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Education Information

Doctorate, Ege University, Faculty Of Engineering, Makine Mühendisliği Bölümü, Turkey 2010 - 2014

Postgraduate, Ege University, Faculty Of Engineering, Makine Mühendisliği Bölümü, Turkey 2006 - 2009

Foreign Languages

English, C1 Advanced

Research Areas

Mechanical Engineering, Energy, Thermodynamics, Heat and Mass Transfer, Computational fluid dynamics, Thermal Systems

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Comprehensive evaluation of a new integrated ORC-VCR system with a thermoelectric generator unit combining sustainable energies for hydrogen production**
Sabbaghi M. A., GENCELİ H., Heidarnejad P., Asker M., Khanmohammadi S.
International Journal of Hydrogen Energy, vol.107, pp.488-501, 2025 (SCI-Expanded)
- II. **Evaluating the economic viability and technological feasibility of a new SOFC-integrated energy system using CO2 capture unit**
Sabbaghi M. A., GENCELİ H., Baniasadi E.
International Journal of Hydrogen Energy, 2025 (SCI-Expanded)
- III. **Biomass-Fueled Organic Rankine Cycles: State of the Art and Future Trends**
Heidarnejad P., GENCELİ H., Hashemian N., Asker M., Al-Rawi M.
Energies, vol.17, no.15, 2024 (SCI-Expanded)
- IV. **Thermodynamic assessment of an innovative biomass-driven system for generating power, heat, and hydrogen**
Sabbaghi M. A., Baniasadi E., GENCELİ H.
International Journal of Hydrogen Energy, vol.75, pp.529-539, 2024 (SCI-Expanded)
- V. **Optimal design of a solar-driven Kalina system for combined power and desalination purposes**
Khanmohammadi S., GENCELİ H., Pakseresht A., Bellotti D.
Solar Energy, vol.268, 2024 (SCI-Expanded)

- VI. **The pandemic's sustainability windfall: a case study of COVID-19 restrictions on electricity demand patterns and sustainable development goals**
 Heidarnejad P., GENCELİ H., Asker M., YUMURTACI Z.
 International Journal of Global Warming, vol.32, no.4, pp.440-463, 2024 (SCI-Expanded)
- VII. **Exploring the performance of an innovative integrated solar tower power plant with hydrogen generation and storage**
 Mirbagheri M. H., Baniasadi E., GENCELİ H.
 International Journal of Hydrogen Energy, vol.48, no.99, pp.39271-39285, 2023 (SCI-Expanded)
- VIII. **Analysis of a novel concentrated solar power and magnetohydrodynamic liquid metal units integrated system with hydrogen production**
 Nezhad Q. A., Jafarmadar S., Genceli H.
 International Journal of Hydrogen Energy, vol.48, no.60, pp.22734-22751, 2023 (SCI-Expanded)
- IX. **Novel Saturated Flow Boiling Correlations for R600a and R717 Refrigerants**
 Turgut O. E., Genceli H., Asker M., Çoban M. T.
 HEAT TRANSFER ENGINEERING, vol.43, no.18, pp.1579-1609, 2022 (SCI-Expanded)
- X. **Air quality during COVID-19 pandemic forced partial confinement in Turkey**
 GENCELİ H.
 INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.26, no.3, pp.311-321, 2022 (SCI-Expanded)
- XI. **Novel Saturated Flow Boiling Heat Transfer Correlation for R32 Refrigerant**
 Turgut O. E., Asker M., Genceli H., Çoban M. T.
 Journal Of Thermophysics And Heat Transfer, vol.1, no.1, pp.1-6, 2021 (SCI-Expanded)
- XII. **Exergetic evaluation and optimisation of a novel integrated energy conversion system including thermoelectric generators**
 Malik M. Z., Musharavati F., Saadat-Targhi M., Khanmohammadi S., GENCELİ H.
 INTERNATIONAL JOURNAL OF EXERGY, vol.35, no.2, pp.195-209, 2021 (SCI-Expanded)
- XIII. **A comprehensive approach for optimizing a biomass assisted geothermal power plant with freshwater production: Techno-economic and environmental evaluation**
 HEIDARNEJAD P., GENCELİ H., Asker M., Khanmohammadi S.
 Energy Conversion and Management, vol.226, 2020 (SCI-Expanded)
- XIV. **A comprehensive approach for optimizing a biomass assisted geothermal power plant with freshwater production: Techno-economic and environmental evaluation**
 Heidarnejad P., Genceli H., Asker M., Khanmohammadi S.
 Energy Conversion And Management, vol.226, no.1, pp.113514, 2020 (SCI-Expanded)
- XV. **The effects of driving patterns and PEM fuel cell degradation on the lifecycle assessment of hydrogen fuel cell vehicles**
 Ahmadi P., Torabi S. H., Afsaneh H., Sadegheih Y., Genceli H., Ashjaee M.
 International Journal Of Hydrogen Energy, vol.45, no.5, pp.3595-3608, 2020 (SCI-Expanded)
- XVI. **The effect of phase change material incorporated building wall on the CO2 mitigation: a case study of Izmir, Turkey**
 Asker M., Alptekin E., Tokuç A., Ezan M. A., Genceli H.
 International Journal of Global Warming, vol.19, no.1, pp.54-75, 2019 (SCI-Expanded)
- XVII. **Mixed refrigerant as working fluid in Organic Rankine Cycle for hydrogen production driven by geothermal energy**
 Genceli H.
 International Journal Of Hydrogen Energy, vol.44, no.34, pp.18703-18711, 2019 (SCI-Expanded)
- XVIII. **Performance assessment of solar-powered high pressure proton exchange membrane electrolyzer: A case study for Erzincan**
 Genceli H.
 International Journal Of Hydrogen Energy, vol.44, no.20, pp.9701-9707, 2019 (SCI-Expanded)
- XIX. **Numerical investigation of inward solidification inside spherical capsule by using temperature transforming method**

- Asker M., Genceli H., Çoban M. T.
AIN SHAMS ENGINEERING JOURNAL, vol.9, no.4, pp.537-547, 2018 (SCI-Expanded)
- XX. **Assessment of different bio-inspired flow fields for direct methanol fuel cells through 3D modeling and experimental studies**
Ouellette D., Ozden A., Ercelik M., Çolpan C. Ö., Genceli H., Li X., Hamdullahpur F.
International Journal Of Hydrogen Energy, vol.43, no.2, pp.1152-1170, 2018 (SCI-Expanded)
- XXI. **Entropy generation analysis of multilayer PCM slabs integrated with fins**
Asker M., Alptekin E., Ezan M. A., Genceli H.
International Journal Of Exergy, vol.25, no.1, pp.154-169, 2018 (SCI-Expanded)
- XXII. **Thermoeconomic modeling and multi-objective evolutionary-based optimization of a modified transcritical CO2 refrigeration cycle**
Khanmohammadi S., Goodarzi M., Khanmohammadi S., Genceli H.
JOURNAL OF THERMAL SCIENCE AND ENGINEERING APPLICATIONS, vol.5, pp.86-96, 2017 (SCI-Expanded)
- XXIII. **Designing, modeling and performance investigation of bio-inspired flow field based DMFCs**
Ozden A., Ercelik M., Ouellette D., Çolpan C. Ö., Genceli H., Hamdullahpur F.
International Journal Of Hydrogen Energy, vol.42, no.33, pp.21546-21558, 2017 (SCI-Expanded)
- XXIV. **Exergoeconomic analysis and multi objective optimization of a solar based integrated energy system for hydrogen production**
Khanmohammadi S., Heidarnejad P., Javanı N., Genceli H.
International Journal Of Hydrogen Energy, vol.42, no.33, pp.21443-21453, 2017 (SCI-Expanded)
- XXV. **Analysis and optimisation of a cascade active magnetic regenerative refrigeration system**
Genceli H., Dincer İ., Güngör A.
International Journal Of Exergy, vol.19, no.2, pp.143-160, 2016 (SCI-Expanded)
- XXVI. **Exergoeconomic Analysis of a Heat Pump Tumbler Dryer**
Genceli H., Dincer İ., Güngör A.
Drying Technology, vol.32, no.3, pp.352-360, 2014 (SCI-Expanded)
- XXVII. **Exergoeconomic evaluation of a geothermal power plant**
Genceli H., Dincer İ., Güngör A.
International Journal Of Exergy, vol.14, no.3, pp.303-319, 2014 (SCI-Expanded)
- XXVIII. **Exergetic performance analysis of Dora II geothermal power plant in Turkey**
Genceli H., Güngör A., Dincer İ.
ENERGY, vol.46, no.1, pp.101-108, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **Implementing the Streamline Curvature Method For Preliminary Design of Multi-Stage Axial Compressors**
Genceli H., Mukhamediarov R.
International Journal of New Findings in Engineering, Science and Technology, vol.2, no.2, pp.106-120, 2024 (Peer-Reviewed Journal)
- II. **Numerical analysis of phase change material filled with metal foam inside a cylindrical capsule**
Genceli H., Al-Rawi M., Asker M.
ENERGY STORAGE, vol.1, no.1, pp.1-10, 2023 (ESCI)
- III. **Numerical Simulation of Thermal Energy Storage System Inside a Spherical Capsule Under Periodic Boundary Conditions**
Asker M., Genceli H., Ezan M. A.
ENERGY STORAGE, vol.1, no.1, pp.1-10, 2022 (ESCI)
- IV. **Simulation and Performance Analysis of a Cooling Energy Storage System Based on Encapsulated Nano-Enhanced Phase Change Materials**
Ghojavand, F., Baniasadi E., Afshari E., Genceli H.

ENERGY STORAGE, vol.1, no.1, pp.1-11, 2022 (ESCI)

- V. **Comparative techno-economic-environmental assessment of biomass fueled integrated energy systems**
Heidarnejad P., Genceli H., Yumurtacı Z.
Turkish Journal of Electromechanics & Energy, vol.6, no.2, pp.39-45, 2021 (Peer-Reviewed Journal)
- VI. **Comparative techno-economic-environmental assessment of biomass fueled integrated energy systems**
HEIDARNEJAD P., GENCELİ H., YUMURTACI Z.
Turkish Journal of Electromechanics & Energy, 2021 (Peer-Reviewed Journal)
- VII. **Thermodynamic analysis and performance assessment of a cascade active magnetic regenerative refrigeration system**
Genceli H., Dincer İ., Güngör A.
INTERNATIONAL JOURNAL OF AIR-CONDITIONING AND REFRIGERATION, vol.21, no.3, pp.1350016, 2013 (ESCI)

Books

- I. **Numerical Simulation of Building Wall Integrated with Phase Change Material: A Case Study of a Mediterranean City Izmir, Turkey**
Asker M., Alptekin E., Tokuç A., Ezan M. A., Genceli H.
in: The Role of Exergy in Energy and the Environment, Sandro Nižetić, Agis Papadopoulos, Editor, Springer, London/Berlin, New York, pp.757-768, 2018
- II. **Energy and exergy analyses of an active magnetic refrigerator**
Genceli H., Güngör A., Dincer İ.
in: Progress in Sustainable Energy Technologies Vol II: Creating Sustainable Development, Ibrahim Dincer, Adnan Midilli, Haydar Kucuk, Editor, Springer, London/Berlin, New York, pp.1-10, 2014
- III. **Exergy Analysis and Environmental Impact Assessment of a Geothermal Power Plant**
Genceli H., Dinçer İ., Güngör A.
in: Causes, Impacts and Solutions to Global Warming, Ibrahim Dinçer, Can Özgür Çolpan, Fethi Kadioglu, Editor, Springer, London/Berlin, New York, pp.825-837, 2013

Papers Published in Refereed Scientific Meetings

- I. **Feasibility Study of Designing A Zero Energy Building in Hot and Dry Climate**
Karami M., Saeidi A., Heidarnejad P., Genceli H.
12th Global Conference on Global Warming (GCGW-2024), Şanlıurfa, Turkey, 16 - 19 May 2024, pp.10-14
- II. **Integration of an SOFC with Closed Brayton and Rankine Cycles for Hydrogen Production: Thermodynamic Analysis and Heat Recovery Considerations**
Genceli H., Sabbaghi M. A., Baniasadi .
8th International Hydrogen Technologies Congress (IHTEC 2024), Diyarbakır, Turkey, 12 - 15 May 2024, pp.130-134
- III. **Thermodynamic Assessment of an Improved Solar Powered Multi-Generation System Using a Thermoelectric Generator**
Sabbaghi M. A., Genceli H., Baniasadi E.
8th International Hydrogen Technologies Congress (IHTEC 2024), Diyarbakır, Turkey, 12 - 15 May 2024, pp.294-298
- IV. **A Comparative Study Based on the Efficiency of Metaheuristic Algorithms for Performing Gibbs Free Energy Minimization Problems**
Çoban T., Turgut O. E., Genceli H., Asker M.
24th Congress on Thermal Science and Technology with International Participation (Ulibtk'23), Ankara, Turkey, 6 -

08 September 2023, pp.1-4

- V. **Thermodynamic Performance Evaluation of Direct Dimethyl Ether Fuel Cells Using Exergy Analysis**
Genceli H., Alpaydın G. U., Çolpan C. Ö., Devrim Y.
7th International Hydrogen Energy Congress, Elazığ, Turkey, 10 - 12 May 2023, pp.10-14
- VI. **A NUMERICAL STUDY ON A PHASE-CHANGE PROCESS IN A CYLINDRICAL CAPSULE**
Genceli H., Asker M., Al-Rawi M.
The 2nd World Energy Storage Conference, İstanbul, Turkey, 18 - 21 December 2022, pp.1-4
- VII. **Performance assessment of a solar driven Kalina cycle with the purpose of power and fresh water generation**
Genceli H., Khanmohammadi S.
International Conference on Sustainable Energy and Technologie, İstanbul, Turkey, 16 - 18 August 2022, pp.2-7
- VIII. **Performance Analysis of a Solar Tower Power Plant Integrated with Hydrogen Energy Storage System**
Mirbagheri M. H., Baniasadi E., Genceli H.
23rd World Hydrogen Energy Conference, İstanbul, Turkey, 26 - 30 June 2022, pp.2-6
- IX. **Simulation of a three-dimensional single-phase direct ethanol fuel cell**
Genceli H., Çolpan C. Ö., Erünel E.
6 th International Hydrogen Technologies Congress (IHTEC-2022), Çanakkale, Turkey, 23 - 26 January 2022, pp.1-4
- X. **Parametric Analysis of Photovoltaic Module**
Asker M., Turgut O. E., Genceli H.
International Conference on Advances in Engineering, Architecture, Science and Technology (ICA-EAST 2021), Erzurum, Turkey, 15 - 17 December 2021, pp.1-4
- XI. **DYNAMIC SIMULATION OF A FLAT PLATE SOLAR COLLECTOR SYSTEM UNDER HOT AND HUMID CLIMATIC CONDITIONS**
Genceli H., Özdoğan A., Asker M.
5 International Anatolian Energy Symposium, 24 - 25 March 2021, pp.436-442

Supported Projects

Genceli H., Çolpan C. Ö., TUBITAK Project, Development of Three Dimensional Model, Design, Production and Experimental Characterization of High Performance Direct Ethanol Fuel Cell Stack , 2021 - 2022

Metrics

Publication: 51

Citation (WoS): 772

Citation (Scopus): 862

H-Index (WoS): 14

H-Index (Scopus): 14

Non Academic Experience

Vestel beyaz eşya, Araştırma ve geliştirme mühendisi