experimental investigation on overall thermal performance of fluid-flow in a rectangular channel with discrete V-pattern baffle. <i>Thermal Science</i> , 2018, 22, 183-191.	1.1	25
68	Fabrication and evaluation of physical and mechanical properties of jute and coconut coir reinforced polymer matrix composite. <i>Materials Today: Proceedings</i> , 2021, 38, 2572-2577.	1.8	24
69	Review on Indian Solar Drying Status. <i>Current Sustainable/Renewable Energy Reports</i> , 2016, 3, 113-120.	2.6	23
70	Review on fabrication methodologies and its impacts on performance of dye-sensitized solar cells. <i>Environmental Science and Pollution Research</i> , 2022, 29, 15233-15251.	5.3	22
71	Experimental investigation on the comparison of fenugreek drying in an indirect solar dryer and under open sun. <i>Heat and Mass Transfer</i> , 2016, 52, 1963-1972.	2.1	21
72	Drying Kinetics, Quality Assessment, and Economic Analysis of Bitter Gourd Flakes Drying Inside Forced Convection Greenhouse Dryer. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2018, 140, .	1.8	21

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73	Enviro-economical feasibility of groundnut drying under greenhouse and indoor forced convection hot air dryers. <i>Journal of Stored Products Research</i> , 2021, 93, 101848.	2.6	21
74	Effect of multiple arc protrusion ribs on heat transfer and fluid flow of a circular-jet impingement solar air passage. <i>Chemical Engineering and Processing: Process Intensification</i> , 2017, 120, 114-133.	3.6	20
75	Thin layer drying characteristics of curry leaves ( <i>Murraya koenigii</i> ) in an indirect solar dryer. <i>Thermal Science</i> , 2017, 21, 359-367.	1.1	20
76	Computational fluid dynamics simulation and energy analysis of domestic direct-type multi-shelf solar dryer. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 136, 173-184.	3.6	19
77	Experimental study of single slope solar still coupled with parabolic trough collector. <i>Materials Science for Energy Technologies</i> , 2020, 3, 700-708.	1.8	19
78	DESIGN, DEVELOPMENT, AND TESTING OF A MODIFIED GREENHOUSE DRYER UNDER CONDITIONS OF NATURAL CONVECTION. <i>Heat Transfer Research</i> , 2014, 45, 433-451.	1.6	19
79	Thermal performance evaluation of modified active greenhouse dryer. <i>Journal of Building Physics</i> , 2014, 37, 395-402.	2.4	18
80	Physico-Mechanical Properties and Taguchi Optimized Abrasive Wear of Alkali Treated and Fly Ash Reinforced Himalayan Agave Fiber Polyester Composite. <i>Journal of Natural Fibers</i> , 2022, 19, 9269-9282.	3.1	18
81	Economic analysis and drying kinetics of a geothermal-assisted solar dryer for tomato paste drying. <i>Journal of the Science of Food and Agriculture</i> , 2021, 101, 6542-6551.	3.5	17
82	Garlic dehydration inside heat exchanger-evacuated tube assisted drying system: Thermal performance, drying kinetic and color index. <i>Journal of Stored Products Research</i> , 2021, 93, 101852.	2.6	17
83	Thermal analysis of jet impingement on hemispherical protrusion on heated surface. <i>Experimental Heat Transfer</i> , 2021, 34, 662-677.	3.2	16
84	Parboiled Paddy Drying with Different Dryers: Thermodynamic and Quality Properties, Mathematical Modeling Using ANNs Assessment. <i>Foods</i> , 2020, 9, 86.	4.3	16
85	PREDICTION OF THE RATE OF MOISTURE EVAPORATION FROM JAGGERY IN GREENHOUSE DRYING USING THE FUZZY LOGIC. <i>Heat Transfer Research</i> , 2015, 46, 923-935.	1.6	15
86	Conjugate heat and mass transfer modeling of a new rubber smoking room and experimental validation. <i>Applied Thermal Engineering</i> , 2017, 112, 761-770.	6.0	15
87	Daylight availability assessment and the application of energy simulation software – A literature review. <i>Materials Science for Energy Technologies</i> , 2020, 3, 679-689.	1.8	15
88	Experimental analysis and thermal performance of evacuated tube solar collector assisted solar dryer. <i>Materials Today: Proceedings</i> , 2021, 47, 5846-5851.	1.8	15
89	A comprehensive overview on solar grapes drying: Modeling, energy, environmental and economic analysis. <i>Sustainable Energy Technologies and Assessments</i> , 2021, 47, 101513.	2.7	15
90	Drying kinetics and economic analysis of bitter gourd flakes drying inside hybrid greenhouse dryer. <i>Environmental Science and Pollution Research</i> , 2023, 30, 72026-72040.	5.3	15

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91	A review of techniques for increasing the productivity of passive solar stills. Sustainable Energy Technologies and Assessments, 2022, 52, 102033.	2.7	15
92	Comparison of groundnut drying in simple and modified natural convection greenhouse dryers: Thermal, environmental and kinetic analyses. Journal of Stored Products Research, 2022, 98, 101990.	2.6	15
93	Heating potential evaluation of earth-air heat exchanger system for winter season. Journal of Building Physics, 2015, 39, 242-260.	2.4	14
94	Performance and economic analysis of natural convection based rubber smoking room for rubber cooperatives in Thailand. Renewable Energy, 2019, 132, 233-242.	8.9	14
95	Recent advancements of PCM based indirect type solar drying systems: A state of art. Materials Today: Proceedings, 2021, 47, 5852-5855.	1.8	14
96	Advancements in steam distillation system for oil extraction from peppermint leaves. Materials Today: Proceedings, 2021, 47, 5794-5799.	1.8	12
97	Concentrated solar power plants: A critical review of regional dynamics and operational parameters. Energy Research and Social Science, 2022, 83, 102331.	6.4	12
98	Experimental investigations on latent heat storage based modified mixed-mode greenhouse groundnuts drying. Journal of Food Processing and Preservation, 2022, 46, .	2.0	12
99	Assessment of sensible heat storage and fuel utilization efficiency enhancement in rubber sheet drying. Journal of Energy Storage, 2017, 10, 67-74.	8.1	11
100	Development and Performance Study of Solar Air Heater for Solar Drying Applications. Green Energy and Technology, 2017, , 579-601.	0.6	11
101	Promising biomass materials for biofuels in India's context. Materials Letters, 2018, 220, 175-177.	2.6	11
102	Financial viability assessment of concentrated solar power technologies under Indian climatic conditions. Sustainable Energy Technologies and Assessments, 2021, 43, 100928.	2.7	11
103	Exergy and energy analysis of sensible heat storage based double pass hybrid solar air heater. Sustainable Energy Technologies and Assessments, 2022, 49, 101714.	2.7	11
104	Thermal characteristics of sensible heat storage materials applicable for concentrated solar power systems. Materials Today: Proceedings, 2021, 47, 5812-5817.	1.8	10
105	Evaluation of Physical, Mechanical, and Wear Properties of Jatropha Shell Powder Reinforced Epoxy Glass Fiber Composites. Journal of Natural Fibers, 2022, 19, 12195-12207.	3.1	10
106	Performance evaluation of mixed synthetic organic dye as sensitizer based dye sensitized solar cell. Optical Materials, 2021, 111, 110658.	3.6	9
107	Fundamental Concepts of Drying. Green Energy and Technology, 2017, , 3-38.	0.6	9
108	A review on technology and promotional initiatives for concentrated solar power in world. International Journal of Ambient Energy, 2018, 39, 297-316.	2.5	8

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109	Techno-economic assessment of forced-convection rubber smoking room for rubber cooperatives. Energy, 2017, 137, 152-159.	8.8	7
110	Evaluation of Biodiesel Production Process by the Determining of the Total Glycerol Content in Biodiesel. Energy Procedia, 2017, 138, 544-551.	1.8	7
111	Thermal analysis of insulated north-wall greenhouse with solar collector under passive mode. International Journal of Sustainable Energy, 2018, 37, 325-339.	2.4	7
112	Development and characterization of ternary mixture series of medium and long chain saturated fatty acids for energy applications. Energy Storage, 2020, 2, e112.	4.3	7
113	Solar cell technologies. , 2020, , 27-50.		7
114	Energy, environmental, economic, and color analysis of geo-exchange energy assisted-insulated north wall solar dryer for onion slices under relatively cloudy and rainy conditions. Solar Energy, 2022, 236, 1-16.	6.1	7
115	Process optimization of conventional steam distillation system for peppermint oil extraction. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2022, 44, 3960-3980.	2.3	7
116	Financial feasibility of concentrated solar power with and without sensible heat storage in hot and dry Indian climate. Journal of Energy Storage, 2022, 52, 105002.	8.1	7
117	A Comprehensive Overview of Renewable Energy Status in India. , 2015, , 91-105.		6
118	CFD Modelling and Simulation of an Indirect Forced Convection Solar Dryer. IOP Conference Series: Earth and Environmental Science, 2021, 795, 012008.	0.3	6
119	Solar Photovoltaic Technology and Its Sustainability. Green Energy and Technology, 2015, , 3-25.	0.6	5
120	Investigation of design configurations and effective parameters on productivity enhancement of vertical diffusion solar stills. International Journal of Environmental Science and Technology, 2022, 19, 6889-6924.	3.5	5
121	Development of Phase Change Materials (PCMs) for Solar Drying Systems. Green Energy and Technology, 2017, , 619-633.	0.6	4
122	Desalination and Solar Still: Boon to Earth. Green Energy and Technology, 2019, , 1-24.	0.6	4
123	Exergy Analysis of Solar Dryers. Green Energy and Technology, 2017, , 239-262.	0.6	4
124	Drying kinetics, performance, and quality assessment for banana slices using heat pump assisted drying system ( HPADS ). Journal of Food Process Engineering, 0, ,	2.9	4
125	Economic Analysis of Various Developed Solar Dryers. Green Energy and Technology, 2017, , 495-513.	0.6	3
126	Energy Analysis of the Direct and Indirect Solar Drying System. Green Energy and Technology, 2017, , 529-542.	0.6	3



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127	Review on Spray-Assisted Solar Desalination: Concept, Performance and Modeling. Arabian Journal for Science and Engineering, 2021, 46, 11521.	3.0	3
128	Advancement in Greenhouse Drying System. Green Energy and Technology, 2017, , 177-196.	0.6	3
129	Parametric study and shrinkage modelling of natural rubber sheet drying using COMSOL multiphysics. IOP Conference Series: Materials Science and Engineering, 2017, 243, 012012.	0.6	2
130	Fundamentals and Performance Evaluation Parameters of Solar Dryer. Green Energy and Technology, 2018, , 37-50.	0.6	2
131	Exergy Analysis of Active and Passive Solar Still. Green Energy and Technology, 2019, , 261-273.	0.6	2
132	Thermal performance and energy consumption analysis of retail buildings through daylighting: A numerical model with experimental validation. Materials Science for Energy Technologies, 2021, 4, 367-382.	1.8	2
133	EXPERIMENTAL INVESTIGATION ON THERMAL BEHAVIOR OF HYBRID SINGLE SLOPE SOLAR STILL. Journal of Thermal Engineering, 0, , 677-689.	1.6	2
134	Applications of Soft Computing in Solar Drying Systems. Green Energy and Technology, 2017, , 419-438.	0.6	2
135	Different Techniques for Separation of Brackish Water. Asian Journal of Chemistry, 2019, 31, 9-17.	0.3	1
136	Chapter 4 Review on Performance Affected Parameters for Dye Sensitized Solar Cell. , 2016, , 93-112.		0
137	Application of Software in Predicting Thermal Behaviours of Solar Stills. Green Energy and Technology, 2019, , 105-148.	0.6	0
138	Solar photovoltaic (PV)-driven active crop drying system for plantain ( MUSA SPP ): Design, development, and performance evaluation. Journal of Food Process Engineering, 0, , e13892.	2.9	0
139	Heat loss analysis of a parabolic type dish cooker. International Journal of Energy Technology, 2019, , 1.	0.3	0
140	Thermodynamic analysis of sensible heat storage based double pass hybrid solar air heater with and without reflector. Sadhana - Academy Proceedings in Engineering Sciences, 2022, 47, 1.	1.3	0
141	Methods to enhance the productivity of solar still: A review. Materials Today: Proceedings, 2022, , .	1.8	0
142	Performance analysis of single slope solar still under composite climate in India: Numerical simulation and thermal modeling approach. Materials Today: Proceedings, 2022, , .	1.8	0