

## Personal Information

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## International Researcher IDs

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Publons / Web Of Science ResearcherID: ABA-3448-2020

ScopusID: 43661546900

Yoksis Researcher ID: 137984



## Education Information

Doctorate, Northeastern University, Makine Mühendisliği, United States Of America 2009  
- 2013

Undergraduate, Middle East Technical University, Faculty of Engineering, Makine  
Mühendisliği Bölümü, Turkey 2003 - 2009

## Research Areas

Mechanical Engineering, Energy, Conventional Energy Systems and Their Technology, Renewable Energy Systems,  
Alternative Energy Resources, Solar energy, Engineering and Technology

## Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering,  
2021 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering,  
2018 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering,  
2014 - 2018

## Academic and Administrative Experience

Bölüm Başkan Danışmanı, Middle East Technical University, Faculty of Engineering, Department of Mechanical  
Engineering, 2017 - Continues

## Advising Theses

KAZANÇ ÖZERİNÇ F., Investigation of biomass and bioplastic wastes using fast heating rate thermochemical processes,  
Postgraduate, A.AKGÜL(Student), 2022

Kazanç Özerinç F., SINGLE PARTICLE COMBUSTION ANALYSIS OF BIOMASS FUELS BY USING WIRE MESH REACTOR,

Postgraduate, K.GÜREL(Student), 2021

Kazanç Özerinç F., Yozgatlıgil A., Investigation of alternative biomass fuels and Turkish lignites at high heating rate pyrolysis and combustion conditions, Doctorate, D.MAGALHAES(Student), 2021

Kazanç Özerinç F., Üner D., MODELING THE EFFECT OF SCR DENOX UNIT ON DIESEL ENGINE PERFORMANCE, Postgraduate, P.PELEN(Student), 2020

KAZANÇ ÖZERİNÇ F., BAKER D. K., Hybridization of single flash geothermal power plant with biomass driven SC02 topping cycle, Postgraduate, B.Mutlu(Student), 2020

Kazanç Özerinç F., Infrared measurement of biomass combustion in a wire mesh reactor, Postgraduate, K.ULUCA(Student), 2019

Kazanç Özerinç F., A study on coal combustion: Experiments and modelling, Postgraduate, B.ÖZER(Student), 2019

Kazanç Özerinç F., Soot Formation in Industrial Burners, Postgraduate, İ.HIRTISLI(Student), 2019

Kazanç Özerinç F., Akata Kurç B., Investigation of fly ash characteristics on zeolite 4A synthesis, Postgraduate, S.ŞENER(Student), 2019

KAZANÇ ÖZERİNÇ F., Investigation of Turkish lignites and biomass at high heating rates by using wire mesh apparatus, Postgraduate, M.BAGHIRZADE(Student), 2018

KAZANÇ ÖZERİNÇ F., Combustion behavior and kinetics of a Turkish lignite blended with biomass/magnesite dust, Postgraduate, F.YOUSEFZAD(Student), 2017

KAZANÇ ÖZERİNÇ F., Non-reacting cfd analysis of a drop tube furnace used for solid fuel combustion, Postgraduate, G.GÜLENÇ(Student), 2017

## Jury Memberships

Academic Staff Examination, Academic Staff Examination, Orta Doğu Teknik Üniversitesi, January, 2022

## Designed Lessons

Kazanç Özerinç F., Biomass Energy Conversion, Undergraduate, 2021 - 2022

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

- I. **Biochar gasification: Insights from pyrolysis atmospheres and gasification heating rates**  
AKGÜL A., Akın S. Ş., Güleç F., KAZANÇ ÖZERİNÇ F.  
FUEL, vol.360, 2024 (SCI-Expanded)
- II. **Sodium salt surface interactions affect single particle combustion behavior of biomass, coal, and their chars**  
Akın S. Ş., AKGÜL A., KAZANÇ ÖZERİNÇ F.  
Fuel, vol.354, 2023 (SCI-Expanded)
- III. **Characterization of tars from recycling of PHA bioplastic and synthetic plastics using fast pyrolysis**  
AKGÜL A., Palmeiro-Sanchez T., Lange H., Magalhaes D., Moore S., Paiva A., KAZANÇ ÖZERİNÇ F., Trubetskaya A.  
Journal of Hazardous Materials, vol.439, 2022 (SCI-Expanded)
- IV. **The effect of torrefaction, slow, and fast pyrolysis on the single particle combustion of agricultural biomass and lignite coal at high heating rates**  
GÜREL K., Magalhães D., KAZANÇ ÖZERİNÇ F.  
Fuel, vol.308, 2022 (SCI-Expanded)
- V. **Influence of biomass thermal pre-treatment on the particulate matter formation during pulverized co-combustion with lignite coal**  
Magalhaes D., KAZANÇ ÖZERİNÇ F.  
Fuel, vol.308, 2022 (SCI-Expanded)

- VI. **Critical analysis of zeolite 4A synthesis through one-pot fusion hydrothermal treatment approach for class F fly ash**  
Akin S. Ş., Kirdeciler S. K., KAZANÇ ÖZERİNÇ F., AKATA KURÇ B.  
Microporous and Mesoporous Materials, vol.325, 2021 (SCI-Expanded)
- VII. **Supercritical extraction of biomass as an effective pretreatment step for the char yield control in pyrolysis**  
Trubetskaya A., Budarin V., Arshadi M., Magalhães D., KAZANÇ ÖZERİNÇ F., Hunt A. J.  
Renewable Energy, vol.170, pp.107-117, 2021 (SCI-Expanded)
- VIII. **Development and analysis of the novel hybridization of a single-flash geothermal power plant with biomass driven sco2-steam rankine combined cycle**  
Mutlu B., BAKER D. K., KAZANÇ ÖZERİNÇ F.  
Entropy, vol.23, no.6, 2021 (SCI-Expanded)
- IX. **Interactions during CO2Co-gasification of biomass and coal chars obtained from fast pyrolysis in a drop tube furnace**  
Magalhães D., Akgül A., Kazanç Özerinç F., Costa M.  
Energy and Fuels, vol.35, no.9, pp.7065-7076, 2021 (SCI-Expanded)
- X. **Prediction of yields and composition of char from fast pyrolysis of commercial lignocellulosic materials, organosolv fractionated and torrefied olive stones**  
Magalhães D., GÜREL K., Matsakas L., Christakopoulos P., Pisano I., Leahy J., KAZANÇ ÖZERİNÇ F., Trubetskaya A.  
Fuel, vol.289, 2021 (SCI-Expanded)
- XI. **An experimental and numerical study on the combustion of lignites from different geographic origins**  
Özer B., Debiagi P. E. A., Hasse C., Faravelli T., Kazanç F.  
Fuel, vol.278, 2020 (SCI-Expanded)
- XII. **A study on the effects of various combustion parameters on the mineral composition of Tuncbilek fly ash**  
Akin S. S., Magalhaes D., KAZANÇ ÖZERİNÇ F.  
FUEL, vol.275, 2020 (SCI-Expanded)
- XIII. **Comparison of single particle combustion behaviours of raw and torrefied biomass with Turkish lignites**  
Magalhaes D., Panahi A., KAZANÇ ÖZERİNÇ F., Levendis Y. A.  
FUEL, vol.241, pp.1085-1094, 2019 (SCI-Expanded)
- XIV. **A study on the reactivity of various chars from Turkish fuels obtained at high heating rates**  
Magalhaes D., Riaza J., KAZANÇ ÖZERİNÇ F.  
FUEL PROCESSING TECHNOLOGY, vol.185, pp.91-99, 2019 (SCI-Expanded)
- XV. **Combustion Behavior and Kinetics of Turkish Lignite Blended with Biomass/Magnesite Dust**  
Farrokhi F. Y., KAZANÇ ÖZERİNÇ F.  
JOURNAL OF ENERGY ENGINEERING, vol.144, no.6, 2018 (SCI-Expanded)
- XVI. **Ignition behavior of Turkish biomass and lignite fuels at low and high heating rates**  
Magalhaes D., KAZANÇ ÖZERİNÇ F., Ferreira A., Rabacal M., Costa M.  
FUEL, vol.207, pp.154-164, 2017 (SCI-Expanded)
- XVII. **Combustion of Turkish lignites and olive residue: Experiments and kinetic modelling**  
Magalhaes D., KAZANÇ ÖZERİNÇ F., Riaza J., Erensoy S., Kabakli O., Chalmers H.  
FUEL, vol.203, pp.868-876, 2017 (SCI-Expanded)
- XVIII. **Comparison of Fine Ash Emissions Generated from Biomass and Coal Combustion and Valuation of Predictive Furnace Deposition Indices: A Review**  
Ruscio A., KAZANÇ ÖZERİNÇ F., Levendis Y. A.  
JOURNAL OF ENERGY ENGINEERING, vol.142, no.2, 2016 (SCI-Expanded)
- XIX. **Characterization of Particulate Matter Emitted from Combustion of Various Biomasses in O-2/N-2 and O-2/CO2 Environments**  
Ruscio A., Kazanc F., Levendis Y. A.

ENERGY & FUELS, vol.28, no.1, pp.685-696, 2014 (SCI-Expanded)

- XX. **Chemical Composition of Submicrometer Particulate Matter (PM<sub>1</sub>) Emitted from Combustion of Coals of Various Ranks in O-2/N-2 and O-2/CO<sub>2</sub> Environments**

Kazanc F., Levendis Y. A., Maffei T.

ENERGY & FUELS, vol.27, no.8, pp.4984-4998, 2013 (SCI-Expanded)

- XXI. **Physical Properties of Particulate Matter Emitted from Combustion of Coals of Various Ranks in O-2/N-2 and O-2/CO<sub>2</sub> Environments**

Kazanc F., Levendis Y. A.

ENERGY & FUELS, vol.26, no.12, pp.7127-7139, 2012 (SCI-Expanded)

- XXII. **Emissions of NO<sub>x</sub> and SO<sub>2</sub> from Coals of Various Ranks, Bagasse, and Coal-Bagasse Blends Burning in O-2/N-2 and O-2/CO<sub>2</sub> Environments**

Kazanc F., Khatami R., Crnkovic P. M., Levendis Y. A.

ENERGY & FUELS, vol.25, pp.2850-2861, 2011 (SCI-Expanded)

## Articles Published in Other Journals

- I. **PARTICULATE MATTER FORMATION DURING CO-COMBUSTION OF AGRICULTURAL RESIDUES WITH TURKISH LIGNITE USING A DROP TUBE FURNACE**

KAZANÇ ÖZERİNÇ F.

Eskişehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, vol.20, no.3, pp.317-325, 2019 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **ABS-Fly Ash Composite Filaments for Fused Deposition Modeling**

Alduais A., Kazanç Özerinç F., Bayram G., Özerinç S.

2nd International Conference on Recent Advances in Manufacturing, RAM 2021, Surat, India, 10 - 12 June 2021, pp.85-95

- II. **Characterization of Reactive Metallic Nanolayers through High-speed Imaging**

Behboud A. B., Kazanç Özerinç F., Özerinç S.

TMS 2021 Annual Meeting & Exhibition, Pennsylvania, United States Of America, 15 March - 18 April 2021, pp.1

- III. **Influence of biomass thermal pre-treatment on the particulate matter formation during pulverized co-combustion with lignite coal**

Kazanç Özerinç F., Magalhaes D.

8th International Conference on Renewable Fuels, Combustion and Fire, Ankara, Turkey, 5 - 07 March 2021, pp.223-227

- IV. **SINGLE PARTICLE COMBUSTION ANALYSIS OF OLIVE RESIDUE AND TUNÇBILEK LIGNITE**

Gürel K., KAZANÇ ÖZERİNÇ F.

15th International Combustion Symposium, 17 September - 19 October 2020

- V. **Hybridization of a geothermal power plant with biomass driven sCO<sub>2</sub> cycle**

Mutlu B., BAKER D. K., KAZANÇ ÖZERİNÇ F.

Eight European Conference on Renewable Energy Systems (ECRES2020), 24 - 25 August 2020

- VI. **Synergies during CO<sub>2</sub> gasification of chars obtained from fast pyrolysis in a drop tube furnace**

Magalhaes D., KAZANÇ ÖZERİNÇ F.

9th International Conference on Advanced Technologies (ICAT'xx20), 10 - 12 August 2020

- VII. **FLY ASH TO ZEOLITE: EFFECT OF FLY ASH CHARACTERISTICS ON ZEOLITE 4A SYNTHESIS**

Akın Ş., Kirdeciler K. S., KAZANÇ ÖZERİNÇ F., AKATA KURÇ B.

Clean Air 2019, 8 - 12 September 2019

- VIII. **INFRARED SENSING OF BIOMASS COMBUSTION IN A WIRE MESH REACTOR**

Uluca K., Baghırzade M., sivaslıgil m., Magalhaes D., KAZANÇ ÖZERİNÇ F.

Clean Air 2019, 8 - 12 September 2019

- IX. **AN EXPERIMENTAL AND NUMERICAL STUDY ON THE COMBUSTION OF LIGNITES FROM DIFFERENT GEOGRAPHIC ORIGINS**  
ÖZER B., Debiagi P. E. A., Hasse C., Faravelli T., KAZANÇ ÖZERİNÇ F.  
Clean Air 2019, 8 - 12 September 2019
- X. **A study on the morphological changes during biomass pyrolysis using a model based on percolation theory**  
Kazanç Özerinç F., Ozer B.  
37th International Symposium on Combustion, Dublin, Ireland, 29 July - 03 August 2018, pp.1
- XI. **Fast pyrolysis of Turkish biomass and its blends with lignite coal by using novel wire mesh reactor**  
Kazanç Özerinç F., Baghırzade M.  
37th International Symposium on Combustion, Dublin, Ireland, 29 July - 03 August 2018, pp.1
- XII. **PM formation during high heating rate co-combustion of lignite coal with olive residue**  
Kazanç Özerinç F., Magalhaes D.  
37th International Symposium on Combustion, Dublin, Ireland, 29 July - 03 August 2018, pp.1
- XIII. **Fly Ash to Zeolite: Effect of Ash Characteristics on Zeolite Synthesis**  
Kazanç Özerinç F., Akın S. Ş., Akata Kurç B., Kirdeciler S. K.  
37th International Symposium on Combustion, Dublin, Ireland, 29 July - 03 August 2018, pp.1
- XIV. **PM formation during combustion of a Turkish lignite using drop tube furnace**  
Kazanç Özerinç F., Magalhaes D.  
14th International Conference on Combustion (INCOS2018), Karabük, Turkey, 25 - 27 April 2018, pp.1
- XV. **Effect of particle size on residence time and burnout of Tunçbilek lignite**  
Kazanç Özerinç F., Ozer B., Magalhaes D.  
In 14th International Conference on Combustion (INCOS2018), Karabük, Turkey, 25 - 27 April 2018, pp.1
- XVI. **Fast pyrolysis of Turkish hazelnut shell by using novel wire mesh reactor**  
Kazanç Özerinç F., Baghırzade M., Gürel K.  
14th International Conference on Combustion , Karabük, Turkey, 25 - 27 April 2018, pp.1
- XVII. **A study on the reactivity of chars from various Turkish fuels obtained at high heating rates**  
Kazanç Özerinç F., Farrokhi F. Y., Magalhaes D., Riaza J.  
13th International Conference on Energy for a Clean Environment, Ponta-Delgada, Portugal, 2 - 06 July 2017, pp.1
- XVIII. **A STUDY ON THE REACTIVITY OF CHARS FROM VARIOUS TURKISH FUELS OBTAINED AT HIGH HEATING RATE**  
KAZANÇ F., Magalhaes D., Farrokhi F. Y., Riaza J.  
Clean Air 2017, 2 - 06 July 2017
- XIX. **Combustion Behavior of Lignite/Biomass and Lignite/Magnesite Dust Blends with a Binding Agent**  
Kazanç Özerinç F., Farrokhi F. Y.  
8th European Combustion Meeting (ECM 2017), Dubrovnik, Croatia, 18 - 21 April 2017, pp.1
- XX. **Gasification of a Turkish lignite under CO<sub>2</sub> and CO<sub>2</sub>+H<sub>2</sub>O atmospheres: modelling approach**  
Kazanç Özerinç F., Magalhaes D., Gökalp İ., Karaca M.  
8th European Combustion Meeting (ECM 2017), Dubrovnik, Croatia, 18 - 21 April 2017, pp.1
- XXI. **An observation on combustion kinetics of Turkish fuels**  
KAZANÇ F., Magalhaes D.  
11th EUROPEAN CONFERENCE ON COAL RESEARCH AND ITS APPLICATIONS: 11th ECCRIA, 5 - 07 September 2016
- XXII. **A Comparison of Fine Ash Emissions from Biomass and Coal Combustion**  
KAZANÇ ÖZERİNÇ F., Ruscio A., Levendis Y.  
International Conference on Clean Coal Technologies, 17 - 21 May 2015
- XXIII. **Fine Ash Particle Emissions from Combustion of Coals and Biomass Process Residues**  
KAZANÇ ÖZERİNÇ F., Ruscio A., Levendis Y.  
35th International Symposium on Combustion, 3 - 08 August 2014
- XXIV. **Physical and Chemical Characteristics of Particulate Matter (PM<sub>1</sub>) Emitted from Combustion of a**

### **Bituminous Coal in Air and Oxy-Fuel Environments.**

KAZANÇ ÖZERİNÇ F., Levendis Y.

8th US National Combustion Meeting 2013, 19 - 22 May 2013

### **XXV. Gaseous and Particulate Emissions from Conventional Combustion and Oxy-combustion of a Lignite Coal**

KAZANÇ ÖZERİNÇ F., Levendis Y.

Technical Meeting of the Eastern States Section of the Combustion Institute, 9 - 12 October 2011

## **Supported Projects**

Kazanç Özerinç F., Derin Güre P., Horizon Europe Project, Actions required to secure the large-scale deployment of the leading CDR approaches to meet EU climate targets, 2023 - 2027

Baker D. K., Kale N., Kazanç Özerinç F., H2020 Project, GEOSMART, 2019 - 2023

KAZANÇ ÖZERİNÇ F., MAGALHAES D., AKGÜL A., Project Supported by Higher Education Institutions, Synergies during co-gasification of Turkish lignite with biomass under conditions relevant to entrained flow gasification, 2021 - 2022

KAZANÇ ÖZERİNÇ F., MAGALHAES D., Project Supported by Higher Education Institutions, Co-combustion of Tunçbilek lignite with raw and torrefied olive residue effect on kinetics and particulate matter emissions, 2021 - 2021

KAZANÇ ÖZERİNÇ F., ÖZERİNÇ S., KAYGUSUZ B., FATHİPOUR S., Project Supported by Higher Education Institutions, Reaktif Metalik Nanokatmanların Yanma Davranışlarının İncelenmesi, 2020 - 2021

KAZANÇ ÖZERİNÇ F., ÖZER B., MAGALHAES D., Project Supported by Higher Education Institutions, Deneysel ve Hesaplamalı Yöntemlerle Afşin-Elbistan Linyitinin Yanma Davranışının Düşey Borulu Reaktör Kullanılarak İncelenmesi, 2018 - 2020

AKATA KURÇ B., AKIN S. Ş., KAZANÇ ÖZERİNÇ F., Project Supported by Higher Education Institutions, UÇUCU KÜLDEN ZEOLİT ELDE EDİLMESİ: SENTEZ VE KARAKTERİZASYONU, 2018 - 2019

Kazanç Özerinç F., Newton Programme Project, Flexible Oxy-Combustion for Turkish Fuels, 2015 - 2019

KAZANÇ ÖZERİNÇ F., TUBITAK Project, Türk Linyitlerinin Çeşitli Biyokütleler Ve Atık Manyezit Tozu İle Pulverize Yanma Özelliklerinin Düşey Borulu Fırında İncelenmesi, 2015 - 2018

KAZANÇ ÖZERİNÇ F., Project Supported by Higher Education Institutions, Atık manyezit tozu ve çeşitli biyokütlelerin Türk linyitlerinin yanması üzerindeki etkisi, 2015 - 2016

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

COST Aksiyonu: CA20133, Member, 2021 - Continues, Sweden

Isı Bilim ve Tekniği, Member, 2021 - Continues, Turkey

Combustion Institute, Member, 2010 - Continues, United States Of America

## **Scientific Refereeing**

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Middle East Technical University, Turkey, November 2022

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Middle East Technical University, Turkey, November 2022

TUBITAK Project, 1011 - International Scientific Research Projects Participation Program (UBAP), Middle East Technical University, Turkey, October 2022

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Middle East Technical University, Turkey, April 2022  
FUEL, SCI Journal, August 2021

ENERGY AND FUELS, SCI Journal, July 2021

ENERGY AND FUELS, SCI Journal, May 2021

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Middle East Technical University, Turkey, November 2018  
TUBITAK Project, 3001 - Initial R&D Projects Support Program, Middle East Technical University, Turkey, July 2018  
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Middle East Technical University, Turkey, March 2018

## Tasks In Event Organizations

Kazanç Özerinç F., 8th International Conference on Renewable Fuels, Combustion and Fire, Scientific Congress, Turkey, Mart 2021

## Metrics

Publication: 48  
Citation (WoS): 471  
Citation (Scopus): 476  
H-Index (WoS): 13  
H-Index (Scopus): 13

## Congress and Symposium Activities

CLEANAIR 2023, Session Moderator, Lisbon, Portugal, 2023  
CLEANAIR 2023, Invited Speaker, Lisbon, Portugal, 2023

## Invited Talks

BİYOKÜTLENİN ENERJİ YOLCULUĞU 3Ç TEKNİK EĞİTİMİ, Workshop, Tarım ve Orman Bakanlığı, TAGEM, Turkey, February 2023  
BİYOKÜTLE ENERJİ DÖNÜŞÜMÜ, Seminar, TÜBİTAK MAM/MAM EXTERNAL SEMINAR SERIES, Turkey, June 2022  
Biomass Energy Conversion, Seminar, Texas Tech University, United States Of America, May 2022  
TAIWAN-TURKEY COMBUSTION MEETING ON NET-ZERO TECHNOLOGY, Workshop, National Formosa University, Taiwan, April 2022

## Awards

Kazanç Özerinç F., BAGEP 2022, Bilim Akademisi, April 2022  
Kazanç Özerinç F., Proje Performans Ödülü, Tübitak, February 2022