

## Assoc. Prof. Hadi GENCELİ

### Personal Information

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### International Researcher IDs

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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. **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)
- II. **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)
- III. **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)
- IV. **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)
- V. **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, 2024 (SCI-Expanded)

- VI. **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)
- VII. **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)
- VIII. **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)
- IX. **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)
- X. **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)
- XI. **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)
- XII. **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)
- XIII. **A comprehensive approach for optimizing a biomass assisted geothermal power plant with freshwater production: Techno-economic and environmental evaluation**  
Heidarmejad P., Genceli H., Asker M., Khanmohammadi S.  
Energy Conversion And Management, vol.226, no.1, pp.113514, 2020 (SCI-Expanded)
- XIV. **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)
- XV. **The effect of phase change material incorporated building wall on the CO<sub>2</sub> 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)
- XVI. **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)
- XVII. **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)
- XVIII. **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)
- XIX. **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)
- XX. **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)
- XXI. **Thermoeconomic modeling and multi-objective evolutionary-based optimization of a modified transcritical CO<sub>2</sub> 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)
- XXII. **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)
- XXIII. **Exergoeconomic analysis and multi objective optimization of a solar based integrated energy system for hydrogen production**  
Khanmohammadi S., Heidarnejad P., Javani N., Genceli H.  
International Journal Of Hydrogen Energy, vol.42, no.33, pp.21443-21453, 2017 (SCI-Expanded)
- XXIV. **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)
- XXV. **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)
- 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. **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. **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)
- II. **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)
- III. **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)
- IV. **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)
- V. **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)

- VI. **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 & Book Chapters

- 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

## Refereed Congress / Symposium Publications in Proceedings

- 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., Baniyasi 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., Erunal 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

DİNCER İ., JAVANI N., GENCELİ H., KANTÜRK FİGEN A., SORGULU F., ÖZTÜRK M., AKGÜN İ., ERDEMİR D., AYDIN M. İ., GÜRSU H., Project Supported by Higher Education Institutions, Yeşil Hidrojen Üretim Sisteminin Geliştirilmesi ve Kurulması, 2024 - Continues

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: 49

Citation (WoS): 772

Citation (Scopus): 862

H-Index (WoS): 13

H-Index (Scopus): 13

## Non Academic Experience

Vestel beyaz eşya