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International Researcher IDs

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Publons / Web Of Science ResearcherID: J-4735-2019

ScopusID: 57193330306

Yoksis Researcher ID: 105261



Learning Knowledge

Doctorate
2013 - 2018

Erciyes University, Fen Bilimleri Enstitüsü, Enerji Sistemleri Mühendisliği, Turkey

Postgraduate
2010 - 2013

Erciyes University, Fen Bilimleri Enstitüsü, Makine Mühendisliği-Isıl Bilimler Ve Enerji Teknolojileri, Turkey

Undergraduate
2005 - 2010

Erciyes University, Mühendislik Fakültesi, Makine Mühendisliği, Turkey

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, PEM ELEKTROLİZÖRLERİN MANYETİK ALAN ALTINDAKİ ÇALIŞMA PERFORMANSININ İNCELENMESİ VE KATALİZÖR GELİŞTİRİLMESİ, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Enerji Sistemleri Mühendisliği, 2018

Postgraduate, Anot Destekli Silindirik Katı Oksit Yakıt Hücrelerinin Sayısal Modellenmesi ve Performansının Analizi, Erciyes Üniversitesi, Isıl Bilimler Ve Enerji Teknolojileri, Makine Mühendisliği, 2013

Academic Titles / Tasks

Associate Professor
2023 - Continues

Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği

Assistant Professor
2019 - 2023

Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği

Lecturer
2013 - 2019

Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği

Research Assistant
2017 - 2018

University of Birmingham, Engineering Faculty, Chemical Engineering-Centre Of
Doctoral Training-Fuel Cell Group

Research Assistant
2011 - 2013

Erciyes University, Mühendislik Fakültesi, Makina Mühendisliği

Research Assistant
2010 - 2013

Erciyes University, Mühendislik Fakültesi, Makina Mühendisliği

Supported Projects

1. KAYA M. F., HÜNER B., KAYATAŞ DEMİR N., KAHVECİ O., KISTI M., ÇAKIRASLAN E. N., EŞİYOK T., TEMİZYÜREK ARSLAN M., DURMAZ M. A., ÖZDOĞAN E., et al., Project Supported by Higher Education Institutions, Yedek Güç Desteği Olarak Düzlemsel ve Esnek Yapılı Zn-Hava Bataryalarının Geliştirilmesi, 2024 - Continues
2. KAYA M. F., KISTI M., ÖZDOĞAN E., EŞİYOK T., OMER A. A. A., DURMAZ M. A., ÖZKIRAR G., Project Supported by Higher Education Institutions, Elektroliz Sistemleri için Yüksek Yüzey Alanına Sahip Elektrot Geliştirilmesi, 2024 - Continues
3. KAYA M. F., OMER A. A. A., SELÇUKLU S. B., Project Supported by Higher Education Institutions, Polimer Elektrolit Membran (PEM) Elektrolizör Bileşenlerinin Makine Öğrenimi ile Optimizasyonu, 2024 - Continues
4. KAYA M. F., ŞENGÜN T. E., Project Supported by Higher Education Institutions, Çinko-Hava (Zn-Air) Bataryaları için Yenilikçi Katot Katalizörleri Geliştirilmesi, 2024 - Continues
5. KAYA M. F., ALTUN A., EŞİYOK T., CONAĞASI M., KAYATAŞ DEMİR N., DURMAZ M. A., ÇAKIRASLAN E. N., HÜNER B., ÖZDOĞAN E., ORHAN E. B., et al., Project Supported by Higher Education Institutions, Yenilenebilir Enerji Destekli Hidrojen Üretimi İçin Yüksek Performanslı Tam Otomatik PEM Elektrolizör Kontrol Sistemi Geliştirilmesi, 2024 - Continues
6. KAYA M. F., KISTI M., Project Supported by Higher Education Institutions, PEM Elektrolizörler için Yenilikçi Metalik Gaz Difüzyon Elektrotlarının Geliştirilmesi, 2023 - Continues
7. KAYA M. F., CONAĞASI M., Project Supported by Higher Education Institutions, DOĞRUDAN DENİZ SUYU ELEKTROLİZİNDE ANOT TARAFINDA KULLANILMAK ÜZERE METALİK KÖPÜK ELEKTROTLAR GELİŞTİRİLMESİ, 2023 - Continues
8. KAYA M. F., ÖZDOĞAN E., Project Supported by Higher Education Institutions, PEM Elektrolizörler İçin TiN ile Kaplanmış Anot Gaz Difüzyon Elektrotları Geliştirilmesi, 2023 - Continues
9. KAYA M. F., DURMAZ M. A., Project Supported by Higher Education Institutions, Elektronik Atıklardan Değerli Metallerin Ayırıştırılarak PEM Elektrolizörler için Katalizör Eldesi, 2023 - Continues
10. Kaya M. F., Yıldırım S., Korkmaz F., TÜBİTAK Project, TÜBİTAK 1505-ATIK WC-Co KOMPOZİT MALZEMELERİN GERİ DÖNÜŞÜMÜ İLE ÇELİK TELLERİN REDÜKSİYON İŞLEMİNDE KULLANILAN HADDENİN YERLİLEŞTİRİLEREK PROTOTİPİNİN GELİŞTİRİLMESİ, 2023 - 2025
11. KAYA M. F., YILDIRIM S., KORKMAZ F., Project Supported by Higher Education Institutions, Sanayi Atığı Haline

Gelmiş WC-Co Malzemelerden Polimer Elektrolit Membranlı PEM Elektrolizörler için IrO₂/WO₃ Kompozit Anot Katalizörü Geliştirilmesi, 2023 - 2024

12. Varol T., Kaya M. F., TUBITAK Project, TÜBİTAK 1001-Seçici Lazer Ergitme Yöntemiyle Proton Değişim Membranlı Su Elektrolizi Hücreleri İçin Geri Dönüşüm Temelli, Düşük Maliyetli Ve Yüksek Performanslı Sıvı/Gaz Difüzyon Plakaların Geliştirilmesi, 2022 - 2024
13. Pietrelli A., Kaya M. F., EU Supported Other Project, COST-European Cooperation in Science and Technology – COST Association, Resilience, Rehabilitation of Damaged Environment, 2020 - 2024
14. KAYA M. F., KISTI M., HÜNER B., UYSAL S., UZGÖREN İ. N., EŞİYOK T., ERELİ N. C., KAYATAŞ DEMİR N., SÜZEN Y. O., ÖZDOĞAN E., Project Supported by Higher Education Institutions, PEM Elektrolizörlerde Darbe Voltajı Kullanılmasının Hidrojen Üretim Performansına Olan Etkilerinin İncelenmesi, 2022 - 2023
15. KAYATAŞ DEMİR N., UZGÖREN İ. N., KAYA M. F., UYSAL S., HÜNER B., SÜZEN Y. O., KISTI M., ÖZDOĞAN E., Project Supported by Higher Education Institutions, Nikel ve Alaşımaları ile Kaplanan 3D Baskılı Elektrotların Hidrojen Oluşum Reaksiyonuna Olan Etkisinin İncelenmesi, 2021 - 2023
16. KAYA M. F., KORKMAZ F., Project Supported by Higher Education Institutions, TEL ÇEKME İŞLEMLERİNDE HADDEDEN GEÇİRİLEN TELİN TERMAL DAVRANIŞININ SAYISAL ANALİZİ, 2021 - 2023
17. Kaya M. F., Kayataş Demir N., Bayrakçeken Yurtcan A., TUBITAK Project, PEM Elektrolizörler için Yenilikçi Anot Gaz Difüzyon Tabakaları Gelistirilmesi, 2020 - 2023
18. Kahveci O., Ayyıldız E., Kaya M. F., Akkaya A., Erol H., Project Supported by Higher Education Institutions, Zirkonyum Katkılı Alüminyum Alaşımlardan Hidrojen Üretimi ve PEM Tipi Yakıt Piline Uygulanması, 2021 - 2022
19. KAYA M. F., KAYATAŞ DEMİR N., ATA E., ASLANOĞLU F., HAŞİMOĞLU A., SINDIRAÇ C., Project Supported by Higher Education Institutions, PEM Tipi Elektrolizör ile Yüksek Safılıkta Hidrojen ve Oksijen Üretimi, 2020 - 2022
20. KAYA M. F., BAŞ F., Project Supported by Higher Education Institutions, Mikrobiyal Elektroliz Hücresi ile Organik Atıklardan Hidrojen Elde Edilmesi ve Yenilikçi Elektrotlar Geliştirilmesi, 2020 - 2021
21. Kaya M. F., Uysal S., Project Supported by Higher Education Institutions, Pem Elektrolizörlerde Kullanılan Anot Gaz Difüzyon Elektrotlarında Akış Davranışının Deneysel Ve Sayısal Olarak İncelenmesi, 2020 - 2021
22. KAYA M. F., KORKMAZ F., YILDIRIM S., BENLİCE E., Project Supported by Higher Education Institutions, Sanayi Uygulamaları için WC/Co Kompozit Ürün Prototipi Geliştirilmesi, 2020 - 2021
23. Kahveci O., Erol H., Kaya M. F., Akkaya A., Project Supported by Higher Education Institutions, Alüminyumca Zengin Alaşımlarda Hidrojen Üretim Potansiyelinin Deneysel Olarak İncelenmesi, 2020 - 2021
24. KAYA M. F., UYSAL S., ÖZCAN R. U., HÜNER B., KAYATAŞ DEMİR N., Project Supported by Higher Education Institutions, Yüzen Fotovoltaik Sistemlerle Elektrokimyasal Hidrojen Üretim Potansiyelinin Araştırılması, 2019 - 2021
25. Kaya M. F., Kayataş Demir N., Project Supported by Higher Education Institutions, PEM Elektrolizörlerde Kullanılan Bipolar Plakaların Geometrik Optimizasyonu, 2019 - 2020
26. Kaya M. F., Bozkurt Ö., TUBITAK Project, TÜBİTAK TEYDEB-YENİ NESİL OPGW EK KUTUSU TASARIMI VE PROTOTİP İMALATI, 2019 - 2020
27. Kaya M. F., Project Supported by Other Official Institutions, Rejeneratif Yakma Sistemi İle Alüminyum Döküm Fırınında Enerji Verimliliği (Bilim Sanayi ve Teknoloji Bakanlığı), 2019 - 2020
28. Kaya M. F., Özlü Torun H., TUBITAK Project, TÜBİTAK 1512-Yakıt Pillerinde Kullanılan Interkonnektor ve Bipolar Plakaların Tasarım ve Üretimi, 2019 - 2020
29. KAYATAŞ DEMİR N., KAYA M. F., Project Supported by Higher Education Institutions, PEM ELEKTROLİZÖRLERİN MANYETİK ALAN ALTINDAKİ ÇALIŞMA PERFORMANSININ İNCELENMESİ VE KATALİZÖR GELİŞTİRİLMESİ, 2016 - 2019
30. KAYATAŞ DEMİR N., KAYA M. F., Project Supported by Higher Education Institutions, PEM Elektrolizörler İçin Katalizör Geliştirilmesi, 2016 - 2018
31. Kayataş Demir N., Industrial Thesis Project, SAN-TEZ-SİLİNDİRİK KATI OKSİT YAKIT PİLLERİNİN ÜRETİMİ KARAKTERİZASYONU VE PERFORMANSLARININ İNCELENMESİ, 2011 - 2014
32. KAYATAŞ DEMİR N., KAYA M. F., YAPICI H., GENÇ G., Project Supported by Higher Education Institutions, ANOT DESTEKLİ SİLİNDİRİK KATI OKSİT YAKIT HÜCRESİNİN SAYISAL MODELLENMESİ VE PERFORMANSININ ANALİZİ, 2012 - 2013

Awards

1. Kaya M. F., YÖK Üstün Başarı Ödülü (Milli Yenilik Ödülü), Yükseköğretim Kurulu (Yök), October 2024
2. Kıstı M., Özdoğan E., Kaya M. F., Öğrenci Kategorisi Birincilik Ödülü, Tokat Gaziosmanpaşa Üniversitesi, January 2023
3. KAYA M. F., Comunication Award, TÜBİTAK Electromobile Efficiency Challenge 2018, August 2018
4. KAYA M. F., Jury Special Award, TÜBİTAK Electromobile Efficiency Challenge 2016, August 2016
5. KAYA M. F., En İyi Tasarım Ödülü, TÜBİTAK Hidromobil, August 2008
6. KAYA M. F., First Thirteen Design Award, Shell Eco Marathon 2008-France, May 2008

Scholarships

TÜBİTAK 2214-A - Yurt Dışı Doktora Sırası Araştırma Bursu, TUBITAK, 2017 - 2018

TÜBİTAK 2211-C Öncelikli Alanlar Doktora Bursu, TUBITAK, 2016 - 2018

Sanayi Tezleri Bursu (San-Tez), Other Government Agencies, 2013 - 2015

Jury Memberships

Competition, Kendi Enerjini Kendin Üret Proje Yarışması, Aspilsan Enerji A.Ş., June, 2022

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Machine learning applications on proton exchange membrane water electrolyzers: A component-level overview**
Albadwi A., SELÇUKLU S. B., KAYA M. F.
International Journal of Hydrogen Energy, vol.94, pp.806-828, 2024 (SCI-Expanded)
2. **First pulsed control system design for enhanced hydrogen production performance in proton exchange membrane water electrolyzers**
Ereli N. C., KISTI M., Eşiyok T., Özdoğan E., Hüner B., KAYATAŞ DEMİR N., KAYA M. F.
Fuel, vol.371, 2024 (SCI-Expanded)
3. **Comparative Analysis of Stress and Temperature Distribution in Wire Drawing of Steel, Copper, and Aluminum**
Korkmaz F., KAYA M. F.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, 2024 (SCI-Expanded)
4. **Pt Thin Film-Coated 3D-Printed Polymer Anode Gas Diffusion Electrodes for PEM Water Electrolyzers**
Hüner B., KISTI M., Özdoğan E., KAYATAŞ DEMİR N., KAYA M. F.
Energy and Fuels, vol.38, no.14, pp.13228-13244, 2024 (SCI-Expanded)
5. **Comprehensive Analysis of Flow Dynamics and Pressure Variations in PEM Water Electrolyzers: Experimental and Computational Insights into Gas Diffusion Electrodes**
Uysal S., Kıstı M., Kaya M. F.
FUEL, no.371, pp.132092-132114, 2024 (SCI-Expanded)
6. **Fabrication and characterization of Nickel-coated 3D printed electrodes for enhanced oxygen evolution reaction in acidic media at various temperatures**
Hüner B., Kayataş Demir N., Kaya M. F.
FUEL, vol.366, no.131172, pp.1-16, 2024 (SCI-Expanded)
7. **Investigation of the AlB₂ intermetallic phases effect on Al-Zn-B alloys' electrochemical performance in Al-air battery anodes**

KAHVECİ O., KAYA M. F., EROL H.

APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.129, no.5, 2023 (SCI-Expanded)

8. **Effects of tank heating on hydrogen release from metal hydride system in VoltaFCEV Fuel Cell Electric Vehicle**
Özdoğan E., Hüner B., Süzen Y. O., Eşiyok T., Uzgören İ. N., Kıstı M., Uysal S., Selçuklu S. B., Kayataş Demir N., Kaya M. F.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.48, no.18, pp.6811-6823, 2023 (SCI-Expanded)
9. **Hydrogen Evolution Reaction Performance of Ni-Co-Coated Graphene-Based 3D Printed Electrodes**
Hüner B., Kayataş Demir N., Kaya M. F.
ACS Omega, vol.8, no.6, pp.5958-5974, 2023 (SCI-Expanded)
10. **Ni-Pt coating on graphene based 3D printed electrodes for hydrogen evolution reactions in alkaline media**
Hüner B., Kayataş Demir N., Kaya M. F.
FUEL, vol.331, 2023 (SCI-Expanded)
11. **An Overview of Various Additive Manufacturing Technologies and Materials for Electrochemical Energy Conversion Applications**
Hüner B., Klstl M., Uysal S., Uzgören İ. N., Özdoğan E., Süzen Y. O., Kayataş Demir N., Kaya M. F.
ACS OMEGA, vol.7, no.45, pp.40638-40658, 2022 (SCI-Expanded)
12. **Development of IrO₂-WO₃ Composite Catalysts from Waste WC-Co Wire Drawing Die for PEM Water Electrolyzers' Oxygen Evolution Reactions**
Uzgoren I. N., Huner B., Yildirim S., Eren O., Ozdogan E., Suzen Y. O., Kayataş Demir N., Kaya M. F.
ACS SUSTAINABLE CHEMISTRY & ENGINEERING, vol.10, pp.13100-13111, 2022 (SCI-Expanded)
13. **Development of Pt coated SS316 mesh gas diffusion electrodes for a PEM water electrolyzer anode**
Kıstı M., Uysal S., Kaya M. F.
Fuel, vol.324, 2022 (SCI-Expanded)
14. **3D printed anode electrodes for microbial electrolysis cells**
Bas F., KAYA M. F.
FUEL, vol.317, 2022 (SCI-Expanded)
15. **Hydrogen production from Al-Cu alloy using electric vehicle's waste DC motor coils**
Kahveci O., Kaya M. F.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.47, no.24, pp.12179-12188, 2022 (SCI-Expanded)
16. **Electrodeposition of NiCu bimetal on 3D printed electrodes for hydrogen evolution reactions in alkaline media**
Hüner B., Kayataş Demir N., Kaya M. F.
International Journal of Hydrogen Energy, vol.47, pp.12136-12146, 2022 (SCI-Expanded)
17. **Investigation of hydrogen production potential from different natural water sources in Turkey**
Uysal S., Kaya M. F., Kayataş Demir N., Huner B., Ozcan R. U., Erdem O. N., Yılmaz M.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.46, no.61, pp.31097-31107, 2021 (SCI-Expanded)
18. **Magnetically modified electrocatalysts for oxygen evolution reaction in proton exchange membrane (PEM) water electrolyzers**
KAYA M. F., Demir N., Rees N. V., El-Kharouf A.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.46, no.40, pp.20825-20834, 2021 (SCI-Expanded)
19. **Effect of low B addition on Al-Zn alloy's hydrogen production performance**
Kaya M. F., Kahveci O., Erol H., Akkaya A.
International Journal of Hydrogen Energy, vol.46, pp.15192-15202, 2021 (SCI-Expanded)
20. **Modelling of a solid oxide water electrolyzer and investigation of the cell performance on different working conditions**
KAYA M. F.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.36, no.4, pp.2109-2119, 2021 (SCI-Expanded)
21. **Improving PEM water electrolyser's performance by magnetic field application**

- KAYA M. F., Demir N., Rees N. V., El-Kharouf A.
APPLIED ENERGY, vol.264, 2020 (SCI-Expanded)
22. **Effect of pulse potential on alkaline water electrolysis performance**
Demir N., Kaya M. F., Albawabiji M. S.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, pp.17013-17020, 2018 (SCI-Expanded)
23. **Investigation of alkaline water electrolysis performance for different cost effective electrodes under magnetic field**
KAYA M. F., Demir N., ALBAWABIJI M. S., TAŞ M.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.28, pp.17583-17592, 2017 (SCI-Expanded)
24. **Numerical Investigation of PEM Water Electrolysis Performance for Different Oxygen Evolution Electrocatalysts**
KAYA M. F., Demir N.
FUEL CELLS, vol.17, no.1, pp.37-47, 2017 (SCI-Expanded)

Articles Published in Other Journals

1. **Last Mile Humanitarian Aid Delivery Model with Electric Vehicles to Disaster Areas**
Özmen M., Çelik R., Aydos Ü. N., Teber M., Aktaş D. C., Kaya M. F.
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.12, no.4, pp.1275-1288, 2023 (Peer-Reviewed Journal)
2. **Investigation the W-Ir Alloy Schottky Barrier Diodes Performance Using Finite Element Method**
Kahveci O., Kaya M. F.
Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.38, no.2, pp.357-370, 2022 (Peer-Reviewed Journal)
3. **Numerical Modeling and Simulation of Various Metal/n-Si Contacts**
Kahveci O., Kaya M. F.
Karadeniz Fen Bilimleri Dergisi, vol.12, no.1, pp.398-413, 2022 (Peer-Reviewed Journal)
4. **Today, Tomorrow, and the Future of Energy Storage Materials for Solar Energy**
Ali D., Kaya M. F., Şendoğdular L.
Engineer and Machinery, vol.62, no.702, pp.70-90, 2021 (Peer-Reviewed Journal)
5. **A CFD ASSISTED STUDY: INVESTIGATION OF THE TRANSFORMATION OF A RECUPERATIVE FURNACE TO REGENERATIVE FURNACE FOR INDUSTRIAL ALUMINIUM MELTING**
Bozkurt Ö., Kaya M. F.
Engineer and Machinery, vol.61, no.702, pp.1-12, 2021 (Peer-Reviewed Journal)
6. **Producing Hydrogen Gas from Organic Wastes Released by Agricultural Activities**
Baş F., Şen B., Kaya M. F.
Turkish Journal of Agriculture - Food Science and Technology, vol.8, no.54, pp.54-61, 2020 (Peer-Reviewed Journal)
7. **EFFECT OF CU COATING ON THE PHYSICAL AND ELECTROCHEMICAL PROPERTIES OF CONDUCTIVE PLA FILAMENT**
Kaya M. F., Kayataş Demir N., Hüner B., Özcan R. U.
International Journal of 3D Printing Technologies and Digital Industry, vol.3, no.2, pp.128-136, 2019 (Peer-Reviewed Journal)

Books & Book Chapters

1. **Sustainable Electrocatalyst for PEM Water Electrolyzers**
Kaya M. F., Kistü M., Hüner B., Özdoğan E., Conağası M., Durmaz M. A., Çakıraslan E. N., Eşiyok T., Süzen Y. O., Taşkın A., et al.
in: Challenges and Solutions in the Hydrogen Value Chain, Ankica Kovac, Editor, Springer Nature, Bern, pp.67-101, 2024

2. **Electrochemical Methods and Materials for Transition Metal-Based Electrocatalysts in Alkaline and Acidic Media**
Kaya M. F., Kisti M., Bulut H., Kayataş Demir N.
in: Transition Metal-Based Electrocatalysts: Applications in Green Hydrogen Production and Storage, Pankaj Pathak, Lakhveer Singh, Editor, American Chemical Society see ACS Publications, Washington, pp.219-248, 2023
3. **Fuel-cell (hydrogen) electric hybrid vehicles**
El-Kharouf A., Kaya M. F.
in: Alternative Fuels and Advanced Vehicle Technologies for Improved Environmental Performance, Richard Folkson, Steve Sapsford, Editor, Elsevier Science, Oxford/Amsterdam, Cambridge, pp.1-31, 2022

Refereed Congress / Symposium Publications in Proceedings

1. **Karbon Fiber Takviyeli Alüminyum İletken (ACFR) Çekirdeğinin Boyutsal Yapısının Sonlu Elemanlar Yöntemi ile Belirlenmesi**
Korkmaz F., Kaya M. F., Çetinkaya M. B., Gürek M.
12. Uluslararası Zeugma Bilimsel Araştırmalar Kongresi, Gaziantep, Turkey, 2 - 04 October 2024, pp.369-378
2. **Development of a High-Performance Fully Automatic PEM Water Electrolyser Control System for Solar Energy-Assisted Hydrogen Production**
Çakıraslan E., Özdoğan E., Orhan B., Altun A., Kisti M., Kaya M. F.
8th International Hydrogen Technologies Congress (IHTEC-2023), Diyarbakır, Turkey, 12 - 16 May 2024, pp.1
3. **Enhancing Performance of Oxygen Evolution Reactions via Pd Coated 3D Printed SS316L Gas Diffusion Layers for PEM Water Electrolyzer Anode**
KISTI M., ÖZDOĞAN E., KAYA M. F.
10th International Conference on Materials Science and Nanotechnology For Next Generation (MSNG-2023), Kayseri, Turkey, 27 - 29 September 2023
4. **Development of Ag/C Supported HER Electrocatalysis for PEM Water Electrolyzers Using Electronic Waste Material**
DURMAZ M. A., KISTI M., KAYA M. F.
10th International Conference on Materials Science and Nanotechnology For Next Generation (MSNG-2023), Kayseri, Turkey, 27 - 29 September 2023
5. **A Control System Design for PEM Water Electrolyzer's Water and Heat Managements**
ÇAKIRASLAN E. N., ÖZDOĞAN E., KISTI M., HÜNER B., KAYATAŞ DEMİR N., KAYA M. F.
7th International Hydrogen Technologies Congress (IHTEC 2023), 10 - 13 May 2023
6. **Development of Hydrogen Evolution Reaction Catalyst for PEM Water Electrolyzers from Electronic Waste Materials**
DURMAZ M. A., KISTI M., KAYA M. F.
7th International Hydrogen Technologies Congress (IHTEC 2023), Elazığ, Turkey, 10 - 12 May 2023
7. **Çelik Tel Çekme İşleminde Tel Üzerinde Meydana Gelen Gerilme Ve Sıcaklık Değişimlerinin Sayısal Olarak İncelenmesi**
Korkmaz F., Kaya M. F.
2. Uluslararası Malzeme Mühendisliği ve İleri İmalat Teknolojileri Kongresi (IMEAMTC'23), İstanbul, Turkey, 12 - 13 January 2023, pp.1-2
8. **The Effect of Boron Addition to The Al-B Alloy Produced by Casting Method on Hydrogen Production**
Erol H., Kahveci O., Kaya M. F.
International Conference on Energy, Environment and Storage of Energy (ICEESEN 2022), Kayseri, Turkey, 1 - 03 September 2022, pp.1
9. **THIN FILM COATING OF PLATINUM ON 3D PRINTED POLYMERIC ANODE ELECTRODES FOR PEM WATER ELECTROLYZERS**
Hüner B., Kayataş Demir N., Kaya M. F.
23rd World Hydrogen Energy Conference, İstanbul, Turkey, 26 - 30 June 2022, pp.57

10. **DEVELOPMENT OF Pt-Cr COATED SS316L ELECTRODES FOR PEM WATER ELECTROLYZERS BY SELECTIVE LASER MELTING METHOD**
Kıstı M., Özdoğan E., Uysal S., Kaya M. F.
23rd World Hydrogen Energy Conference, İstanbul, Turkey, 26 - 30 June 2022, pp.60
11. **3D PRINTED Co-Cr BASED ANODE GAS DIFFUSION ELECTRODES BY SELECTIVE LASER MELTING METHOD**
Kaya M. F.
2nd International Symposium of Scientific Research and Innovative Studies (ISSRIS'22), Balıkesir, Turkey, 04 March 2022, vol.1, pp.1-12
12. **Economic, Energy and Environmental Assessments of Transition to Hydrogen-Powered Buses**
Dinç M. N., Selçuklu S. B., Kıstı M., Kaya M. F.
The 5th International Conference on Alternative Fuels , Energy and Environment : Futures and Challenges (ICAFEE 2021), Kayseri, Turkey, 15 - 18 October 2021, pp.1-12
13. **Preparation of Ni/C Catalyst for Hydrogen Evolution Reactions (HER) in Alkaline Water Electrolyzers**
Uzgören İ. N., Kaya M. F.
The 5th International Conference on Alternative Fuels , Energy and Environment : Futures and Challenges (ICAFEE 2021), Kayseri, Turkey, 15 - 18 October 2021, pp.1-12
14. **Development of Cost-Effective Anode Gas Diffusion Layers for PEM Water Electrolyzers**
Kıstı M., Uysal S., Kaya M. F.
The 5th International Conference on Alternative Fuels , Energy and Environment : Futures and Challenges (ICAFEE 2021), Kayseri, Turkey, 15 - 18 October 2021, pp.1-12
15. **Evaluation of Hydrogen Evolution Reactions for Ni-Pt Coated 3D Printed Electrodes in an Alkaline Medium**
Hüner B., Kayataş Demir N., Kaya M. F.
The 5th International Conference on Alternative Fuels , Energy and Environment : Futures and Challenges (ICAFEE 2021), Kayseri, Turkey, 15 - 18 October 2021, pp.1-12
16. **A Unique Heat Exchanger Design for Most Efficient Hydrogen Release from Metal Hydride Hydrogen Storage Tank for VoltaCARH2 Hydrogen Electric Vehicle**
Özdoğan E., Süzen Y. O., Uysal S., Kıstı M., Uzgören İ. N., Hüner B., Selçuklu S. B., Kayataş Demir N., Kaya M. F.
The 5th International Conference on Alternative Fuels , Energy and Environment : Futures and Challenges (ICAFEE 2021), Kayseri, Turkey, 15 - 18 October 2021, pp.1-12
17. **Modeling of Hydrogen and Electric Powered Vehicle Filling Stations Using a Floating Photovoltaic System**
Bulduk S., Kaya M. F.
5th International Hydrogen Technologies Congress (IHTEC 2021), Niğde, Turkey, 26 - 28 May 2021, pp.1-12
18. **Investigation of Ni-MnxOy Coated SS316 Stainless Steel Mesh as a Gas Diffusion Layer Material for PEM Water Electrolyzer**
Kıstı M., Kaya M. F.
5th International Hydrogen Technologies Congress (IHTEC 2021), Niğde, Turkey, 26 - 28 May 2021, pp.1-12
19. **Evaluation of Hydrogen Evolution Reaction Performance of Ni-Co Coated 3D Printed Electrodes Prepared by Electrochemical Deposition**
Hüner B., Kayataş Demir N., Kaya M. F.
5th International Hydrogen Technologies Congress (IHTEC 2021), Niğde, Turkey, 26 - 28 May 2021, pp.1-12
20. **Automatic PEM Water Electrolyzer Control System (PEMECS) Design for Cell Testing**
Özdoğan E., Tuncay E., Uzgören İ. N., Kıstı M., Uysal S., Hüner B., Kayataş Demir N., Kaya M. F.
5th International Hydrogen Technologies Congress (IHTEC 2021), Niğde, Turkey, 26 - 28 May 2021, pp.1-12
21. **Energy and Environmental Assessment of Transition to Hydrogen Vehicles**
Dinç M. N., Kıstı M., Selçuklu S. B., Kaya M. F.
5th International Hydrogen Technologies Congress (IHTEC 2021), Niğde, Turkey, 26 - 28 May 2021, pp.1-12
22. **A WASTE RECOVERY STUDY: HYDROGEN PRODUCTION FROM ELECTRICAL VEHICLE'S WASTE DC**

MOTOR BY AL-CU ALLOYING

Kaya M. F., Kahveci O.

International Conference on Energy, Environment and Storage of Energy (ICEESEN 2020) , Kayseri, Turkey, 19 - 21 November 2020, pp.1-12

23. **HYDROGEN PRODUCTION FROM DAIRY ORGANIC WASTE BY MICROBIAL ELECTROLYSIS CELLS (MEC)**
Baş F., Kaya M. F.
International Conference on Energy, Environment and Storage of Energy (ICEESEN 2020), Kayseri, Turkey, 19 - 21 November 2020, pp.1-12
24. **A CHEAPER HYDROGEN PRODUCTION STUDY: ACCELERATION OF THE HYDROLYSIS OF NABH₄ BY DIFFERENT ZNCI₂ ADDITION**
Uysal S., Kaya M. F.
International Conference on Energy, Environment and Storage of Energy (ICEESEN 2020), Kayseri, Turkey, 19 - 21 November 2020, pp.1-16
25. **INVESTIGATION OF THE ELECTROCHEMICAL PROPERTIES OF THE BINARY COATING ON 3D PRINTED ELECTRODES**
Hüner B., Kayataş Demir N., Kaya M. F.
International Conference on Energy, Environment and Storage of Energy (ICEESEN 2020), Kayseri, Turkey, 19 - 21 November 2020, pp.1-12
26. **Tarımsal ve Hayvansal Faaliyetlerden Kaynaklanan Organik Atıklardan Hidrojen Gazı Elde Edilmesi**
Baş F., Şen B., Kaya M. F.
5. Uluslararası Anadolu Tarım, Gıda, Çevre ve Biyoloji Kongresi, 1 - 04 October 2020, vol.1, no.1, pp.1-12
27. **Modelling of Lorentz Force Effects on PEM Water Electrolysis Performance**
KAYA M. F., KAYATAŞ DEMİR N., El-Kharouf A.
Fuel Cell & Hydrogen Technical Conference 2018-FCH2018, Birmingham, United Kingdom, 13 - 14 March 2018, vol.1, no.1, pp.12-14
28. **Numerical Modeling of Magnetohydrodynamic Effect of Lorentz Force to the Water Electrolysis Performance**
KAYATAŞ DEMİR N., KAYA M. F.
International Conference on Advances and Innovations in Engineering (ICAIE), Elazığ, Turkey, 10 - 12 May 2017, pp.873-874
29. **Numerical Investigation of Heat Transfer Performance for Pumice Block Materials Using Silica Aerogel Insulation Materials**
KAYA M. F., TAŞKIN A., KAYATAŞ DEMİR N.
International Conference on Advances and Innovations in Engineering (ICAIE), Elazığ, Turkey, 10 - 12 May 2017, pp.187
30. **Effect of Constant Magnetic Field to the Hydrogen Evolution Reactions Under Acidic Medium**
KAYA M. F., KAYATAŞ DEMİR N.
International Conference on Advances and Innovations in Engineering (ICAIE), Elazığ, Turkey, 10 - 12 May 2017, pp.871-872
31. **Noble Metal-Free Oxides for the Oxygen Evolution Reactions by Using Adam'xxs Fusion Method**
KAYATAŞ DEMİR N., KAYA M. F., ÇÖĞENLİ M. S.
International Hydrogen Technologies Congress (IHTEC-2017), Adana, Turkey, 15 - 18 March 2017
32. **Noble metal-free Oxides for the Oxygen Evolution Reactions by Using Adam's Fusion Method**
KAYATAŞ DEMİR N., KAYA M. F., ÇÖĞENLİ M. S.
The Second International Hydrogen Technologies Congress (IHTEC-2017), Adana, Turkey, 15 - 18 March 2017, vol.1, no.1, pp.83
33. **Synthesis and Characterization of IrxRu1-xO₂ Catalysts for the Oxygen Evolution Reactions**
KAYA M. F., KAYATAŞ DEMİR N., BAYRAKÇEKEN YURTCAN A.
The Second International Hydrogen Technologies Congress (IHTEC-2017), Adana, Turkey, 15 - 18 March 2017, vol.1, no.1, pp.50
34. **Cost Effective Electrodes For Alkaline Water Electrolysis And Performance Analysis Under Magnetic**

Field

KAYA M. F., KAYATAŞ DEMİR N., TAŞ M.

Fourth European Conference on Renewable Energy Systems (ECRES2016), İstanbul, Turkey, 28 - 31 August 2016, vol.1, no.1, pp.1-8

35. EXPERIMENTAL AND NUMERICAL INVESTIGATION OF HEAT TRANSFER CHARACTERISTICS OF SILICA AEROGEL AND OTHER INSULATION MATERIALS

KAYATAŞ DEMİR N., KAYA M. F., YILDIRIM E.

Uluslararası Malzeme Bilimi ve Teknolojisi Konferansı Kapadokya, Nevşehir, Turkey, 6 - 08 April 2016, pp.47

36. Anot Destekli Tek Hücreli Katı Oksit Yakıt Hücresinin Sayısal Modellenmesi

KAYATAŞ DEMİR N., KAYA M. F., YAPICI H., GENÇ G.

19. Ulusal Isı Bilimi ve Tekniği Kongresi, Samsun, Turkey, 9 - 12 September 2013, pp.1-8

Courses

İleri Enerji Malzemeleri, Postgraduate, 2020 - 2021

İleri Elektrokimyasal Enerji Dönüşüm Sistemleri, Postgraduate, 2020 - 2021

Bilgisayar Destekli Teknik Resim-2, Undergraduate, 2018 - 2019

Bilgisayar Destekli Teknik Resim-1, Undergraduate, 2018 - 2019

YAKIT PİLLERİ, Undergraduate, 2018 - 2019

Tasarım ve modelleme Teknikleri, Undergraduate, 2018 - 2019

Malzeme Bilgisi, Undergraduate, 2014 - 2015

Enerji Ekonomisi ve Politikaları, Undergraduate, 2013 - 2014

Mühendislik Fiziği-2, Undergraduate, 2013 - 2014

Ölçme Tekniği, Undergraduate, 2013 - 2014

Elektromekanik Enerji Dönüşümü, Undergraduate, 2013 - 2014

Advising Theses

Kaya M. F., Pem elektrolizörlerdeki oksijen oluşum reaksiyonlarında kullanılmak üzere endüstriyel kesici takım atıklarından kompozit anot katalizörü geliştirilmesi, Postgraduate, İ.NUR(Student), 2023

Kaya M. F., Tel çekme işlemlerinde haddeden geçirilen telin termal davranışının sayısal analizi, Postgraduate, F.KORKMAZ(Student), 2023

Kaya M. F., PEM elektrolizörlerde kullanılan anot gaz difüzyon elektrotlarında akış davranışının deneysel ve sayısal olarak incelenmesi, Postgraduate, S.UYSAL(Student), 2022

Kaya M. F., Mikrobiyal elektroliz hücresi ile organik atıklardan hidrojen elde edilmesi ve yenilikçi elektrotlar geliştirilmesi, Postgraduate, F.BAŞ(Student), 2020

Activities in Scientific Journals

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, Assistant Editor/Section Editor, 2024 - Continues

Frontiers in Materials, Article Editor, 2022 - Continues

Memberships / Tasks in Scientific Organizations

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Member, 2021 - Continues, United States Of America

Türk Isı Bilimi ve Tekniği Derneği (TIBTD), Member, 2019 - Continues

The Electrochemical Society (ECS), Member, 2018 - Continues

Hidrojen Teknolojileri Derneği, Member, 2017 - Continues

Makine Mühendisleri Odası, Member, 2010 - Continues

Scientific Refereeing

CARBON, National Scientific Refreed Journal, November 2024

Energy Conversion and Management: X, SCI Journal, September 2023

ADVANCED FUNCTIONAL MATERIALS, National Scientific Refreed Journal, June 2023

SCIENTIFIC REPORTS, SCI Journal, May 2023

TUBITAK Project, 1002 - Quick Support Program, TÜBİTAK, Turkey, June 2022

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, TÜBİTAK, Turkey, June 2022

SENSORS AND ACTUATORS B-CHEMICAL, SCI Journal, March 2022

APPLIED ENERGY, SCI Journal, March 2022

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, TÜBİTAK, Turkey, November 2021

ELECTROCHIMICA ACTA, SCI Journal, July 2019

JOURNAL OF POWER SOURCES, SCI Journal, December 2018

ENERGY, SCI Journal, November 2018

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, June 2016

Scientific Consultations

Aspilsan Enerji A.Ş., Scientific Consultancy, Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği, Turkey, 2020 - Continues

Hasçelik Kablo A.Ş., Scientific Consultancy, Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği, Turkey, 2019 - Continues

HVS Enerji, Scientific Consultancy, Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği, Turkey, 2019 - 2021

Metrics

Publication: 76

Citation (WoS): 363

Citation (Scopus): 334

H-Index (WoS): 12

H-Index (Scopus): 12

Congress and Symposium Activities

IV.National Electrochemistry Summer School(Electrocatalyst and Fotocatalyst)-Bursiyer, Attendee, Manisa, Turkey, 2016

International Summer School on Materials for Energy Storage and Conversion-mESCIS-COST Actions Scholarship, Attendee, Ankara, Turkey, 2015

V.International Renewable Energy Sources (RES) Winter School-Bursiyer, Attendee, Afyon, Turkey, 2015

National Thermal Science and Technology Congress, Attendee, Samsun, Turkey, 2013

International Solar Energy for World Peace-Türkiye Teknoloji Geliştirme Vakfı(TTGV) Bursiyeri, Attendee, İstanbul, Turkey, 2013

Exergy and Applications Summer School, Attendee, Bolu, Turkey, 2012

PEM Fuel Cells Summer School (ICHET and JRC co-organized), Attendee, İzmir, Turkey, 2010
TUMTMK XVI. International Mechanic Congress, Attendee, Kayseri, Turkey, 2008
International NanoCOF SOFC Meeting, Attendee, Niğde, Turkey, 2008

Invited Talks

Hidrojen Enerjisi ve Yakıt Pilleri, Seminar, TÜBİTAK Bilim Söyleşileri, Turkey, April 2022
Spring Training on Hydrogen and Fuel Cells (ST2022)- Fundamentals of PEM Water Electrolyzers, Seminar, University of Zagreb, Faculty of Mechanical Eng. and Naval Architecture, Croatia, March 2022

Research Areas

Chemical Engineering and Technology, Chemical Technologies, Electrochemical Processes, Defense Technology, Mechanical Engineering, Energy, Alternative Energy Resources, Hydrogen Technologies and Fuel Cells, Construction and Manufacturing, Computer Aided Design and Manufacturing, Material, Mechanical, Finite Element Methods, Thermodynamics, Heat and Mass Transfer, Aeronautical and Space Engineering, Metallurgical and Materials Engineering, Material science and engineering, Ceramic Materials, Aeronautical Engineering, Structural Technologies, Design Techniques, Engineering and Technology

Entrepreneurship Activities

Anonymous, Bataryasan A.Ş., 01 November 2020, Co-Founder

Non Academic Experience

Company, BATARYASAN Enerji San. ve Tic. A.Ş., İdari
University of Birmingham
Simfer A.Ş.
Merkezçelik A.Ş.