

Runar Unnthorsson

List of Publications by Year in descending order

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Version: 2024-02-01

92
papers

1,452
citations

361296
20
h-index

360920
35
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93
all docs

93
docs citations

93
times ranked

1231
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of biomass gasification modelling. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 110, 378-391.	8.2	236
2	A Step towards the Hydrogen Economy – A Life Cycle Cost Analysis of A Hydrogen Refueling Station. <i>Energies</i> , 2017, 10, 763.	1.6	101
3	Designing sensory-substitution devices: Principles, pitfalls and potential. <i>Restorative Neurology and Neuroscience</i> , 2016, 34, 769-787.	0.4	69
4	Artificial neural network integrated with thermodynamic equilibrium modeling of downdraft biomass gasification-power production plant. <i>Energy</i> , 2020, 213, 118800.	4.5	69
5	Performance analysis and environmental assessment of small-scale waste biomass gasification integrated CHP in Iceland. <i>Energy</i> , 2020, 197, 117268.	4.5	53
6	Acoustic emission based fatigue failure criterion for CFRP. <i>International Journal of Fatigue</i> , 2008, 30, 11-20.	2.8	47
7	Energy Harvesting Technologies for Structural Health Monitoring of Airplane Components – A Review. <i>Sensors</i> , 2020, 20, 6685.	2.1	45
8	An Assessment of the Sustainability of Lignocellulosic Bioethanol Production from Wastes in Iceland. <i>Energies</i> , 2018, 11, 1493.	1.6	44
9	Waste Biomass Gasification Simulation Using Aspen Plus: Performance Evaluation of Wood Chips, Sawdust and Mixed Paper Wastes. <i>Journal of Power and Energy Engineering</i> , 2019, 07, 12-30.	0.3	37
10	Ideal EROI (energy return on investment) deepens the understanding of energy systems. <i>Energy</i> , 2014, 67, 241-245.	4.5	33
11	Relative vibrotactile spatial acuity of the torso. <i>Experimental Brain Research</i> , 2017, 235, 3505-3515.	0.7	29
12	Measuring relative vibrotactile spatial acuity: effects of tactor type, anchor points and tactile anisotropy. <i>Experimental Brain Research</i> , 2018, 236, 3405-3416.	0.7	29
13	Levelized Cost of Energy Analysis of a Wind Power Generation System at BÄrfell in Iceland. <i>Energies</i> , 2015, 8, 9464-9485.	1.6	27
14	Translational research – the need of a new bioethics approach. <i>Journal of Translational Medicine</i> , 2016, 14, 16.	1.8	27
15	Evaluation of an Audio-haptic Sensory Substitution Device for Enhancing Spatial Awareness for the Visually Impaired. <i>Optometry and Vision Science</i> , 2018, 95, 757-765.	0.6	27
16	A Method for Estimating Annual Energy Production Using Monte Carlo Wind Speed Simulation. <i>Energies</i> , 2016, 9, 286.	1.6	24
17	The Sound of Vision Project: On the Feasibility of an Audio-Haptic Representation of the Environment, for the Visually Impaired. <i>Brain Sciences</i> , 2016, 6, 20.	1.1	23
18	Enhanced methane production from pig slurry with pulsed electric field pre-treatment. <i>Environmental Technology (United Kingdom)</i> , 2018, 39, 479-489.	1.2	22

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19	Techno-Economic and Environmental Assessment of Power Supply Chain by Using Waste Biomass Gasification in Iceland. <i>Biophysical Economics and Sustainability</i> , 2020, 5, 1.	0.7	22
20	The equivalence of stoichiometric and non-stoichiometric methods for modeling gasification and other reaction equilibria. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 131, 109982.	8.2	21
21	Simulation and Performance Analysis of Integrated Gasification-Syngas Fermentation Plant for Lignocellulosic Ethanol Production. <i>Fermentation</i> , 2020, 6, 68.	1.4	20
22	Effect of Coronavirus Disease 2019 on CO2 Emission in the World. <i>Aerosol and Air Quality Research</i> , 2020, 20, 1197-1203.	0.9	20
23	Hit Detection and Determination in AE Bursts. , 0, , .		19
24	Methane yield enhancement via electroporation of organic waste. <i>Waste Management</i> , 2017, 66, 61-69.	3.7	19
25	Prioritization of Bioethanol Production Systems from Agricultural and Waste Agricultural Biomass Using Multi-criteria Decision Making. <i>Biophysical Economics and Resource Quality</i> , 2019, 4, 1.	2.4	19
26	Gasification of Woody Biomasses and Forestry Residues: Simulation, Performance Analysis, and Environmental Impact. <i>Fermentation</i> , 2021, 7, 61.	1.4	19
27	Hot water production improves the energy return on investment of Geothermal power plants. <i>Energy</i> , 2013, 51, 273-280.	4.5	18
28	Energy return on investment of hydroelectric power generation calculated using a standardised methodology. <i>Renewable Energy</i> , 2014, 66, 364-370.	4.3	18
29	Blind wayfinding with physically-based liquid sounds. <i>International Journal of Human Computer Studies</i> , 2018, 115, 9-19.	3.7	18
30	Current Use and Future Perspectives of Spatial Audio Technologies in Electronic Travel Aids. <i>Wireless Communications and Mobile Computing</i> , 2018, 2018, 1-17.	0.8	18
31	Hydrogen production via biomass gasification: simulation and performance analysis under different gasifying agents. <i>Biofuels</i> , 2022, 13, 717-726.	1.4	18
32	Techno-Economic Analysis of Power Production by Using Waste Biomass Gasification. <i>Journal of Power and Energy Engineering</i> , 2020, 08, 1-8.	0.3	18
33	Artificial Neural Network Modeling of Bioethanol Production Via Syngas Fermentation. <i>Biophysical Economics and Sustainability</i> , 2021, 6, 1.	0.7	16
34	Modeling of Hydrogen Production by Applying Biomass Gasification: Artificial Neural Network Modeling Approach. <i>Fermentation</i> , 2021, 7, 71.	1.4	16
35	Simulation of small-scale waste biomass gasification integrated power production: a comparative performance analysis for timber and wood waste. <i>International Journal of Applied Power Engineering (IJAPE)</i> , 2020, 9, 147.	0.1	16
36	Dioxin Formation in Biomass Gasification: A Review. <i>Energies</i> , 2022, 15, 700.	1.6	13

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37	Taxonomy of Means and Ends in Aquaculture Productionâ€™Part 2: The Technical Solutions of Controlling Solids, Dissolved Gasses and pH. Water (Switzerland), 2016, 8, 387.	1.2	11
38	Geothermal Power Plant Maintenance: Evaluating Maintenance System Needs Using Quantitative Kano Analysis. Energies, 2014, 7, 4169-4184.	1.6	10
39	The intensity order illusion: temporal order of different vibrotactile intensity causes systematic localization errors. Journal of Neurophysiology, 2019, 122, 1810-1820.	0.9	10
40	Bioethanol Production via Herbaceous and Agricultural Biomass Gasification Integrated with Syngas Fermentation. Fermentation, 2021, 7, 139.	1.4	10
41	Development of a New Stoichiometric Equilibrium-Based Model for Wood Chips and Mixed Paper Wastes Gasification by ASPEN Plus. , 2019, , .		10
42	Different Approaches to Aiding Blind Persons in Mobility and Navigation in the â€™Navitonâ€™ and â€™Sound of Visionâ€™ Projects. , 2018, , 435-468.		8
43	Dataset of biomass characteristics and net output power from downdraft biomass gasifier integrated power production unit. Data in Brief, 2020, 33, 106390.	0.5	8
44	Energy return on investment of Austrian sugar beet: A small-scale comparison between organic and conventional production. Biomass and Bioenergy, 2015, 75, 267-271.	2.9	7
45	Performance Investigation of Biomass Gasification for Syngas and Hydrogen Production Using Aspen Plus. Open Journal of Modelling and Simulation, 2022, 10, 71-87.	0.7	7
46	Turbine repair at Nesjavellir geothermal power plant: An Icelandic case study. Geothermics, 2015, 53, 166-170.	1.5	6
47	Taxonomy of Means and Ends in Aquaculture Productionâ€™Part 1: The Functions. Water (Switzerland), 2016, 8, 319.	1.2	6
48	Auditory depth map representations with a sensory substitution scheme based on synthetic fluid sounds. , 2017, , .		5
49	Thermoelectric Powered Security Systems in Iceland Using a Geothermal Steam Pipe as a Heat Source. Proceedings (mdpi), 2018, 2, 440.	0.2	5
50	A Practical Approach for Estimating the Optimum Tilt Angle of a Photovoltaic Panel for a Long Periodâ€™Experimental Recorded Data. Solar, 2021, 1, 41-51.	0.9	5
51	The Latest Advances in Wireless Communication in Aviation, Wind Turbines and Bridges. Inventions, 2022, 7, 18.	1.3	5
52	Vibrotactile Threshold Measurements at the Wrist Using Parallel Vibration Actuators. ACM Transactions on Applied Perception, 2022, 19, 1-11.	1.2	5
53	Theorizing for Maintenance Management Improvements: Using Case Studies from the Icelandic Geothermal Sector. Energies, 2015, 8, 4943-4962.	1.6	4
54	Taxonomy of Means and Ends in Aquaculture Productionâ€™Part 3: The Technical Solutions of Controlling N Compounds, Organic Matter, P Compounds, Metals, Temperature and Preventing Disease. Water (Switzerland), 2016, 8, 506.	1.2	4

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55	Energy Return on Investment for Aquaponics: Case Studies from Iceland and Spain. <i>BioPhysical Economics and Resource Quality</i> , 2017, 2, 1.	2.4	4
56	Dioxin and Furan Emissions from Gasification. , 0, , .		4
57	Specified Maintenance of Steam Turbines in Geothermal Power Plants. , 2013, , .		3
58	Operation and Maintenance in Icelandic Geothermal Power Plants: Structure and Hierarchy. , 2013, , .		3
59	Direct Use of Geothermal Resources for Circular Food Production. <i>Proceedings (mdpi)</i> , 2018, 2, 497.	0.2	3
60	Thermoelectric Generator Using Passive Cooling. , 0, , .		3
61	Waste Geothermal Hot Water for Enhanced Outdoor Agricultural Production. , 2013, , .		3
62	Implicit Equation for Photovoltaic Module Temperature and Efficiency via Heat Transfer Computational Model. <i>Thermo</i> , 2022, 2, 39-55.	0.6	3
63	Waste-Heat for Pre-Heating Internal Combustion Engines. , 2012, , .		2
64	Innovation and development in geothermal turbine maintenance based on Icelandic experience. <i>Geothermics</i> , 2015, 56, 72-78.	1.5	2
65	Geothermal wellhead maintenance: A statistical model based on documented Icelandic experience. <i>Geothermics</i> , 2015, 53, 147-153.	1.5	2
66	Calculations of environmental benefits from using geothermal energy must include the rebound effect. <i>Geothermics</i> , 2017, 66, 151-155.	1.5	2
67	Estimation of Spectral Notches From Pinna Meshes: Insights From a Simple Computational Model. <i>IEEE/ACM Transactions on Audio Speech and Language Processing</i> , 2021, 29, 2683-2695.	4.0	2
68	Thermoelectric-Based Power Generator for Powering Microcontroller Based Security Camera. , 2012, , .		1
69	A Web-Accessible Robotics Monitoring System Powered by a Thermoelectric Generator Connected to a Battery. , 2014, , .		1
70	Simulation Based Grid Optimization to Enhance Renewable Energy Storage in Iceland. , 2014, , .		1
71	Taxonomy of Means and Ends in Aquaculture Productionâ€™Part 4: The Mapping of Technical Solutions onto Multiple Treatment Functions. <i>Water (Switzerland)</i> , 2016, 8, 487.	1.2	1
72	Design of a Low-Power Quadruped Robot for Remote Data Acquisition in a Heated Garden. , 2016, , .		1

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73	Heat pumps in subarctic areas: current status and benefits of use in Iceland. International Journal of Energy and Environmental Engineering, 2017, 8, 283-291.	1.3	1
74	Uniaxial and lateral strain behavior of ribbed reinforcement bars inspected with digital image correlation. Structural Concrete, 2018, 19, 1992-2003.	1.5	1
75	Repurposing Waste Steam and Hot Water to Accelerate Plant Growth in Heated Green Roofs. , 2013, , .		1
76	Effect of Coronavirus Disease 2019 on CO2 Emission in the World. Aerosol and Air Quality Research, 2020, 20, 1197-1203.	0.9	1
77	Introducing a New Haptic Illusion to Increase the Perceived Resolution of Tactile Displays. , 2018, , .		1
78	Designing and Installing a Retrofit Heated Green Roof Using Either Co-Gen Waste Hot Water or Municipal Waste Steam Heat as Energy Source. , 2014, , .		0
79	Necessity is the Mother of Invention: The Dawn of Domestic Geothermal Turbine Repairs in Iceland. , 2014, , .		0
80	Wellhead Scaling Problems in Geothermal Power Plants Addressed Using a Needle Valve Derivative. , 2014, , .		0
81	Design of a Clamp for a Thermoelectric Generator Using Bimetallic Thermal Properties. , 2016, , .		0
82	Heat Transfer Analysis of Shell-and-Helical-Coil Heat Exchangers. , 2016, , .		0
83	Societal and Environmental Impact of High Energy Return on Investment (EROI) Energy Access. , 2018, , 127-148.		0
84	On Authority in Academia. , 2018, , .		0
85	On Improving Academic-Industry Collaboration. , 2018, , .		0
86	Identifying and Monitoring Evolving AE Sources. , 0, , .		0
87	Fin Drive Propulsion. , 2012, , .		0
88	Go With the Flow: The Evolvement of Geothermal Wellhead Maintenance at the Hellisheidi Power Plant. , 2014, , .		0
89	Design and Construction of a Heated Garden System Utilizing Steam Condensate From an On Site Boiler. , 2016, , .		0
90	A Detachable Thermoelectric Generator As a Power Source for a 3G Camera Network Using a Steam Pipe As a Heat Source. , 2019, , .		0

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91	Thermoelectric Generator-Based System for Energizing Low-Power Communication and Geolocation Electronics. , 2019, , .		0
92	Open Field Heating of Green Roofs and Small Arable Land Plots Using Waste Steam and Hot Water From Geothermal, Municipal and COGEN Sources to Enhance Plant Growth. , 2019, , .		0