

## Prof. MEHMET KARAKILÇIK

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: C-2829-2018

ScopusID: 12545483300

Yoksis Researcher ID: 103416

### Education Information

Doctorate, Cukurova University, Fen Bilimleri , Fizik, Turkey 1992 - 1998

Postgraduate, Cukurova University, Fen Bilimleri, Fizik, Turkey 1988 - 1992

Undergraduate, Cukurova University, Fen Edebiyat Fakültesi, Fizik, Turkey 1984 - 1988

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Occupational Health and Safety, İş Güvenliği Eğitim Programı, TÜV, 2014

### Dissertations

Doctorate, Prototip yalıtımlı bir güneş havuzunun performansının saptanması, Cukurova University, Fen Bilimleri Enstitüsü, 1998

Postgraduate, Yalıtımlı ve yalıtımsız güneş havuzlarının performansını etkileyen etmenler, Cukurova University, Fen Bilimleri Enstitüsü, 1991

### Research Areas

Mechanical Engineering, Energy, Alternative Energy Resources, Energy storage technologies, Solar energy, Thermodynamics, Heat and Mass Transfer, Physics, General Physics, Mathematical Methods in Physics, Natural Sciences, Engineering and Technology

## Academic Titles / Tasks

Professor, Cukurova University, Fen-Edebiyat Fakültesi, Fizik, 2018 - Continues

Associate Professor, Cukurova University, Fen-Edebiyat Fakültesi, Fizik, 2013 - 2018

Assistant Professor, Cukurova University, Fen-Edebiyat Fakültesi, Fizik, 1999 - 2013

## Academic and Administrative Experience

Member of the Senate, Cukurova University, Fen-Edebiyat Fakültesi, Fizik, 2023 - Continues

Fakülte Kurulu Üyesi, Cukurova University, Fen-Edebiyat Fakültesi, Fizik, 2022 - Continues

Head of Department, Cukurova University, Fen-Edebiyat Fakültesi, Fizik, 2022 - Continues

Meslek Yüksekokulu Kurulu Üyesi, Cukurova University, İmamoğlu Meslek Yüksekokulu, Elektrik ve Enerji, 2014 - 2017

Head of Department, Cukurova University, Sivil Havacılık Yüksekokulu, Havacılık Elektrik-Elektroniği, 2013 - 2017

Yüksekokul Kurulu Üyesi, Cukurova University, Sivil Havacılık Yüksekokulu, Havacılık Elektrik-Elektroniği, 2013 - 2017

Yüksekokul Yönetim Kurulu Üyesi, Cukurova University, Sivil Havacılık Yüksekokulu, Havacılık Elektrik-Elektroniği, 2013 - 2016

Meslek Yüksekokulu Yönetim Kurulu Üyesi, Cukurova University, Fen-Edebiyat Fakültesi, Fizik, 2013 - 2016

Cukurova University, Fen Edebiyat Fakültesi, Fizik, 2007 - 2014

## Jury Memberships

Associate Professor Exam, Associate Professor Exam, Ege Üniversitesi, January, 2022

Associate Professor Exam, Associate Professor Exam, Kırıkkale Üniversitesi, February, 2021

Associate Professor Exam, Associate Professor Exam, Dokuz Eylül Üniversitesi, July, 2019

Associate Professor Exam, Doçentlik Sınav Jürisi, Necmettin Erbakan Üniversitesi, September, 2018

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Hydrogen production of flat plate solar collectors integrated with photovoltaic thermal panels**  
ATIZ A., Erden M., KARAKILÇIK M.  
International Journal of Hydrogen Energy, vol.52, pp.1408-1424, 2024 (SCI-Expanded)
- II. **Solar pond integrated with parabolic trough solar collector for producing electricity and hydrogen**  
Damarseckin S., ATIZ A., KARAKILÇIK M.  
International Journal of Hydrogen Energy, vol.52, pp.115-126, 2024 (SCI-Expanded)
- III. **Experimental investigation of hydrogen production performance of various salts with a chlor-alkali method**  
Erden M., KARAKILÇIK M.  
International Journal of Hydrogen Energy, vol.52, pp.546-560, 2024 (SCI-Expanded)
- IV. **Investigation of the energetic, exergetic performance, environmental, economic, and hydrogen production analyses of PV-T for increasing surface areas and mass flow rates compared to PV**  
ATIZ A., KARAKILÇIK M., Sogukpınar H., Bozkurt I.  
International Journal of Hydrogen Energy, vol.49, pp.424-436, 2024 (SCI-Expanded)
- V. **Assessment of hydrogen generation and thermodynamic efficiencies of PEM coupled with PV and PV-T under diverse circumstances**  
ATIZ A., KARAKILÇIK M.  
International Journal of Hydrogen Energy, 2024 (SCI-Expanded)
- VI. **Experimental room heating applications relative to increasingly evacuated vacuum tube solar collectors**  
ATIZ A., KARAKILÇIK M.  
HEAT AND MASS TRANSFER, vol.59, no.6, pp.1059-1071, 2023 (SCI-Expanded)

- VII. **Energy and exergy analyses and electricity generation of PV-T combined with a solar collector for varying mass flow rate and ambient temperature**  
ATIZ A., Erden M., KARAKILÇIK M.  
HEAT AND MASS TRANSFER, vol.58, no.7, pp.1263-1278, 2022 (SCI-Expanded)
- VIII. **The integration of parabolic trough solar collectors and evacuated tube collectors to geothermal resource for electricity and hydrogen production**  
ATIZ A., KARAKILÇIK H., Erden M., KARAKILÇIK M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.46, no.57, pp.29027-29037, 2021 (SCI-Expanded)
- IX. **Assessment of power and hydrogen production performance of an integrated system based on middle-grade geothermal source and solar energy**  
ATIZ A., KARAKILÇIK H., Erden M., KARAKILÇIK M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.46, no.1, pp.272-288, 2021 (SCI-Expanded)
- X. **Çukurova Üniversitesi Uzay Bilimleri ve Güneş Enerjisi Araştırma ve Uygulama Merkezi (UZAYMER): I. Gözlem Koşulları ve Güncel Projeler**  
SOLMAZ A., AKSAKER N., AKYÜZ A., KURT Z., ALLAK S., ALADAĞ Y., KARAKILÇIK M., EMRAHOĞLU N., ÖZEL M. E.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.2, no.1, pp.1-12, 2021 (SCI-Expanded)
- XI. **Performance investigation of salt gradient cylindrical solar pond integrated and nonintegrated with evacuated tube solar collectors**  
ATIZ A., BOZKURT İ., KARAKILÇIK M.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.43, no.12, pp.6243-6255, 2019 (SCI-Expanded)
- XII. **Investigation energy, exergy and electricity production performance of an integrated system based on a low-temperature geothermal resource and solar energy**  
ATIZ A., KARAKILÇIK H., Erden M., KARAKILÇIK M.  
ENERGY CONVERSION AND MANAGEMENT, vol.195, pp.798-809, 2019 (SCI-Expanded)
- XIII. **Investigation of hydrogen production performance of chlor-alkali cell integrated into a power generation system based on geothermal resources**  
KARAKILÇIK H., Erden M., KARAKILÇIK M.  
International Journal of Hydrogen Energy, pp.14145-14150, 2019 (SCI-Expanded)
- XIV. **Assessment of electricity and hydrogen production performance of evacuated tube solar collectors**  
ATIZ A., KARAKILÇIK H., Erden M., KARAKILÇIK M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.44, no.27, pp.14137-14144, 2019 (SCI-Expanded)
- XV. **Investigation of hydrogen production performance of a reactor assisted by a solar pond via photoelectrochemical process**  
KARAKILÇIK M., Erden M., Çiloğulları M., Dincer I.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.23, pp.10549-10554, 2018 (SCI-Expanded)
- XVI. **A preface to the special issue section on "The Second International Hydrogen Technologies Congress (IHTEC 2017), 15-18 March 2017, Adana, Turkey"**  
Midilli A., KARAKILÇIK M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.23, pp.10521, 2018 (SCI-Expanded)
- XVII. **Solar Food Processing and Cooking Methodologies**  
Saxena A., Goel V., KARAKILÇIK M.  
APPLICATIONS OF SOLAR ENERGY, pp.251-294, 2018 (SCI-Expanded)
- XVIII. **PERFORMANCE COMPARISON OF ABOVEGROUND AND UNDERGROUND SOLAR PONDS**  
Sogukpınar H., Bozkurt I., KARAKILÇIK M.  
THERMAL SCIENCE, vol.22, no.2, pp.953-961, 2018 (SCI-Expanded)
- XIX. **Investigation of hydrogen production performance of a Photovoltaic and Thermal System**  
Çiloğulları M., Erden M., KARAKILÇIK M., Dincer I.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.4, pp.2547-2552, 2017 (SCI-Expanded)
- XX. **Performance investigation of hydrogen production by the flat-plate collectors assisted by a solar pond**  
Erden M., KARAKILÇIK M., Dincer I.

- INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.4, pp.2522-2529, 2017 (SCI-Expanded)
- XXI. **Reply to "Erroneous equations used for energy and exergy analysis of a solar pond" by M. Khalilian KARAKILÇIK M.**  
ENERGY CONVERSION AND MANAGEMENT, vol.120, pp.469-470, 2016 (SCI-Expanded)
- XXII. **Performance assessment of a magnesium chloride saturated solar pond**  
Bozkurt I., Deniz S., KARAKILÇIK M., Dincer I.  
RENEWABLE ENERGY, vol.78, pp.35-41, 2015 (SCI-Expanded)
- XXIII. **The effect of sunny area ratios on the thermal performance of solar ponds**  
Bozkurt I., KARAKILÇIK M.  
ENERGY CONVERSION AND MANAGEMENT, vol.91, pp.323-332, 2015 (SCI-Expanded)
- XXIV. **Exergy analysis of a solar pond integrated with solar collector**  
Bozkurt I., KARAKILÇIK M.  
SOLAR ENERGY, vol.112, pp.282-289, 2015 (SCI-Expanded)
- XXV. **A new performance model to determine energy storage efficiencies of a solar pond**  
Bozkurt I., Mantar S., KARAKILÇIK M.  
HEAT AND MASS TRANSFER, vol.51, no.1, pp.39-48, 2015 (SCI-Expanded)
- XXVI. **Investigation of turbidity effect on exergetic performance of solar ponds**  
Atiz A., Bozkurt I., KARAKILÇIK M., Dincer I.  
ENERGY CONVERSION AND MANAGEMENT, vol.87, pp.351-358, 2014 (SCI-Expanded)
- XXVII. **AN INVESTIGATION OF THE EFFECT OF TRANSPARENT COVERS ON THE PERFORMANCE OF CYLINDRICAL SOLAR PONDS**  
Bozkurt I., Atiz A., KARAKILÇIK M., Dincer I.  
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.11, no.4, pp.404-416, 2014 (SCI-Expanded)
- XXVIII. **Dynamic exergetic performance assessment of an integrated solar pond**  
KARAKILÇIK M., Bozkurt I., Dincer I.  
INTERNATIONAL JOURNAL OF EXERGY, vol.12, no.1, pp.70-86, 2013 (SCI-Expanded)
- XXIX. **Performance assessment of a solar pond with and without shading effect**  
KARAKILÇIK M., Dincer I., Bozkurt I., Atiz A.  
ENERGY CONVERSION AND MANAGEMENT, vol.65, pp.98-107, 2013 (SCI-Expanded)
- XXX. **The daily performance of a solar pond integrated with solar collectors**  
Bozkurt I., KARAKILÇIK M.  
SOLAR ENERGY, vol.86, no.5, pp.1611-1620, 2012 (SCI-Expanded)
- XXXI. **Exergetic performance analysis of a solar pond**  
KARAKILÇIK M., Dincer I.  
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.47, no.1, pp.93-102, 2008 (SCI-Expanded)
- XXXII. **Performance investigation of a solar pond**  
Karakilcik M., Dincer I., Rosen M. A.  
APPLIED THERMAL ENGINEERING, vol.26, no.7, pp.727-735, 2006 (SCI-Expanded)
- XXXIII. **Experimental and theoretical temperature distributions in a solar pond**  
Karakilcik M., Kıymaç K., Dincer I.  
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.49, pp.825-835, 2006 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Vardiyalı Çalışanların Gürültü Algı Yanılgısının İncelenmesi**  
ACAR M. Z., KARAKILÇIK M.  
Çukurova Üniversitesi Mühendislik Fakültesi Dergisi, vol.36, no.4, pp.1089-1097, 2021 (Peer-Reviewed Journal)
- II. **Ç.Ü. Uzay Bilimleri ve Güneş Enerjisi Araştırma ve Uygulama Merkezi (UZAYMER) : I. Gözlem Koşulları ve Güncel Projeler**  
SOLMAZ A., AKSAKER N., AKYÜZ A., BAŞTÜRK Ö., KARAKILÇIK M., EMRAHOĞLU N., ÖZEL M. E.

Turkish Journal of Astronomy and Astrophysics, vol.2, no.1, pp.1-12, 2021 (Peer-Reviewed Journal)

- III. **Comparison of heat efficiencies of flat-plate and vacuum tube collectors integrated with Organic Rankine Cycle in Adana climate conditions**  
ATIZ A., KARAKILÇIK M.  
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.26, no.1, pp.106-112, 2020 (ESCI)
- IV. **Comparison of heat efficiency of flat-plate and vacuum tube collectors integrated with Organic Rankine Cycle in Adana climate conditions**  
ATIZ A., KARAKILÇIK M.  
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.26, no.1, pp.106-112, 2020 (ESCI)
- V. **The Theoretical Investigation of Performance of the Hydrogen Attainment System with Electricity from a Solar Pond**  
ATIZ A., KARAKILÇIK M.  
Çukurova Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, vol.34, no.4, pp.1-8, 2018 (Peer-Reviewed Journal)
- VI. **Performance Evaluation of a Solar Cooker with Low Cost Heat Storage Material**  
Saxena A., KARAKILÇIK M.  
International Journal of Sustainable and Green Energy, vol.6, no.4, pp.57-63, 2017 (Peer-Reviewed Journal)
- VII. **NUMERICAL INVESTIGATION OF INSULATION EFFECT ON SOLAR POND**  
Bozkurt I., Sogukpinar H., KARAKILÇIK M., Turkmenler H., Balta M.  
International Journal of Engineering & Applied Sciences (IJEAS), vol.7, no.3, pp.16-25, 2015 (Peer-Reviewed Journal)
- VIII. **Modeling Of A Solar Pond For Different Insulation Materials To Calculate Temperature Distribution**  
Bozkurt I., Sogukpinar H., KARAKILÇIK M.  
Journal of Multidisciplinary Engineering Science and Technology (JMEST), vol.2, no.6, pp.1378-1382, 2015 (Peer-Reviewed Journal)
- IX. **Energy efficiency assessment of integrated and nonintegrated solar ponds**  
Bozkurt I., KARAKILÇIK M., Dincer I.  
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.9, no.1, pp.45-51, 2014 (ESCI)
- X. **Vakum Tüplü Kollektörlerin Güneş Havuzu Performansı Üzerine Etkisi**  
KARAKILÇIK M., Atız A., Bozkurt İ.  
Adıyaman Üniversitesi Fen Bilimleri Dergisi, vol.4, no.1, pp.1-10, 2014 (Peer-Reviewed Journal)
- XI. **Magnezyum Klorür Tabakalı Güneş Havuzunun Enerji ve Ekserji Verimlerinin İncelenmesi**  
Deniz S., KARAKILÇIK M.  
Çukurova Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.29, no.1, pp.57-69, 2013 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Investigation of cushion gas/working gas ratios of underground salt caverns for hydrogen storage**  
San S., Karakılçık H., Karakılçık M., Erden M., Atız A.  
in: Emerging Trends in Energy Storage Systems and Industrial Applications, Prabhansu and Nayan Kumar, Editor, Academic Press , London, pp.67-78, 2022
- II. **Investigation of Cushion Gas / Working Gas Ratios of Underground Salt Caverns Hydrogen Gas Storage**  
San S., KARAKILÇIK M., KARAKILÇIK H., Erden M., ATIZ A.  
in: Emerging Trends in Energy Storage Systems and Industrial Applications, Prabhansu, Nayan Kumar, Editor, Elsevier, Oxford, pp.67-78, 2022
- III. **Performance Improving of Low Temperature Geothermal Sources with the Assist of a Solar Pond**  
KARAKILÇIK H., ATIZ A., Erden M., KARAKILÇIK M.  
in: Renewable Energy Based Solutions, Uyar Tanay Sıdkı, Javani Nader, Editor, Springer, Cham, pp.451-463, 2022

- IV. **Thermal Energy Storage Performance Analysis of Different Model Solar Ponds**  
KARAKILÇIK M., ATIZ A., BOZKURT İ., Erden M., Çiloğulları M., Saxena A.  
in: Renewable Energy Based Solutions, Uyar Tanay Sıdkı, Javani Nader, Editor, Springer, Cham, pp.465-487, 2022
- V. **Daily comparison energy and exergy analysis and thermal energy storage performance of solar collectors**  
ATIZ A., KARAKILÇIK H., SAXENA A., KARAKILÇIK M.  
in: Solar Water Heating: Fundamentals and Applications, Khalil Kassmi, Editor, Nova Science Publishers, Inc., Hauppauge NY, pp.59-83, 2021
- VI. **Hydrogen production and space heating using water heated by solar radiation**  
ATIZ A., KARAKILÇIK H., KARAKILÇIK M.  
in: Solar Water Heating: Fundamentals and Applications, Khalil Kassmi, Editor, Nova Science Publishers, Inc., Hauppauge NY, pp.177-202, 2021
- VII. **Thermal performance evaluation of a modified solar water heater integrated with parabolic trough concentrator**  
RASTOGI V., SAXENA A., SINGH A., KARAKILÇIK M.  
in: Solar Water Heating: Fundamentals and Applications, Khalil Kassmi, Editor, Nova Science Publishers, Inc., Hauppauge NY, pp.151-175, 2021
- VIII. **100 Renewable Energy Generation with Integrated Solar Energy Systems**  
ATIZ A., KARAKILÇIK M.  
in: Accelerating the Transition to a 100 Renewable Energy Era, Tanay Sıtkı Uyar, Editor, Springer Nature, Cham, pp.259-274, 2020
- IX. **Underground Large-Scale Hydrogen Storage**  
KARAKILÇIK H., KARAKILÇIK M.  
in: Accelerating the Transition to a 100 Renewable Energy Era, Tanay Sıtkı Uyar, Editor, Springer Nature, Cham, pp.375-392, 2020
- X. **Solar Food Processing and Cooking Methodologies**  
Saxena A., Goel V., KARAKILÇIK M.  
in: Applications of Solar Energy, Himanshu Tyagi Avinash Kumar Agarwal Prodyut R. Chakraborty Satvasheel Powar, Editor, Springer, pp.251-294, 2018
- XI. **Performance Analysis of a Solar Pond**  
BOZKURT İ., ATIZ A., KARAKILÇIK M., Dinçer I.  
in: Progress in Exergy, Energy, and the Environment, Dincer, Ibrahim Midilli Adnan Kucuk, Haydar, Editor, Springer International Publishing, pp.783-790, 2017
- XII. **Investigation of Heat Storage Performance of a Solar Pond with Potassium Chloride**  
KARAKILÇIK M., Bozkurt I., Balkaya I., Dincer I.  
in: Progress in Clean Energy, Volume II: Novel Systems and Applications, Dincer I.,Ozgur Colpan C.,Kizilkan O., Ezan MA., Editor, Springer-Verlag , Gewerbestrasse, pp.239-250, 2015
- XIII. **Performance Comparison of Sodium and Magnesium Chloride-Saturated Solar Ponds**  
Bozkurt I., Deniz S., KARAKILÇIK M., Dincer I.  
in: Progress in Clean Energy, Volume II Novel Systems and Applications, Dincer I.,Ozgur Colpan C.,Kizilkan O., Ezan MA., Editor, Springer-Verlag , Gewerbestrasse, pp.251-259, 2015
- XIV. **Investigation of Effect of Using Evacuated Tube Solar Collector on Solar Pond Performance**  
Atiz A., Bozkurt I., KARAKILÇIK M., Dincer I.  
in: Progress in Clean Energy, Volume II: Novel System and Applications, Dincer I.,Ozgur Colpan C.,Kizilkan O., Ezan MA., Editor, Springer-Verlag , Gewerbestrasse, pp.261-273, 2015
- XV. **Investigation of Turbidity Effect on Energy Transmission in a Solar Pond**  
Atiz A., Bozkurt I., KARAKILÇIK M., Dincer I.  
in: Progress in Exergy, Energy, and the Environment, Dincer I.,Midilli A.,Kucuk H., Editor, Springer-Verlag , Gewerbestrasse, pp.773-781, 2014
- XVI. **Investigation of Exergy Ratios of a Solar Pond**  
KARAKILÇIK M., Dincer I.

in: Progress in Exergy, Energy, and the Environment, Dincer I., Midilli A., Kucuk H., Editor, Springer-Verlag, Gewerbestrasse, pp.267-278, 2014

**XVII. Performance Assessment of a Small Solar Pond Stratified with Magnesium Chloride Water**

Deniz S., Bozkurt I., KARAKILCIK M., Dincer I.

in: Progress in Exergy, Energy, and the Environment, Dincer I., Midilli A., Kucuk H., Editor, Springer-Verlag, Gewerbestrasse, pp.243-250, 2014

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **INVESTIGATION OF ELECTRICITY, HYDROGEN AND CLEAN WATER PRODUCTION WITH RENEWABLE ENERGY SYSTEM INTEGRATED ONTO A SHIP: MOBILE ENERGY PRODUCTION ON A SHIP**  
Erden M., ATIZ A., KARAKILCIK H., KARAKILCIK M.  
23rd World Hydrogen Energy Conference (WHEC2022), İstanbul, Turkey, 26 - 30 June 2022, vol.1, pp.170-172
- II. **Hydrogen Production Flat Plate Solar Collector Integrated With PV-T**  
Atız A., Karakılçık M., Erden M.  
23rd World Hydrogen Energy Conference (WHEC-2022), İstanbul, Turkey, 26 - 30 June 2022, pp.177-179
- III. **A New Experimental Investigation On Hydrogen Production Of NaCl, KCl and CaCl<sub>2</sub> Solutions Through Chloralkali Reactor**  
Erden M., Karakılçık M.  
23rd World Hydrogen Energy Conference (WHEC-2022), İstanbul, Turkey, 26 - 30 June 2022, pp.177-179
- IV. **Investigation Of Electricity, Hydrogen And Clean Water Production With Renewable Energy System Integrated Onto A Ship**  
Erden M., Atız A., Karakılçık H., Karakılçık M.  
23rd World Hydrogen Energy Conference (WHEC-2022), İstanbul, Turkey, 26 - 30 June 2022, pp.170-172
- V. **Parabolic Trough Solar Collector Integrated With Solar Pond For Electricity And Hydrogen Production Based On Solar Energy**  
Damarseçkin S., Atız A., Karakılçık M.  
23rd World Hydrogen Energy Conference (WHEC-2022), İstanbul, Turkey, 26 - 30 June 2022, pp.73-76
- VI. **Su Soğutmalı Farklı Yüzey Alanlı Fotovoltaik Termal (PV-T) Güneş Kolektörlerinin Enerji Performansının İncelenmesi**  
Atız A., Karakılçık M., Soğukpınar H., Bozkurt İ.  
MEDITERRANEAN SUMMIT, 7th INTERNATIONAL APPLIED SCIENCES CONGRESS, Mersin, Turkey, 12 - 13 March 2022, pp.31-37
- VII. **Hidrojen Gazı ve Sıvı Sodyum Hidroksit Üretimi İçin Membran Hücre Prosesinin Sayısal İncelenmesi**  
Karakılçık M., Atız A.  
MEDITERRANEAN SUMMIT, 7th INTERNATIONAL APPLIED SCIENCES CONGRESS, Mersin, Turkey, 12 - 13 March 2022, pp.23-30
- VIII. **Silindirik Güneş Havuzunun Üç Boyutlu Modellenmesi**  
Soğukpınar H., Bozkurt İ., Atız A., Karakılçık M.  
MEDITERRANEAN SUMMIT, 7th INTERNATIONAL APPLIED SCIENCES CONGRESS, Mersin, Turkey, 12 - 13 March 2022, pp.38-45
- IX. **Investigation of hydrogen production performance at different mass flow rates by upgrading the temperatures of geothermal resource fluids at different medium temperatures with PTSCs in an integrated system**  
Karakılçık H., Atız A., Karakılçık M.  
6th International Hydrogen Technologies Congress (IHTEC-2022), İstanbul, Turkey, 23 January - 26 October 2022, pp.183-185
- X. **Investigation of Hydrogen and Heat Generation Performance of Water-Cooled Photovoltaics for Different Mass Flow Rates**  
Atız A., Karakılçık M., Erden M.

6th International Hydrogen Technologies Congress (IHTEC-2022), Çanakkale, Turkey, 23 - 26 January 2022, pp.154-156

- XI. **AA New Experimental Study On Comparison Of Hydrogen Production Performance Of NaCl and KCl Electrolytes Via Electrochemical Process Based Chloralkali Reactor**  
Erden M., Karakılçık M.  
6th International Hydrogen Technologies Congress (IHTEC-2022), Çanakkale, Turkey, 23 - 26 January 2022, pp.256-258
- XII. **Jeofizik Yöntemlerle Doğal Gaz Depolama Rezervuarlarının Belirlenmesi**  
KARAKILÇIK H., KARAKILÇIK M.  
Mathematics - Engineering- Science and Medical Studies, Euro Asia 5th. International Congress on Applied Sciences, Adana, Turkey, 15 - 17 November 2019, pp.420-427
- XIII. **Yeraltı Tuz Mağaralarının Hidrojen Depolama Potansiyelinin İncelenmesi**  
KARAKILÇIK M., KARAKILÇIK H.  
Mathematics - Engineering- Science and Medical Studies, Euro Asia 5th. International Congress on Applied Sciences, Adana, Turkey, 15 - 17 November 2019, pp.487-494
- XIV. **Parabolic Trough Solar Collectors With A Low-Temperature Geothermal Source For Electricity And Hydrogen Production**  
ATIZ A., KARAKILÇIK H., KARAKILÇIK M.  
World Energy Strategies Congress and Exhibition (WESCE'19), İstanbul, Turkey, 26 - 28 August 2019, pp.104-108
- XV. **Investigation of Hydrogen Storage Potential of Tuz Golu Underground Salt Caverns**  
San S., Karakılçık H., Karakılçık M.  
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- XVI. **Energy, Exergy And Economic Analyses Of A Heat Pump Integrated With Solar Pond For Domestic Heating**  
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- XVII. **INVESTIGATION OF PERFORMANCE OF SURFACE WATER COOLED PHOTOVOLTAIC PANEL**  
KARAKILÇIK M.  
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- XVIII. **Yeraltı Doğal Gaz Depolama Alanlarının Stratejik Öneminin İncelenmesi**  
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- XIX. **Power generation with integrated parabolic trough solar collectors based on solar energy and a low-grade temperature geothermal source**  
ATIZ A., KARAKILÇIK H., KARAKILÇIK M.  
4th International Mediterranean Science and Engineering Congress (IMSEC 2019), Alanya/Antalya, Turkey, 25 - 27 April 2019
- XX. **Daily performance of evacuated tube solar collectors for domestic heating applications**  
ATIZ A., KARAKILÇIK M.  
4th International Mediterranean Science and Engineering Congress (IMSEC 2019), Alanya/Antalya, Turkey, 25 - 27 April 2019, pp.741-748
- XXI. **Gölgeli ve Gölgesiz Alanlı Bir Güneş Havuzunun Sıcaklık Dağılımlarının Karşılaştırılması**  
KARAKILÇIK M.  
4th International Mediterranean Science and Engineering Congress (IMSEC 2019), Alanya/Antalya, Turkey, 25 - 27 April 2019, pp.1225-1234
- XXII. **Investigation Of Hydrogen Production Performance Of An Integrated System Based On Low-Temperature Geothermal Resources And Solar Energy**  
ATIZ A., KARAKILÇIK H., Erden M., KARAKILÇIK M.  
9th International Symposium on Eastern Mediterranean Geology, Antalya, Turkey, 7 - 11 May 2018, pp.99-106
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- XXIV. **Investigation of the performance of underground natural gas storage caverns in Turkey**  
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- XXV. **Investigation of underground energy storage reservoirs**  
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9th International Symposium on Eastern Mediterranean Geology (ISEMG2018), Antalya, Turkey, 7 - 11 May 2018, pp.110-114
- XXVI. **Investigation of Hydrogen Production Performance of an Integrated System Based On a Low Temperature Geothermal Resource and Solar Energy**  
Atiz A., KARAKILÇIK H., Erden M., KARAKILÇIK M.  
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- XXVII. **Investigation of the performance of a solar pond integrated with flat plate solar collectors to meet the heat demand of a room**  
ATIZ A., KARAKILÇIK M.  
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- XXVIII. **Investigation of hydrogen production performance of chlorine alkaline reactor integrated into a power generation system based on geothermal resources**  
KARAKILÇIK H., Erden M., Atiz A., KARAKILÇIK M.  
The 14th International Conference on Energy Storage (EnerSTOCK2018), Adana, Turkey, 25 - 28 April 2018, pp.1191-1199
- XXIX. **Investigation of Underground Large Scale Hydrogen Storage: Salt Dome**  
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- XXX. **The Effect on electricity and hydrogen production performance of the evacuated tube solar collectors with preheated inlet water by a solar pond**  
Atiz A., KARAKILÇIK H., Erden M., KARAKILÇIK M.  
14th International Conference on Energy Storage (EnerSTOCK2018), Adana, Turkey, 25 - 28 April 2018, pp.1200-1213
- XXXI. **Investigation of Hydrogen Production Performance of a Reactor Assisted by a Solar Pond by Photoelectrochemical Method**  
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2nd International Hydrogen Technologies Congress (IHTEC2017), Adana, Turkey, 15 - 18 March 2017, vol.1, pp.158-163
- XXXII. **Daily Performance Assessment of an Integrated Thermal System on Hydrogen Production**  
ATIZ A., Erden M., Çiloğulları M., KARAKILÇIK M.  
2nd International Hydrogen Technologies Congress (IHTEC2017), Adana, Turkey, 13 - 18 March 2017, vol.1, pp.111-116
- XXXIII. **The Effect of Bacteriologically Generated Carbohydrates on Electrocatalytic Oxidation and Hydrogen Efficiency**  
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2nd International Hydrogen Technologies Congress (IHTEC 2017), 15 - 18 March 2017, pp.218-222
- XXXIV. **Investigation of Hydrogen Production by using Silver Coated Platinum Electrode in Base Media**  
SANGÜN M. K., KARAKILÇIK M., Çetin R., KILINÇÇEKER G.  
2nd International Hydrogen Technologies Congress (IHTEC 2017), 15 - 18 March 2017, pp.213-217
- XXXV. **Assessment of a Geothermal Based Integrated System For Power and Hydrogen Production**  
KARAKILÇIK H., Erden M., KARAKILÇIK M.

- 2nd International Hydrogen Technologies Congress (IHTEC2017), Adana, Turkey, 13 - 15 March 2017, pp.229-233
- XXXVI. **Investigation of Magnetic Field Effect on Hydrogen Production Performance In Aqueous Methanol Electrolysis**  
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- XXXVII. **Tuz gradyentli güneş havuzunun termal enerji depolama performansının incelenmesi Investigation of thermal energy storage performance of a salt gradient solar pond**  
KARAKILÇIK M.  
1st International Mediterranean Science and Engineering Congress (IMSEC2016), Adana, Turkey, 26 - 28 October 2016, pp.1910-1918
- XXXVIII. **Günlük termal enerji kaybının yalıtımlı güneş havuzu performansı üzerine etkisi The effect on the insulated solar pond performance of the daily thermal energy loss**  
KARAKILÇIK M.  
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- XXXIX. **Yansıtıcı Yalıtımlı Kapaklı Model Bir Güneş Havuzunun Performansının Araştırılması**  
KARAKILÇIK M.  
10th International Clean Energy Symposium (UTES2016), 24 - 26 October 2016
- XL. **AN INVESTIGATION OF THE PERFORMANCE OF A MODEL SOLAR POND WITH THE REFLECTOR INSULATED COVER**  
KARAKILÇIK M.  
10th International Clean Energy Symposium, İstanbul, Turkey, 24 October - 26 September 2016, pp.547-559
- XLI. **Numerical Evaluation of the Performance Increase for a Solar Pond With Glazed and Unglazed**  
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- XLIII. **Potasyum Klorürlü Güneş Havuzunun Performansının İncelenmesi**  
Balkaya İ., Bozkurt İ., Atız A., Karakılçık M.  
9. Ulusal Temiz Enerji Sempozyumu (UTES13), Konya, Turkey, 25 - 28 December 2013, no.50, pp.402-407
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Koçer A. A., Öztürk M., Karakılçık M.  
9. Ulusal Temiz Enerji sempozyumu (UTES13), Konya, Turkey, 25 - 28 December 2013, no.37, pp.291-298
- XLV. **Sodyum Klorür ve Magnezyum Klorürlü Güneş Havuzlarında Sıcaklık ve Yoğunluk Dağılımlarının Karşılaştırılması**  
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9. Ulusal Temiz Enerji Sempozyumu (UTES13), Konya, Turkey, 25 - 28 December 2013, pp.408-413
- XLVI. **Effect on the Temperature Distributions of Heat Energy Extraction from Storage Zone (SZ) In an Insulated Experimental Small Solar Pond**  
KARAKILÇIK M., Kıymaç K.  
The Fourth International Thermal Energy Congress, İzmir, Turkey, 8 - 12 July 2001, pp.130-135

## Other Publications

- I. **Ç.Ü. FEF Ders Notu Genel Fizik III Laboratuvarı**  
UFUKTEPE Y., KARAKILÇIK M., YÜKSEL M., AKYOL M., AKÇA G., AKÇA S., GÜRSUL M., ŞEKER(ZAİMOĞLU) Z., ÇETİN G., YEĞEN S. B., et al.  
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- II. **Temel Elektronik Laboratuvarı Deneyleri Föyü**

## Supported Projects

- KARAKILÇIK M., SOĞUKPINAR H., KARAKILÇIK H., ATIZ A., Erden M., Project Supported by Higher Education Institutions, Taşıtlar için yerli ve milli hidrojenin üretim ve depolanma modellerinin araştırılması, 2022 - Continues
- KARAKILÇIK M., Erden M., KARAKILÇIK H., ATIZ A., DAMARSEÇKİN S., Project Supported by Higher Education Institutions, Elektrokimyasal yöntemle farklı tuzların hidrojen üretim performansının araştırılması, 2022 - Continues
- KARAKILÇIK M., Yalçın B., Project Supported by Higher Education Institutions, Fotovoltaik Panele Entegre Düşey Eksenli Spiral Model Rüzgr Türbin DESMORTden Oluşan Hibrit Sisteminin Elektrik Üretim Performansının İncelenmesi, 2021 - 2024
- KARAKILÇIK M., Taşkın Y. E., Project Supported by Higher Education Institutions, Fotovoltaik Panele Bütünleşik Dikey Eksenli Rüzgar Türbininin Enerji Performansının İncelenmesi, 2019 - 2022
- KARAKILÇIK M., Erden M., Project Supported by Higher Education Institutions, KLOR-ALKALİ YÖNTEM İLE FARKLI TUZLARIN HİDROJEN ÜRETİM PERFORMANSLARININ İNCELENMESİ, 2017 - 2022
- KARAKILÇIK M., Project Supported by Higher Education Institutions, ÇOKLU ÜRETİM UYGULAMALAR İÇİN YENİ GÜNEŞ HAVUZU VE PV/T TABANLI ENERJİ SİSTEMLERİNİN ARAŞTIRILMASI, 2013 - 2022
- KARAKILÇIK M., Project Supported by Higher Education Institutions, Fotovoltaik Termal Panellerin Performansının İncelenmesi, 2017 - 2020
- KARAKILÇIK M., Öksüz H. İ., Project Supported by Higher Education Institutions, Yüzey Su Soğutmalı Fotovoltaik Panelin Performansının Araştırılması, 2016 - 2020
- AKYÜZ A., KARAKILÇIK M., ŞENKAL O., AKSAKER N., YILDIZ B. Y., Project Supported by Higher Education Institutions, ÇÜ UZAYMERe mini Güneş Enerjisi Santrali Araştırma Uygulama ve Eğitimi Sisteminin Kurulması, 2018 - 2019
- AKYÜZ A., TOPAKSU M., KARAKILÇIK M., Project Supported by Higher Education Institutions, UZAYMER 'in altyapısını geliştirme, 2016 - 2018
- KARAKILÇIK M., Erden M., Çiloğulları M., KILINÇÇEKER G., KARAKILÇIK H., Project Supported by Higher Education Institutions, 2nd International Hydrogen Energy Technologies Congress (IHTEC2017), 2017 - 2017
- KARAKILÇIK M., Project Supported by Higher Education Institutions, YANSITICI YALITIMLI KAPAKLI MODEL BİR GÜNEŞ HAVUZU PERFORMANSININ ARAŞTIRILMASI, 2016 - 2017
- KARAKILÇIK M., Çiloğulları M., Project Supported by Higher Education Institutions, Güneş Havuzu ve Damıtma Sisteminden Oluşan Entegre Bir Sistemin Kirli ve Tuzlu Sudan Temiz Su ve Termal Enerji Üretim Performansının İncelenmesi, 2014 - 2017
- KARAKILÇIK M., Project Supported by Higher Education Institutions, Uluslararası Yayınları Özendirme Desteği (4 Adet), 2014 - 2016
- KARAKILÇIK M., Project Supported by Higher Education Institutions, Potasyum Klorür Tabakalı Güneş Havuzunun Performansının İncelenmesi, 2012 - 2016
- KARAKILÇIK M., Project Supported by Higher Education Institutions, Magnezyum Klorür Tabakalı Güneş Havuzunun Enerji ve Ekserji Verimlerinin İncelenmesi, 2012 - 2016
- AKYÜZ A., KARAKILÇIK M., YILDIZ B. Y., ALIŞ S., AKSAKER N., TOPAKSU M., SAYGAÇ T., ULUBAY SİDDİKİ A., Project Supported by Higher Education Institutions, Hakkı Ögelman Calistayi: Temel Bilimciler için Astronomi, 2015 - 2015
- KARAKILÇIK M., Project Supported by Higher Education Institutions, Hidrojen Enerjisi Üretmek İçin Güneş Kollektörleri ile Entegre Bir Güneş Havuzunun Performansının İncelenmesi, 2013 - 2015
- KARAKILÇIK M., Project Supported by Higher Education Institutions, Güneş Toplaçları ve Güneş Havuzundan Oluşan Entegre Bir Sistem Enerji ve Ekserji Veriminin Deneysel ve Teorik Olarak İncelenmesi ve Isıtma Uygulamaları, 2012 - 2015

## Activities in Scientific Journals

International Journal Of Hydrogen Energy, Special Issue Editor, 2017 - 2018

## **Memberships / Tasks in Scientific Organizations**

Hidrojen Teknolojileri Derneđi, Board Member, 2021 - Continues, Turkey

Hidrojen Teknolojileri Derneđi, Member, 2015 - Continues, Turkey

## **Scientific Refereeing**

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, January 2022

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, January 2019

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, October 2018

## **Metrics**

Publication: 109

Citation (WoS): 756

Citation (Scopus): 915

H-Index (WoS): 16

H-Index (Scopus): 18

## **Congress and Symposium Activities**

9th International Symposium on Eastern Mediterranean Geology, Attendee, Antalya, Turkey, 2018

14th International Conference on Energy Storage (EnerSTOCK2018), Attendee, Turkey, 2018

2nd International Hydrogen Technologies Congress (IHTEC2017), Attendee, Adana, Turkey, 2017

2016 IEEE International Conference on Power and Renewable Energy (ICPRE 2016), Attendee, Shanghai, China, 2016

10th International Clean Energy Symposium (UTES2016), Attendee, İstanbul, Turkey, 2016

1st International Mediterranean Science and Engineering Congress (IMSEC 2016), Attendee, Turkey, 2016

Hidrojen Enerjisi Teknolojileri, Attendee, İstanbul, Turkey, 2015

13th International Conference on Clean Energy (ICCE-2014), Attendee, İstanbul, Turkey, 2014

Sixth International Exergy, Energy and Environment Symposium (IEEES-6), Attendee, Rize, Turkey, 2013

2th International Green Energy Conference (IGEC-2), Attendee, Oshawa, Canada, 2006

2th International Exergy, Energy and Environment Symposium (IEEES-2), Attendee, Athens, Greece, 2005

1th International Exergy, Energy and Environment Symposium (IEEES-1), Attendee, İzmir, Turkey, 2003

4th International Thermal Energy Congress (ITEC 2001), Attendee, Turkey, 2001

## **Non Academic Experience**

University of Ontario Institute of Technology

University of Ontario Institute of Technology

University of Ontario Institute of Technology

Ç.Ü. Ceyhan Meslek Yüksek Okulu

Ç.Ü. Hatay Eğitim Yüksek Okulu

T.C. MEB. Bakırköy Bağcılar Endüstri Meslek Lisesi