

## Doç. Dr. Afşın Yusuf ÇETİNKAYA

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### Araştırma Alanları

Çevre Mühendisliği

### Akademik Unvanlar / Görevler

Doç. Dr., Yıldız Teknik Üniversitesi, İnşaat Fakültesi, Çevre Müh.Bölümü, 2020 - Devam Ediyor

Araştırma Görevlisi, Yıldız Teknik Üniversitesi, İnşaat Fakültesi, 2011 - 2017

### SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Comparative Life Cycle Assessment and Exergy Analysis of Coal- and Natural Gas-Based Ammonia Production**  
ÇETİNKAYA A. Y., Bilgili L., KUZU S. L., Yılmaz F.  
Chemical Engineering and Technology, cilt.46, sa.11, ss.2431-2441, 2023 (SCI-Expanded)
- II. **Application of life cycle assessment of system solution scenarios for municipal solid waste management in Turkey**  
Çetinkaya A. Y., Bilgili L.  
JOURNAL OF MATERIAL CYCLES AND WASTE MANAGEMENT, cilt.1, ss.1-10, 2022 (SCI-Expanded)
- III. **Application fuzzy DEMATEL methodology to investigate some technical parameters of biochemical methane potential (BMP) test produced vegetable waste anaerobic biogas**  
Bashan V., ÇETİNKAYA A. Y.  
ENVIRONMENTAL MONITORING AND ASSESSMENT, cilt.194, sa.9, 2022 (SCI-Expanded)
- IV. **Iron-Copper Bimetallic Nanoparticle for the Removal of Disinfection By-products: Optimization, Kinetic Study, and Life Cycle Assessment**  
Altuntaş K., El Hadki A., BİLGİLİ L., KUZU S. L., ÇETİNKAYA A. Y., DEBİK E.  
WATER AIR AND SOIL POLLUTION, cilt.233, sa.7, 2022 (SCI-Expanded)
- V. **Influential Publications and Bibliometric Approach to Heavy Metal Removals for Water**  
BAŞHAN V., ÇETİNKAYA A. Y.  
WATER AIR AND SOIL POLLUTION, cilt.233, sa.7, 2022 (SCI-Expanded)
- VI. **Analysis of the effects of domestic waste disposal methods on mucilage with life cycle assessment**  
Çetinkaya A. Y., Bilgili L., Sarı M.  
MARINE POLLUTION BULLETIN THE INTERNATIONAL JOURNAL FOR MARINE ENVIRONMENTALISTS, SCIENTISTS, ENGINEERS, ADMINISTRATORS, POLITICIANS AND LAWYERS, cilt.180, ss.113813-113830, 2022 (SCI-Expanded)

- VII. **A Synergistic Assessment of Bio-kinetics and Life Cycle Environmental Impacts of Different Agricultural Biomass Sources in Turkey**  
YETİLMEZSOY K., ÇETİNKAYA A. Y., Bilgili L.  
Waste and Biomass Valorization, cilt.13, sa.5, ss.2651-2671, 2022 (SCI-Expanded)
- VIII. **Development of an MFC-biosensor for determination of Pb+2: an assessment from computational fluid dynamics and life cycle assessment perspectives**  
Cetinkaya A. Y., KUZU S. L., Bilgili L.  
ENVIRONMENTAL MONITORING AND ASSESSMENT, cilt.194, sa.4, 2022 (SCI-Expanded)
- IX. **Removal of Cu(II) ions from aqueous solutions using membrane system and membrane capacitive deionization (MCDI) technology**  
Cetinkaya A. Y., BİLGİLİ L.  
ENVIRONMENTAL MONITORING AND ASSESSMENT, cilt.193, sa.8, 2021 (SCI-Expanded)
- X. **Medical waste management in a mid-populated Turkish city and development of medical waste prediction model**  
Çetinkaya A. Y., KUZU S. L., DEMİR A.  
ENVIRONMENT DEVELOPMENT AND SUSTAINABILITY, cilt.22, sa.7, ss.6233-6244, 2020 (SCI-Expanded)
- XI. **Life cycle assessment of environmental effects and nitrate removal for membrane capacitive deionization technology**  
ÇETİNKAYA A. Y.  
ENVIRONMENTAL MONITORING AND ASSESSMENT, cilt.192, sa.8, 2020 (SCI-Expanded)
- XII. **Evaluation of railway versus highway emissions using LCA approach between the two cities of Middle Anatolia**  
Bilgili L., KUZU S. L., Çetinkaya A. Y., Kumar P.  
SUSTAINABLE CITIES AND SOCIETY, cilt.49, 2019 (SCI-Expanded)
- XIII. **Climatological evaluation in a Central Anatolian city and indirect effects of climatological variation on air quality**  
KUZU S. L., Cetinkaya A. Y.  
Air Quality, Atmosphere and Health, cilt.12, sa.7, ss.847-854, 2019 (SCI-Expanded)
- XIV. **Life Cycle Comparison of Membrane Capacitive Deionization and Reverse Osmosis Membrane for Textile Wastewater Treatment**  
Cetinkaya A. Y., Bilgili L.  
WATER AIR AND SOIL POLLUTION, cilt.230, sa.7, 2019 (SCI-Expanded)
- XV. **Effect of operating parameters on boron removal using a combined system**  
Cetinkaya A. Y.  
Materials Research Express, cilt.6, sa.7, 2019 (SCI-Expanded)
- XVI. **Microbial fuel cell-based biosensor for toxicity testing of Cr6+**  
Çetinkaya A. Y., ÖZKAYA B.  
International Journal of Global Warming, cilt.17, sa.4, ss.347-356, 2019 (SCI-Expanded)
- XVII. **Performance and mechanism of direct As(III) removal from aqueous solution using low-pressure graphene oxide-coated membrane**  
Cetinkaya A. Y.  
Chemical Papers, cilt.72, sa.9, ss.2363-2373, 2018 (SCI-Expanded)
- XVIII. **Life cycle assessment and greenhouse gas emission evaluation from aksaray solid waste disposal facility**  
Çetinkaya A. Y., Bilgili L., KUZU S. L.  
Air Quality, Atmosphere and Health, cilt.11, sa.5, ss.549-558, 2018 (SCI-Expanded)
- XIX. **Phenol removal from synthetic solution using low pressure membranes coated with graphene oxide and carbon**  
Cetinkaya A. Y., ÖZDEMİR O. K.  
CHEMICAL PAPERS, cilt.72, sa.2, ss.327-335, 2018 (SCI-Expanded)
- XX. **Electricity Production and Characterization of High-Strength Industrial Wastewaters in Microbial**

## **Fuel Cell**

- CETINKAYA A. Y., ÖZDEMİR O. K., DEMİR A., ÖZKAYA B.  
APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY, cilt.182, sa.2, ss.468-481, 2017 (SCI-Expanded)
- XXI. **DISPERSION MODELLING OF VOLATILE ORGANIC COMPOUND EMISSIONS FROM ATAKOY WASTEWATER TREATMENT PLANT IN ISTANBUL**  
ÇETİNKAYA A. Y., KUZU S. L.  
JOURNAL OF ENVIRONMENTAL PROTECTION AND ECOLOGY, cilt.18, sa.4, ss.1337-1345, 2017 (SCI-Expanded)
- XXII. **Simultaneous production of bioelectricity and treatment of membrane concentrate in multitube microbial fuel cell**  
KÖROĞLU E. O., Cetinkaya A. Y., ÖZKAYA B., DEMİR A.  
JOURNAL OF BIOSCIENCE AND BIOENGINEERING, cilt.122, sa.5, ss.594-600, 2016 (SCI-Expanded)
- XXIII. **The production of electricity from dual-chambered microbial fuel cell fueled by old age leachate**  
CETINKAYA A. Y., ÖZKAYA B., Taskan E., KARADAĞ D., ÇAKMAKCI M.  
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, cilt.38, sa.11, ss.1544-1552, 2016 (SCI-Expanded)
- XXIV. **Microbial electrochemical technologies with the perspective of harnessing bioenergy: Maneuvering towards upscaling**  
Butti S. K., Velvizhi G., Sulonen M. L. K., Haavisto J. M., KÖROĞLU E. O., Cetinkaya A. Y., Singh S., Arya D., Modestra J. A., Krishna K. V., et al.  
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, cilt.53, ss.462-476, 2016 (SCI-Expanded)
- XXV. **Electricity generation from organic fraction of municipal solid wastes in tubular microbial fuel cell**  
Karlulah A., KÖROĞLU E. O., Manav N., Cetinkaya A. Y., ÖZKAYA B.  
Separation and Purification Technology, cilt.156, ss.502-511, 2015 (SCI-Expanded)
- XXVI. **The development of catalytic performance by coating Pt-Ni on CMI7000 membrane as a cathode of a microbial fuel cell**  
Cetinkaya A. Y., ÖZDEMİR O. K., KÖROĞLU E. O., Hasimoglu A., ÖZKAYA B.  
BIORESOURTE TECHNOLOGY, cilt.195, ss.188-193, 2015 (SCI-Expanded)
- XXVII. **Electricity production by a microbial fuel cell fueled by brewery wastewater and the factors in its membrane deterioration**  
Cetinkaya A. Y., Köroğlu E. O., Manav Demir N., Baysoy D. Y., Ozkaya B., Çakmakçı M.  
Cuihua Xuebao/Chinese Journal of Catalysis, cilt.36, sa.7, ss.1068-1076, 2015 (SCI-Expanded)
- XXVIII. **Novel design of a multitube microbial fuel cell ((UMFC)-F-2) for energy recovery and treatment of membrane concentrates**  
KÖROĞLU E. O., BAYSOY D. Y., CETINKAYA A. Y., OZKAYA B., ÇAKMAKCI M.  
BIOMASS & BIOENERGY, cilt.69, ss.58-65, 2014 (SCI-Expanded)
- XXIX. **Change of surface and structure properties of cation exchange membrane in a microbial fuel cell**  
ÖZKAYA B., DENKTAŞ C., ÇETİNKAYA A. Y., ÇAKMAKCI M., KARADAĞ D., ŞAHİNKAYA E.  
INTERNATIONAL JOURNAL OF GLOBAL WARMING, cilt.6, ss.222-233, 2014 (SCI-Expanded)
- XXX. **Electricity generation from young landfill leachate in a microbial fuel cell with a new electrode material**  
Ozkaya B., Cetinkaya A. Y., ÇAKMAKCI M., KARADAĞ D., ŞAHİNKAYA E.  
BIOPROCESS AND BIOSYSTEMS ENGINEERING, cilt.36, sa.4, ss.399-405, 2013 (SCI-Expanded)

## **Diğer Dergilerde Yayınlanan Makaleler**

- I. **Comparative Life Cycle Assessment of Container Cities and Tent Cities for Earthquake Victims: Environmental Impacts and Sustainability Considerations**  
ÇETİNKAYA A. Y., Bilgili L.  
Circular Economy and Sustainability, cilt.4, sa.1, ss.149-161, 2024 (Scopus)
- II. **Environmental impact assessment of earthquake-generated construction and demolition waste**

### **management: a life cycle perspective in Turkey**

Bilgili L., ÇETİNKAYA A. Y.

Environment Systems and Decisions, 2023 (Scopus)

- III. **Treatment of slaughterhouse industry wastewater with ultrafiltration membrane and evaluation with life cycle analysis**  
Çetinkaya A. Y., Bilgili L.  
Environmental Research & Technology, cilt.5, sa.3, ss.197-201, 2022 (Hakemli Dergi)
- IV. **Life Cycle Comparison of Passenger Air and Rail Transportation**  
BİLGİLİ L., ÇETİNKAYA A. Y., KUZU S. L.  
Environmental Research & Technology, cilt.5, sa.1, ss.44-49, 2022 (Scopus)
- V. **Bio-electroactive fuel cells and their applications**  
Çetinkaya A. Y., Kuzu S. L., Demir A.  
Environmental Research and Technology, cilt.3, sa.4, ss.182-186, 2020 (Hakemli Dergi)
- VI. **Investigation of Biomethane Potential of Dairy Industry Wastewater**  
Cetinkaya A. Y.  
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, cilt.21, sa.2, ss.457-460, 2018 (ESCI)
- VII. **EFFECT OF PRETREATMENT ON ELECTRICITY GENERATION FROM MUNICIPAL SOLID WASTE IN MICROBIAL FUEL CELL**  
Karluvalı A., Cetinkaya A. Y., KÖROĞLU E. O., ÖZKAYA B.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGISI, cilt.33, sa.4, ss.479-488, 2015 (ESCI)
- VIII. **Microbial Fuel Cells for Energy Recovery from Waste**  
KÖROĞLU E. O., ÖZKAYA B., ÇETİNKAYA A. Y.  
International Journal of Energy Science, cilt.4, sa.1, ss.28, 2014 (Hakemsiz Dergi)

### **Kitap & Kitap Bölümleri**

- I. **Investigation of EU Environmental Policies from the Past to the Future in the LCA Perspective**  
BİLGİLİ L., ÇETİNKAYA A. Y., KUZU S. L.  
The Future of the European Union Integration: A Failure or A Success? Future Expectations, Altuğ Günar, Burak Darıcı, Editör, Peter Lang, ss.95-106, 2020
- II. **Investigation of EU Environmental Policies from the Past to the Future in the LCA Perspective**  
ÇETİNKAYA A. Y., BİLGİLİ L., KUZU S. L.  
Future of the European Union Integration A Failure or A Success? Future Expectations, , Editör, Peterlang, ss.95-106, 2020

### **Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar**

- I. **Life cycle assessment of three municipal solid waste management scenarios in İstanbul**  
Çetinkaya A. Y., Bilgili L.  
6th EurAsia Waste Management Symposium 2022, İstanbul, Türkiye, 24 Ekim - 26 Kasım 2022, ss.1-3
- II. **Eco-Indicators for Municipal Waste Management of İstanbul: A Historical Perspective**  
Özkaya B., Demir A., Çetinkaya A. Y., Bilgili L., Karluvalı A.  
IRRC Waste-to-Energy, Vienna, Avusturya, 14 - 15 Ekim 2019, ss.143-152
- III. **Energy, Environment and Sustainable Development**  
ÇETİNKAYA A. Y.  
International Conference on Energy and Sustainable Built Development, 19 - 20 Haziran 2019
- IV. **Production of Electricity from methane by microbial fuel cell system**  
ÇETİNKAYA A. Y.

4th International Hydrogen Technologies Congress, 20 - 23 Haziran 2019

- V. **Treatment of Slaughterhouse Industry Wastewater by Microfiltration and Ultrafiltration Membranes and Use as Agricultural Irrigation**  
ÇETİNKAYA A. Y.  
2nd INTERNATIONAL CONFERENCE ON LIFE AND ENGINEERING SCIENCES, 27 - 29 Haziran 2019
- VI. **Araba Yıkama Atıksularının Tekrar kullanılmasında Ters Osmoz Membran Performansının Değerlendirilmesi**  
ÇETİNKAYA A. Y.  
4th Uluslararası Bilimsel Araştırmalar Kongresi, 14 - 17 Şubat 2019
- VII. **Environment Impact of Waste Management Using Life Cycle Assesment in ISTANBUL**  
ÇETİNKAYA A. Y.  
İCELİS, 26 - 28 Mayıs 2018
- VIII. **Mikrobiyal Yakıt Hücresi İle Elektrik Enerjisi Üretimi ve Biyosensör Olarak Kullanımı**  
ÇETİNKAYA A. Y.  
Eurasian Conference on Biological and Chemical Sciences, 26 - 27 Nisan 2018
- IX. **Çevre Mühendisliğinin Tarihçesi ve Gelişimi**  
ÇETİNKAYA A. Y.  
1. International Symposium on Innoative Approaches in Scientific Studies, 11 - 13 Nisan 2018
- X. **PRODUCTION OF SUSTAINABLE ENERGY VIA INTEGRATION OF DIRECT BOROHYDRIDE**  
ÇETİNKAYA A. Y., ÖZDEMİR O. K., ÖZKAYA B.  
2nd International Energy Engineering Conference, Gaziantep, Türkiye, 12 - 13 Ekim 2017
- XI. **Historical Development in Microbial Fuel Cell Design and Performance in Yildiz Technical University**  
KÖROĞLU E. O., ÇETİNKAYA A. Y., KARLUVALI A., ÖZKAYA B., DEMİR A.  
International Workshop on 'Microbial Electrochemical Technologies for Sustainability: Fuels, Chemicals, Remediation', HAYDARABAD, Hindistan, 28 Şubat 2017
- XII. **Different anode materials for microbial fuel cells**  
ÇETİNKAYA A. Y., KÖROĞLU E. O., ÖZKAYA B., DEMİR A.  
International Workshop on 'Microbial Electrochemical Technologies for Sustainability: Fuels, Chemicals, Remediation', HAYDARABAD, Hindistan, 28 Şubat 2017
- XIII. **Different Anode Materials for Microbial Fuel Cell**  
ÇETİNKAYA A. Y., KÖROĞLU E. O., ÖZKAYA B., DEMİR A.  
international Workshop on 'Microbial Electrochemical Technologies for Sustainability, 28 Şubat 2017
- XIV. **Air Cathode Microbial Fuel Cells with Pt-Co Coated CMI7000 Membrane as the Cathodic Catalyst**  
ÇETİNKAYA A. Y., ÖZDEMİR O. K., ÖZKAYA B., Sulonen M., Puhakka J.  
General Meeting of the International Society for Microbial Electrochemistry and Technology, 3 - 06 Aralık 2016
- XV. **Katot Yüzeyi Pt Ni Katalizörle Kaplanmış CMI 7000 Membranının Mikrobiyal Yakıt Hücresindeki Performansının Değerlendirilmesi**  
ÇETİNKAYA A. Y., ÖZDEMİR O. K., KÖROĞLU E. O., ÖZKAYA B.  
4. ULUSAL MEMBRAN TEKNOLOJİLERİ VE UYGULAMALARI SEMPOZYUMU, Türkiye, 7 - 09 Ekim 2015
- XVI. **The Change Of Surface And Structure Properties Of Cation Exchange Membrane In A Microbial Fuel Cell**  
Çetinkaya A. Y., Denктаş C., Özkaya B., Çakmakçı M., Şahinkaya E., Karadağ D.  
International Conference On Recycling And Reuse , İstanbul, Türkiye, 4 - 06 Haziran 2012, ss.56
- XVII. **Yeni Geliştirilen Çapraz Akışlı Çoklu Tüp Mikrobiyal Yakıt Hücresi İle Evsel Atıksu Akımından Elektrik Enerjisi Üretimi**  
ÖZKAYA B., ÇETİNKAYA A. Y., KÖROĞLU E. O., ÇAKMAKÇI M., KARADAĞ D.  
YTÜ İİAR-GE PROJE PAZARI-ENERJİ VE ÇEVRE TEKNOLOJİLERİ, Türkiye, 14 Mayıs 2012

## Desteklenen Projeler

Çetinkaya A. Y., UFUK 2020 Projesi, Empower Students as the agents of change, 2023 - 2025

KARLUVALI A., TAHERI MOUSAVI S. M., ÇETİNKAYA A. Y., ÖZKAYA B., Yükseköğretim Kurumları Destekli Proje, GÜNEŞ ENERJİLİ DAMITMA SİSTEMİNDE FAZ DEĞİŞİM MALZEMESİNİN ETKİSİ, 2022 - 2023

Kuzu S. L., Çetinkaya A. Y., TÜBİTAK Projesi, Yeni Geliştirilen Entegre Kapasitif Karışım ve Mikrobiyal Yakıt Hücresi Sistemi ile Tuzluluk Gradyanlarından ve Atıksudan Elektrik Enerjisi Üretimi, 2019 - 2020

Çetinkaya A. Y., TÜBİTAK Projesi, Mikro Ölçekli Mikrobiyal Yakıt Hücresinin Toksikite Sensörü Olarak Kullanımının Değerlendirilmesi, 2019 - 2020

Özkaya B., AB Destekli Diğer Projeler, Düşük Maliyetli ve Verimli Mikrobiyal Yakıt Hücresi MYH Malzemeleri ile Atıksulardan Biyoelektrik Üretimi, 2014 - 2017

Karadağ D., TÜBİTAK Projesi, Yüzeyi Kaplanmış Ultrafiltrasyon Membranları ile İçme Suyu Kaynaklarındaki Organik Maddelerin Arıtılabilirliği, 2011 - 2013

## **Metrikler**

Yayın: 58

Atıf (WoS): 370

Atıf (Scopus): 576

H-İndeks (WoS): 11

H-İndeks (Scopus): 13

## **Akademi Dışı Deneyim**

CSIR-Indian Institute of Chemical Technology

Tampere University of Technology