

Assoc. Prof. Berker Fıçıcılar

Personal Information

Office Phone: [+90 362 312 1919](tel:+903623121919) Extension: 1334

Email: berker.ficilar@omu.edu.tr

Other Email: berkerf@gmail.com

Web: <https://avesis.omu.edu.tr/berker.ficilar>

Address: Ondokuz Mayıs Üniversitesi Mühendislik Fakültesi Kimya Mühendisliği Bölümü 1. Kat 136-B Kurupelit Kampüsü Atakum SAMSUN

International Researcher IDs

ScholarID: iXucFtsAAAAJ

ORCID: 0000-0003-3882-1691

Publons / Web Of Science ResearcherID: D-1354-2010

ScopusID: 13608862600

Yoksis Researcher ID: 160489

Biography

He graduated from the Department of Chemical Engineering at the Middle East Technical University (METU) in 2001. In 2004, he successfully completed his master's thesis at the METU Institute of Natural and Applied Sciences, titled "Carbon dioxide removal in steam reforming: Adsorption of CO₂ onto hydrotalcite and activated soda." In 2010, he pursued his research on mathematical modeling and simulation of PEM fuel cells at the Department of Chemical and Petroleum Engineering at the University of Kansas under the supervision of Prof. Dr. Trung Van Nguyen. In 2011, he successfully completed his doctoral thesis at the METU Institute of Natural and Applied Sciences with the research titled "Electrocatalyst development and modeling of nonisothermal two-phase flow for PEM fuel cells." He obtained the title of Assistant Professor in 2015 and was appointed as an Associate Professor in March 2022. Currently, he continues his academic career as an Associate Professor in the Department of Chemical Engineering at Ondokuz Mayıs University, specializing in Thermodynamics and Energy Technology.

At the undergraduate level, he teaches Mathematical Modeling in Chemical Engineering, Chemical Reaction Engineering, Thermodynamics, and Linear Algebra Applications in Engineering in the field of Chemical Engineering. At the graduate level, he offers courses in Advanced Thermodynamics, Transport Phenomena, Advanced Reaction Engineering, Fuel Cells, and Advanced Numerical Methods for Engineering. His research primarily focuses on redox flow batteries (H₂/Br, V/V, PSB, V/H₂ Fe/Cr, etc.). Additionally, he conducts research on hydrogen production, PEM fuel cells, NaS batteries, and the modeling of electrochemical systems. In recent years, he has been conducting research on the design and development of PEM electrolyzers.

Education Information

Doctorate, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), Turkey 2005 - 2011

Postgraduate, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli), Turkey 2001 - 2004

Undergraduate, Middle East Technical University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Turkey 1995 - 2001

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Electrocatalyst development and modeling of nonisothermal two-phase flow for PEM fuel cells, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), 2011

Postgraduate, Carbon dioxide removal in steam reforming: Adsorption of CO₂ onto hydrotalcite and activated soda, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli), 2004

Research Areas

Simulation and Modelling, Electrochemical Processes, Catalysis and Catalytic Processes, Hydrogen Technologies and Fuel Cells, Electromagnetic Methods, Sensors, Electrochemistry

Academic Titles / Tasks

Associate Professor, Ondokuz Mayıs University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2023 - Continues

Assistant Professor, Ondokuz Mayıs University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2015 - 2023

Research Assistant, Ondokuz Mayıs University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2012 - 2015

Research Assistant, Ondokuz Mayıs University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2011 - 2011

Research Assistant, Middle East Technical University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2005 - 2011

Academic and Administrative Experience

Ondokuz Mayıs University, 2016 - Continues

Ondokuz Mayıs University, 2015 - 2022

Courses

KMB-634 YAKIT HÜCRELERİ, Postgraduate, 2022 - 2023, 2019 - 2020, 2016 - 2017, 2015 - 2016

KMB-340 KİMYA MÜHENDİSLİĞİNDE MATEMATİKSEL MODELLEME, Undergraduate, 2022 - 2023

KMB-467 MÜHENDİSLİKTE LİNEER CEBİR UYGULAMALARI, Undergraduate, 2022 - 2023

KMB-314 KİMYA MÜHENDİSLİĞİ TERMODİNAMİĞİ, Undergraduate, 2021 - 2022, 2020 - 2021, 2018 - 2019, 2014 - 2015

KMB-409 KİMYA MÜHENDİSLİĞİNDE MATEMATİKSEL MODELLEME, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

KMB-601 TAŞINIM OLAYLARI, Postgraduate, 2021 - 2022, 2015 - 2016

KMB-321 ELEKTROKİMYA MÜHENDİSLİĞİNİN ESASLARI, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2016 - 2017

KMB-332 KİMYASAL REAKSİYON MÜHENDİSLİĞİ, Undergraduate, 2021 - 2022

KMB-204 AKIŞKANLAR MEKANİĞİ, Undergraduate, 2020 - 2021, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

KMB-607 MÜHENDİSLİK İÇİN İLERİ SAYISAL YÖNTEMLER, Postgraduate, 2020 - 2021, 2019 - 2020

KMB-238 MÜHENDİSLİKTE LİNEER CEBİR UYGULAMALARI, Undergraduate, 2020 - 2021, 2017 - 2018

KMB-202 MÜHENDİSLİKTE SAYISAL METODLAR, Undergraduate, 2019 - 2020, 2014 - 2015

KMB-310 KİMYA MÜHENDİSLİĞİ LABORATUVARI II, Undergraduate, 2019 - 2020, 2018 - 2019, 2014 - 2015

KMB-242 YENİ VE YENİLENEBİLİR ENERJİ KAYNAKLARI, Undergraduate, 2019 - 2020

KMB-602 İLERİ REAKSİYON MÜHENDİSLİĞİ, Postgraduate, 2018 - 2019, 2017 - 2018

KMB-323 TAŞINIM OLAYLARI, Undergraduate, 2018 - 2019, 2017 - 2018

KMB-403 KİMYA MÜHENDİSLİĞİNDE TASARIM I, Undergraduate, 2017 - 2018, 2016 - 2017
KMB-404 KİMYA MÜHENDİSLİĞİNDE TASARIM II, Undergraduate, 2017 - 2018, 2016 - 2017
KMB-603 İLERİ TERMODİNAMİK, Postgraduate, 2017 - 2018
KMB-405 KİMYA MÜHENDİSLİĞİ LABORATUVARI III, Undergraduate, 2016 - 2017, 2015 - 2016
GMB-210 ISI VE KÜTLE TRANSFERİ (I. VE II. ÖĞRETİM), Undergraduate, 2016 - 2017, 2015 - 2016
KMB-311 TERMODİNAMİK (YAZ OKULU), Undergraduate, 2015 - 2016, 2014 - 2015
KMB-233 ENERJİ TEKNOLOJİLERİ, Undergraduate, 2015 - 2016
KMB-311 TERMODİNAMİK, Undergraduate, 2015 - 2016
KMB-204 AKIŞKANLAR MEKANIĞI (YAZ OKULU), Undergraduate, 2015 - 2016
KMB-226 MESLEKİ İNGİLİZCE, Undergraduate, 2014 - 2015

Advising Theses

Fıçıcılar B., Karbondioksitin elektrolizi ile karbon nanofiber üretiminin tasarımı ve optimizasyonu, Postgraduate, N.ÖZER(Student), 2022

Berker F., Characterization and diagnostic techniques for optimization of water management of proton exchange membrane fuel cell, Doctorate, S.GÖKÇE(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Development of low-cost nitrogen- and boron-doped carbon black cathode catalysts for the improvement of hydrogen-bromine flow battery cathode kinetics**
Duman B., Fıçıcılar B.
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.53, no.7, pp.1421-1431, 2023 (SCI-Expanded)
- II. **An alternative HCMS carbon catalyst in bromine reduction reaction for hydrogen-bromine flow batteries**
KARAEYVAZ M. C., Duman B., Fıçıcılar B.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.46, no.57, pp.29512-29522, 2021 (SCI-Expanded)
- III. **Improved PEM fuel cell performance with hydrophobic catalyst layers**
Avcioglu G. S., Fıçıcılar B., EROĞLU İ.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.40, pp.18632-18641, 2018 (SCI-Expanded)
- IV. **Effective factors improving catalyst layers of PEM fuel cell**
Avcioglu G. S., Fıçıcılar B., EROĞLU İ.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.23, pp.10779-10797, 2018 (SCI-Expanded)
- V. **Facilitation of water management in low Pt loaded PEM fuel cell by creating hydrophobic microporous layer with PTFE, FEP and PDMS polymers: Effect of polymer and carbon amounts**
Ozturk A., Fıçıcılar B., EROĞLU İ., BAYRAKÇEKEN YURTCAN A.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.33, pp.21226-21249, 2017 (SCI-Expanded)
- VI. **Influence of FEP nanoparticles in catalyst layer on water management and performance of PEM fuel cell with high Pt loading**
Avcioglu G. S., Fıçıcılar B., EROĞLU İ.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.1, pp.496-506, 2017 (SCI-Expanded)
- VII. **Effect of PTFE nanoparticles in catalyst layer with high Pt loading on PEM fuel cell performance**
Avcioglu G. S., Fıçıcılar B., EROĞLU İ.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.23, pp.10010-10020, 2016 (SCI-Expanded)
- VIII. **High performance PEM fuel cell catalyst layers with hydrophobic channels**
Avcioglu G. S., Fıçıcılar B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.40, no.24, pp.7720-7731, 2015 (SCI-Expanded)
- IX. **Effect of Pd loading in Pd-Pt bimetallic catalysts doped into hollow core mesoporous shell carbon on**

performance of proton exchange membrane fuel cells

Fıçıcılar B., BAYRAKÇEKEN YURTCAN A., Eroğlu I.

Journal of Power Sources, vol.193, no.1, pp.17-23, 2009 (SCI-Expanded)

X. Breakthrough analysis for CO₂ removal by activated hydrotalcite and soda ash

Fıçıcılar B., DOĞU T.

Catalysis Today, vol.115, no.1-4, pp.274-278, 2006 (SCI-Expanded)

Articles Published in Other Journals

- I. **Acid modified graphite felt cathode electrode for low temperature H₂/Br₂ redox flow battery**
Duman B., Fıçıcılar B.
Research on Engineering Structures and Materials, vol.6, no.4, pp.375-384, 2020 (Scopus)
- II. **Surface Modified and Bismuth Loaded Graphite Felts for Improvement of Anode Electrode Kinetics in Iron Chromium Redox Flow Battery**
KARAEYVAZ M. C., FİÇİCİLAR B.
Mugla Journal of Science and Technology, vol.6, no.1, pp.95-104, 2020 (Peer-Reviewed Journal)
- III. **Synthesis and Characterization of Mn₃O₄ Doped Modified Electrodes for Vanadium Redox Flow Batteries**
BÜŞRA NUR D., FİÇİCİLAR B.
Kastamonu University Journal of Engineering and Sciences, vol.5, no.2, pp.71-82, 2019 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Chapter 12 - Other possible fuels and possible use of blended fuels in fuel cells**
DAŞ E., UNGAN H., BAYRAKÇEKEN YURTCAN A., FİÇİCİLAR B.
in: Direct Liquid Fuel Cells: Fundamentals, Advances and Future, Ramiz Gültekin Akay, Ayşe Bayrakçeken Yurtcan, Editor, Elsevier, pp.249-273, 2020

Refereed Congress / Symposium Publications in Proceedings

- I. **"Hidrojen/Brom Redoks Akış Pili Katot Elektrodu için Balık Pullarından Karbon Sentezi ve Karakterizasyonu**
BODUR C., FİÇİCİLAR B.
UBAK - The 13th International Scientific Research Congress - Science and Engineering, Online, Ankara, Turkey, 11 - 12 March 2022
- II. **DEVELOPMENT OF BROMINE RESISTANT ANODE CATALYST FOR HYDROGEN OXIDATION AND REDUCTION REACTIONS IN HYDROGEN BROMINE FLOW BATTERIES**
Kirtoklu B., Fıçıcılar B.
23rd World Hydrogen Energy Conference: Bridging Continents by H₂, WHEC 2022, İstanbul, Turkey, 26 - 30 June 2022, pp.879-881
- III. **Use of Carbon Nanofiber Produced by Electrolysis of Carbon dioxide as Catalyst in Hydrogen-Bromine Flow Battery**
UÇAR N. Ö., DUMAN B. N., FİÇİCİLAR B.
8. Ulusal Kataliz Kongresi (NCC-8), Online, Ankara, Turkey, 09 September 2021
- IV. **Innovative Design and Optimization of Carbon Production System by Electrolysis of Carbon Dioxide**
UÇAR N. Ö., FİÇİCİLAR B.
3. Ulusal Karbon Konferansı (Online), Turkey, 11 - 12 March 2021
- V. **Electrocatalytic Activity of Pt/C Based Catalysts for V/H₂ Redox Flow Battery**

ÖZBAŞ İ. G., KAPLAN E., FIÇICILAR B.

1. Uluslararası Mühendislik ve Mimarlık Kongresi (Online), İstanbul, Turkey, 16 - 17 January 2021

VI. **Hidrojen-Brom Akış Pili için Biyokütle Kaynaklı Karbon Katalizör Sentezi**

KIRTOKLU B., DUMAN B. N., FIÇICILAR B.

International Marmara Sciences Congress (AUTUMN 2020), Kocaeli, Turkey, 4 - 05 December 2020

VII. **Synthesis of Boron Doped Cathode Catalyst for Hydrogen-Bromine Flow Batteries**

DUMAN B. N., FIÇICILAR B.

International 2nd conference on Sustainable Energy and Energy Calculations (ICSEEC2020) online, Turkey, 4 - 05 September 2020

VIII. **Sodyum Polisülfür/Bromür (PSB) Akış Pillerinde Anot Kinetiğinin İyileştirilmesi için Ni/C Katalizörü Sentezi ve Karakterizasyonu**

VAROL E., FIÇICILAR B.

32. Ulusal Kimya Kongresi (Online), Turkey, 17 - 19 September 2020

IX. **Enhancement of Direct Methanol Fuel Cell Performance by Adding SBA-3 Silica Material to Nafion Membrane**

UÇAR N. Ö., ÖZBAŞ İ. G., ÇAKMAN G., FIÇICILAR B.

European Fuel Cell Conference and Exhibition (EFC19), Naples, Italy, 9 - 11 December 2019

X. **Design and Optimization of Carbon Nanofiber Production by Carbon dioxide Electrolysis**

UÇAR N. Ö., FIÇICILAR B.

European Fuel Cell Conference and Exhibition (EFC19), Naples, Italy, 9 - 11 December 2019

XI. **Development of Ni/C Nanocomposite Electrocatalyst for DBFC**

VAROL E., FIÇICILAR B.

1st International Eurasian Conference on Biological and Chemical Sciences (EURASIANBIOCHEM 2018), Ankara, Turkey, 26 - 27 April 2018

XII. **Characterization of Graphite Felt Electrode and Investigation of Bromine Cathode Kinetics in H₂/Br₂ Flow Battery System**

DUMAN B. N., FIÇICILAR B.

1st International Eurasian Conference on Biological and Chemical Sciences (EURASIANBIOCHEM 2018), Ankara, Turkey, 26 - 27 April 2018

XIII. **Preparation Of Nafion/Mesoporous Silica Composite Membranes For High Temperature H₂/O₂ PEM Fuel Cell**

KARAAYVAZ M. C., AYDIN B., FIÇICILAR B., GEYİKÇİ F.

1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), Karabük, Turkey, 22 - 24 March 2018

XIV. **Preparation Of Nafion/Mesoporous Silica Composite Membranes For High Temperature H₂/O₂ Pem Fuel Cells**

KARAAYVAZ M. C., ÖZOĞUL B., FIÇICILAR B., GEYİKÇİ F.

1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), 22 - 24 March 2018

XV. **The Structural and Thermal Properties of PLA Composites Based on Silica Derived from Rice Husk and Polyethylene Glycol**

ÖZOĞUL B., GEYİKÇİ F., KARAAYVAZ M. C., FIÇICILAR B.

ICACCHE - International Conference on Applications in Chemistry and Chemical Engineering, Saraybosna, Bosnia And Herzegovina, 11 - 15 October 2017

XVI. **Hollow Glass Microspheres Reinforced Sulfonated Polyethersulfone Composite Membranes for H₂/O₂ PEM Fuel Cells**

KARAAYVAZ M. C., ÖZOĞUL B., FIÇICILAR B., GEYİKÇİ F.

ICACCHE - International Conference on Applications in Chemistry and Chemical Engineering, Saraybosna, Bosnia And Herzegovina, 11 - 15 October 2017

XVII. **Acid Treated and Bi Electrodeposited Graphite Felt Electrodes for Fe/Cr Redox Flow Batteries**

KARAAYVAZ M. C., FIÇICILAR B., ÖZOĞUL B., GEYİKÇİ F.

ICACCHE - International Conference on Applications in Chemistry and Chemical Engineering, Saraybosna, Bosnia

And Herzegovina, 11 - 15 October 2017

- XVIII. Synthesis and Characterization of SBA-3 Silica Material**
Uçar N. Ö., ÇAKMAN G., FIÇICILAR B.
3rd International Porous Powder Materials Symposium and Exhibitions, Kuşadası, Turkey, 12 - 15 September 2017
- XIX. Synthesis and Characterisation of SBA-3 Mesoporous Silica Material**
UÇAR N. Ö., ÇAKMAN G., FIÇICILAR B.
3rd International Porous Powder Materials Symposium & Exhibition, Kuşadası, Turkey, 12 - 15 September 2017
- XX. Effective Factors Improving Catalyst Layers of PEM Fuel Cell**
Avcıoğlu G., FIÇICILAR B., EROĞLU İ.
2nd International Hydrogen Technologies Congress, Adana, Turkey, 15 - 18 March 2017
- XXI. Influence of PTFE nanoparticles on mass transport in high performance PEM fuel cell electrodes**
AVCIOĞLU S. G., FIÇICILAR B., EROĞLU İ.
World Hydrogen Energy Conference - WHEC 2016, Zaragoza, Spain, 13 - 16 June 2016
- XXII. Mn3O4 Based Electrocatalyst Synthesis for Vanadium Redox Flow Batteries**
DUMAN B., FIÇICILAR B.
NCC6 - The 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016
- XXIII. Katalizör tabakasına eklenen hidrofobik nanopartiküllerin PEM yakıt pili performansına etkisi**
AVCIOĞLU S. G., FIÇICILAR B., EROĞLU İ.
Ulusal Hidrojen Teknolojileri Kongresi UHTEK-2015, İstanbul, Turkey, 20 - 23 December 2015
- XXIV. CMK 3 Carbon based electrocatalysts for use in regenerative fuel cells**
GEYİKÇİ F., ÇAKMAN G., NARİN N., FIÇICILAR B.
International Porous and Powder Materials, 15 - 18 September 2015
- XXV. CMK 3 CARBON BASED ELECTROCATALYSTS FOR USE IN REGENERATIVE FUEL CELLS**
FIÇICILAR B., ÇAKMAN G., NARİN N., GEYİKÇİ F.
Porous Powder Materials Symposium and Exhibition, İzmir, Turkey, 15 - 18 September 2015
- XXVI. Effect of hydrophobic nanoparticles on PEM fuel cell performance**
AVCIOĞLU S. G., FIÇICILAR B., EROĞLU İ.
International Symposium on Materials for Energy Storage and Conversion (mESC-IS-2015), 7 - 09 September 2015
- XXVII. Effect of nano carbon electrocatalyst support on PEM ionic conductivity measurement performance**
ÇAKMAN G., NARİN N., ŞENYER B., FIÇICILAR B.
Nanoscience and Nanotechnology Conference (NanoTR11), Ankara, Turkey, 22 - 25 June 2015
- XXVIII. Effect of hydrophobic nanoparticles in cathode catalyst layer on PEM fuel cell performance.**
AVCIOĞLU S. G., FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.
Turkish-German Conference on Energy Technologies, Ankara, Turkey, 13 - 15 October 2014
- XXIX. Polimer elektrolit membran yakıt pilleri için sodyum bor hidrürden hidrojen üretimi**
DENİZCİ A. C., YILDIRIM S., AYDIN A., FIÇICILAR B., GEYİKÇİ F.
Ulusal Kimya Mühendisliği Kongresi (UKMK-11), Eskişehir, Turkey, 2 - 05 September 2014
- XXX. PEM yakıt pillerinde su ve ısı yönetiminin iyileştirilmesi için hidrofobik nanoparçacıklar ile yüksek performanslı ve dayanıklı yakıt pili bileşenlerinin geliştirilmesi**
ÖZTÜRK A., FIÇICILAR B., EROĞLU İ., BAYRAKÇEKEN YURTCAN A.
Ulusal Kimya Mühendisliği Kongresi (UKMK-11), Eskişehir, Turkey, 2 - 05 September 2014
- XXXI. High performance PEM fuel cell catalyst layers with hydrophobic channels**
AVCIOĞLU S. G., BARIM B. Ş., FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.
13 th International Conference on Clean Energy (ICCE-2014), İstanbul, Turkey, 8 - 12 June 2014
- XXXII. Multi-step reaction mechanisms for anode and cathode electrodes of a H₂/O₂ PEM Fuel Cell**
AVCIOĞLU S. G., FIÇICILAR B., EROĞLU İ.
5. Ulusal Kataliz Kongresi (NCC-5), Adana, Turkey, 23 - 26 April 2014
- XXXIII. Experimental and modeling studies on the effect of inclusion of hydrophobic nanoparticles in cathode microporous and catalyst layer for enhanced water management in PEMFCs**

Avcioglu G. S., ÖZTÜRK AYDIN A., Fiçıcılar B., BAYRAKÇEKEN YURTCAN A., Kincal S., Eroglu I.
20th World Hydrogen Energy Conference, WHEC 2014, Gwangju, South Korea, 15 - 20 June 2014, vol.2, pp.1247-1255

XXXIV. Engineering of PEM fuel cell catalyst layer with hydrophobic nanoparticles

AVCIOĞLU S. G., FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.

9th Nanoscience and Nanotechnology Conference (NanoTR-9), Erzurum, Turkey, 24 - 28 June 2013

XXXV. Improvement of carbon supported platinum electrocatalysts for proton exchange membrane (PEM) fuel cell

GÜVENATAM B., FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.

International Conference on Clean Energy (ICCE-2010), Gazimagusa, Cyprus (Kktc), 15 - 17 October 2010

XXXVI. A five layer one-dimensional PEMFC model with detailed electrode kinetics

FIÇICILAR B., EROĞLU İ., NGUYEN T. V.

218th Electrochemical Society Meeting, Las Vegas Nevada, United States Of America, 10 - 15 October 2010

XXXVII. A nonisothermal PEM fuel cell model with a multi-step reaction pathway.

FIÇICILAR B., EROĞLU İ., NGUYEN T. V.

Fuel Cells – Gordon Research Conferences, Smithfield RI, United States Of America, 1 - 06 August 2010

XXXVIII. Mikrodalga yardımı ile karbon destekli katalizör hazırlanması

FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.

Ulusal Kimya Mühendisliği Kongresi (UKMK-9), Ankara, Turkey, 22 - 25 June 2010

XXXIX. Development of different carbon supportsfor proton exchange membrane (PEM) fuel cell electrocatalysts

GÜVENATAM B., FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.

6th Chemical Engineering Conference for Colloborative Research in Eastern Mediterranean Countries (EMCC-6), Belek/Antalya, Turkey, 7 - 12 March 2010

XL. Nanostructured materials for low temperature fuel cell catalysis

FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.

5th Nanoscience and Nanotechnology Conference (NanoTR-5), Eskişehir, Turkey, 8 - 12 June 2009

XLI. Pt incorporated hollow core mesoporous shell carbon nanocomposite catalyst for PEMFCs

FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.

Hydrogen Power Theoretical and Engineering Solutions International Symposium (Hypothesis-VIII), Lizbon Portekiz, 1-3 Nisan, 2009, LİZBON, Portugal, 1 - 03 April 2009

XLII. Effects of two-phase flow in the cathode region on the performance of a proton exchange membrane fuel cell

FIÇICILAR B., EROĞLU İ.

6th Symposium on Fuel Cell Modelling and Experimental Validation (MODVAL-6), BAD HERRENALB KARLSRUHE, Germany, 25 - 26 March 2009

XLIII. Effect of pd loading in pd-pt bimetallic catalysts doped into hollow core mesoporous shell carbon on performance of proton exchange membrane fuel cells

FIÇICILAR B., BAYRAKÇEKEN YURTCAN A., EROĞLU İ.

Fuel Cells Science & Technology 2008 – Scientific Advances in Fuel Cell Systems, KOPENHAG, Denmark, 8 - 09 October 2008

XLIV. Development and characterization of novel composite/blend proton exchange membranes.

AKAY R. G., YURDAKUL A. Ö., FIÇICILAR B., BAÇ N., EROĞLU İ.

Fuel Cells Science & Technology 2008 – Scientific Advances in Fuel Cell Systems 8-9 Ekim, 2008., KOPENHAG, Denmark, 8 - 09 October 2008

XLV. Breakthrough analysis for CO2 removal by activated hydrotalcite and soda ash

FIÇICILAR B., DOĞU T.

8th International Conference on Carbon Dioxide Utilization (ICCDU-VIII), Oslo, Norway, 20 - 23 June 2005

Supported Projects

- Fıçıcılar B., Project Supported by Higher Education Institutions, Alerjik Reaksiyon Hassasiyetini Ölçmek İçin Kandaki Spesifik İmmünoglobulin E Seviyesini Ölçmek İçin Biyosensör Geliştirme, 2022 - Continues
- Fıçıcılar B., Project Supported by Higher Education Institutions, Hidrojen Brom Akış Pillerinde Hidrojen Yükseltgenme ve İndirgenme Tepkimesi İçin Broma Dayanıklı Anot Katalizörü Geliştirilmesi (OMÜ BAP Projesi, Yüksek Lisans Tez Projesi, Proje No: PYO.MUH.1904.21.016), 2021 - Continues
- Fıçıcılar B., Project Supported by Higher Education Institutions, Karbondioksitin Elektrolizi ile Karbon Nanofiber Üretiminin Tasarımı ve Optimizasyonu (OMÜ BAP Projesi, Yüksek Lisans Tez Projesi, Proje No: PYO.MUH.1904.21.001), 2021 - Continues
- Fıçıcılar B., TUBITAK Project, Reformat Gazlarından Saf ve Basınçlandırılmış Hidrojen Üretimi İçin Elektrokimyasal Hidrojen Saflaştırıcı ve Kompresörü Sistemi (EHSK) Geliştirilmesi, 2019 - Continues
- Fıçıcılar B., Tekin B., Project Supported by Higher Education Institutions, Endüstriyel Kenevirin Çinko İyon Temelli Hibrit Süperkapasitör Sistemlerinin Geliştirilmesi İçin Kullanımı, 2022 - 2022
- Fıçıcılar B., Project Supported by Higher Education Institutions, Hidrojen Brom Akış Pillerinde Hidrojen Yükseltgenme ve İndirgenme Tepkimesi İçin Broma Dayanıklı Anot Katalizörü Geliştirilmesi, 2021 - 2022
- Fıçıcılar B., Project Supported by Higher Education Institutions, Karbondioksitin Elektrolizi ile Karbon Nanofiber Üretiminin Tasarımı ve Optimizasyonu, 2021 - 2022
- Fıçıcılar B., Project Supported by Higher Education Institutions, Sodyum Polisülfür / Bromür (PSB) Akış Pillerinde Anot Elektrotunun Geliştirilmesi ve Performansın İyileştirilmesi, 2019 - 2022
- Fıçıcılar B., TUBITAK Project, Yüksek Performanslı Sodyum Polisülfür/Bromür (PSB) Akış Pillerinde Anot Kinetiğinin İyileştirilmesi Ve Sistem Tasarımının Geliştirilmesi (Tübitak 1002 Projesi, Proje No: 120M122), 2020 - 2021
- Fıçıcılar B., Project Supported by Higher Education Institutions, Sodyum Polisülfür / Bromür (PSB) Akış Pillerinde Anot Elektrotunun Geliştirilmesi ve Performansın İyileştirilmesi (OMÜ BAP Projesi, Yüksek Lisans Tez Projesi, Proje No: PYO.MUH.1904.19.018), 2019 - 2021
- Fıçıcılar B., TUBITAK Project, Hidrojen/Brom Akış Pilleri için Yüksek Performanslı ve Dayanıklı Elektrotların B/N Katkılı Karbon Siyahı Yapılar ile Geliştirilmesi (Tübitak 1002 Projesi, Proje No: 218M764), 2019 - 2020
- Fıçıcılar B., Project Supported by Higher Education Institutions, Polimer Elektrolit Membran (PEM) Elektrolizör İçin Membran Sentezi Ve Karakterizasyonu, 2018 - 2019
- Fıçıcılar B., Project Supported by Higher Education Institutions, Polimer Elektrolit Membran (PEM) Elektrolizör İçin Membran Sentezi Ve Karakterizasyonu OMÜ BAP Projesi, Yüksek Lisans Tez Projesi, Proje No: PYO.MUH.1904.18.013), 2018 - 2019
- Fıçıcılar B., Project Supported by Higher Education Institutions, Elektriksel Enerji Depolama Birimi Olarak Sodyum Sülfür Pili ve Elektrokimyasal Akış Kapasitörü Tümlleşik Sisteminin Tasarımı ve Geliştirilmesi, 2016 - 2019
- Fıçıcılar B., Project Supported by Higher Education Institutions, Mezogözenekli Karbon Elektrotların Fe/Cr Akışkan Pilleri İçin Geliştirilmesi, 2017 - 2018
- Fıçıcılar B., Project Supported by Higher Education Institutions, Mezogözenekli Karbon Elektrotların Fe/Cr Akışkan Pilleri İçin Geliştirilmesi (OMÜ BAP Projesi, Yüksek Lisans Tez Projesi, Proje No: PYO.MUH.1904.16.013), 2017 - 2018
- Fıçıcılar B., Project Supported by Higher Education Institutions, Elektriksel Enerji Depolama Birimi Olarak Sodyum Sülfür Pili ve Elektrokimyasal Akış Kapasitörü Tümlleşik Sisteminin Tasarımı ve Geliştirilmesi (OMÜ BAP Projesi, ArGe 1901 Projesi, Proje No: PYO.MUH.1901.16.002), 2016 - 2018
- Topcu Y., Ceylan S., Fıçıcılar B., TUBITAK Project, Makroalg Kömür karışımlarının akışkan yatak reaktörde katalitik hızlı pirolizi ve elde edilen ürünlerin karakterizasyonu (Tübitak 3501 Kariyer Projesi), 2015 - 2018
- Fıçıcılar B., TUBITAK Project, PEM Yakıt Pillerinde Su ve Isı Yönetiminin İyileştirilmesi için Hidrofobik Nanoparçacıklar ile Yüksek Performanslı ve Dayanıklı Yakıt Pili Bileşenlerinin Geliştirilmesi (Tübitak 1001 ArGe Projesi, Proje No: 113M205), 2013 - 2017
- Fıçıcılar B., Project Supported by Higher Education Institutions, PEM Yakıt Pillerinde Su ve Isı Yönetiminin İyileştirilmesi için Hidrofobik Nanoparçacıklar ile Yüksek Performanslı ve Dayanıklı Yakıt Pili Bileşenlerinin Geliştirilmesi (OMÜ BAP Projesi, ArGe 1905 Projesi, Proje No PYO MUH 1905 15 002 Benzer Destek Projesi), 2016 - 2016
- Fıçıcılar B., Project Supported by Higher Education Institutions, PEM Yakıt Pillerinde Su ve Isı Yönetiminin İyileştirilmesi için Hidrofobik Nanoparçacıklar ile Yüksek Performanslı ve Dayanıklı Yakıt Pili Bileşenlerinin Geliştirilmesi, 2015 - 2016

Fıçıcılar B., Akıllı Şebekeler için HBr Akışkan Pil Sistemi Tasarımı ve Geliştirilmesi (Bilim Sanayi ve Teknoloji Bakanlığı
Teknogirişim Sermayesi Desteği TGSD Arge Projesi Proje No 1134 TGSD 2014), 2014 - 2015
Fıçıcılar B., Hidrojen Brom Akışkan Pil Sistemi Tasarımı ve Geliştirilmesi (KOSGEB), 2014 - 2015