

Asst. Prof. YUSUF OSMAN DONAR

Personal Information

Office Phone: [+90 321 212 9801](tel:+903212129801) Extension: 1378

Email: yodonar@ankara.edu.tr

Other Email: yodonar@gmail.com

Web: <https://avesis.ankara.edu.tr/yodonar>

International Researcher IDs

ScholarID: GJC_0JUAAAAJ

ORCID: 0000-0003-1672-4540

Publons / Web Of Science ResearcherID: ABH-1270-2021

ScopusID: 57188626419

Yoksis Researcher ID: 264617

Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Dr), Turkey 2013 - 2020

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), Turkey 2011 - 2013

Undergraduate, Ankara University, Fen Fakültesi, Kimya Bölümü, Turkey 2007 - 2011

Dissertations

Doctorate, C/TiO₂ kompozit fotokatalizör sentezi ve uygulamaları, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Dr), 2020

Postgraduate, Hidrotermal yöntemle sentezlenen nano metal oksitlerin model biyokütle olarak selüloz pirolizindeki katalitik etkisinin incelenmesi, Ankara University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), 2013

Research Areas

Chemistry, Physical Chemistry, Gaseous Systems, Chemical Kinetics, Composites, nanocomposites, Cellulose and its Derivatives, Fuel Cells, High Temperature Chemistry, Surface Chemistry, Catalysis, Carbon Chemistry, Carbohydrate Chemistry, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Ankara University, Fen Fakültesi, Kimya Bölümü, 2023 - Continues

Lecturer PhD, Ankara University, Fen Fakültesi, Kimya Bölümü, 2017 - 2023

Academic and Administrative Experience

Assistant Coordinator, Ankara University, Fen Fakültesi, Kimya Bölümü, 2023 - Continues

Courses

TEMEL KİMYA I, Undergraduate, 2023 - 2024, 2022 - 2023

BİLGİSAYAR II, Associate Degree, 2022 - 2023, 2021 - 2022

SCIENTIFIC CULTURAL AND SOCIAL ACTIVITIES, Undergraduate, 2022 - 2023

PHYSICAL CHEMISTRY LAB, Undergraduate, 2022 - 2023, 2021 - 2022

FİZİKOKİMYA LABORATUVARI, Undergraduate, 2022 - 2023, 2021 - 2022

BİLİMSSEL KÜLTÜREL VE SOSYAL ETKİNLİKLER, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Synthesis and characterization of ordered mesoporous carbon-based materials for electrochemical detection of environmental pollutants**
Gaber A., BİLGE YÜCEL S., BAYRAMOĞLU D., DONAR Y. O., Sinağ A.
Trends in Environmental Analytical Chemistry, vol.42, 2024 (SCI-Expanded)
- II. **Recent developments and modification strategies in electrochemical sensors based on green nanomaterials for catechol detection**
DONAR Y. O., BİLGE KOÇAK S., Bayramog D., Ozoylumlu B., Ergenekon S., Sinag A.
TRENDS IN ENVIRONMENTAL ANALYTICAL CHEMISTRY, vol.41, 2024 (SCI-Expanded)
- III. **Green catalyst for clean fuel production via hydrodeoxygenation**
BiLge S., DONAR Y. O., Ergenekon S., Özoylumlu B., SINAĞ A.
Turkish Journal of Chemistry, vol.47, no.5, pp.968-990, 2023 (SCI-Expanded)
- IV. **Catalytic evaluation of cellulose pyrolysis by using nanosized metal oxide catalysts**
DONAR Y. O., Uenaln A. T., Ergenekon S., Sinag A.
TURKISH JOURNAL OF CHEMISTRY, vol.47, no.1, pp.116-125, 2023 (SCI-Expanded)
- V. **Synthesis, characterization, modeling and catalytic testing of tungstated zirconia supported Ni catalysts for Hydrodeoxygenation of Guaiacol**
DONAR Y. O., TÜRKŞEN Ö., Ünaln A. T., BAYRAMOĞLU D., Ergenekon S., Dulkadir H., SINAĞ A.
Molecular Catalysis, vol.531, 2022 (SCI-Expanded)
- VI. **Tuning the energy bandgap and nonlinear absorption coefficients of WO_x/ZrO₂ nanocomposite thin films with the role of weight and doping concentration**
Tekin S., KARATAY A., Yıldiz E., DONAR Y. O., SINAĞ A., DULKADİR H., ELMALI A.
JOURNAL OF LUMINESCENCE, vol.247, 2022 (SCI-Expanded)
- VII. **Catalytic pyrolysis of olive oil residue to produce synthesis gas: The effect of bulk and nano metal oxides**
Karadağ E., BiLge S., DONAR Y. O., SINAĞ A.
Turkish Journal of Chemistry, vol.46, no.4, pp.1306-1315, 2022 (SCI-Expanded)
- VIII. **The short-term effects of pyro- and hydrochars derived from different organic wastes on some soil properties**
Jafari Tarf O., Akça M. O., Donar Y. O., Bilge S., Turgay O. C., Sinağ A.
BIOMASS CONVERSION AND BIOREFINERY, vol.12, no.1, pp.129-139, 2022 (SCI-Expanded)
- IX. **Utilisation of lignin as a model biomass component for preparing a highly active photocatalyst under UV and visible light**
DONAR Y. O., Bilge S., SINAĞ A.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, 2020 (SCI-Expanded)
- X. **Effect of Cr/Sb doping and annealing on nonlinear absorption coefficients of SnO₂/PMMA nanocomposite films**
PEPE Y., KARATAY A., DONAR Y. O., Bilge S., Yıldiz E., YÜKSEK M., SINAĞ A., ELMALI A.
MATERIALS CHEMISTRY AND PHYSICS, 2020 (SCI-Expanded)
- XI. **Green synthesis of carbon based biosensor materials from algal biomass for the sensitive detection of vardenafil**
Bilge S., Bakirhan N. K., DONAR Y. O., SINAĞ A., Ozkan S. A., OKUDAN E. Ş.

JOURNAL OF ELECTROANALYTICAL CHEMISTRY, 2020 (SCI-Expanded)

- XII. **Tuning the energy bandgap and nonlinear absorption coefficients of CdO nanocomposite films with doping and annealing process**
PEPE Y., KARATAY A., DONAR Y. O., SINAĞ A., ÜNVER H., ELMALI A.
OPTICAL MATERIALS, vol.103, 2020 (SCI-Expanded)
- XIII. **Thermal annealing and dopant dependence of nonlinear absorption characteristics in ZnO Nanoparticle/PMMA films**
PEPE Y., KARATAY A., DONAR Y. O., Bilge S., ELMALI A., SINAĞ A.
OPTICAL MATERIALS, 2020 (SCI-Expanded)
- XIV. **Turning toxic cigarette butt waste into the sensor material for the sensitive determination of antihypertensive drug trandolapril from its dosage form and biological samples**
Bilge S., Bakirhan N. K., DONAR Y. O., SINAĞ A., Ozkan S. A.
SENSORS AND ACTUATORS B-CHEMICAL, 2019 (SCI-Expanded)
- XV. **Controlling the nonlinear absorption characteristics of TiO₂/carbon nanocomposites on films**
KARATAY A., DONAR Y. O., SINAĞ A., ELMALI A.
OPTICS AND LASER TECHNOLOGY, vol.108, pp.510-514, 2018 (SCI-Expanded)
- XVI. **Effect of metal oxide nanoparticles on the evolution of valuable gaseous products during pyrolysis of Turkish low-rank coal**
Bilge S., DONAR Y. O., SINAĞ A.
JOURNAL OF ANALYTICAL AND APPLIED PYROLYSIS, pp.242-247, 2018 (SCI-Expanded)
- XVII. **TiO₂/Carbon Materials Derived from Hydrothermal Carbonization of Waste Biomass: A Highly Efficient, Low-Cost Visible-Light-Driven Photocatalyst**
DONAR Y. O., Bilge S., SINAĞ A., Pliekhov O.
CHEMCATCHEM, no.5, pp.1134-1139, 2018 (SCI-Expanded)
- XVIII. **Adsorption of anionic and cationic dyes on biochars, produced by hydrothermal carbonization of waste biomass: effect of surface functionalization and ionic strength**
Caglar E., DONAR Y. O., SINAĞ A., Birogul I., Bilge S., Aydinca K., Pliekhov O.
TURKISH JOURNAL OF CHEMISTRY, no.1, pp.86-106, 2018 (SCI-Expanded)
- XIX. **Enhanced photocatalytic activity of carbon and zirconium modified TiO₂**
Pliekhov O., Pliekhova O., DONAR Y. O., SINAĞ A., Tusar N. N., Stangar U. L.
CATALYSIS TODAY, vol.284, pp.215-220, 2017 (SCI-Expanded)
- XX. **Preparation and characterization of agricultural waste biomass based hydrochars**
DONAR Y. O., Caglar E., SINAĞ A.
FUEL, vol.183, pp.366-372, 2016 (SCI-Expanded)
- XXI. **Catalytic effect of tin oxide nanoparticles on cellulose pyrolysis**
DONAR Y. O., SINAĞ A.
JOURNAL OF ANALYTICAL AND APPLIED PYROLYSIS, vol.119, pp.69-74, 2016 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **A Comparison of the Effects of Hydrothermal and Pyrolytic Biochars on Selected Soil Physical, Chemical and Biological Characteristics**
Jafari Tarf O., AKÇA M. O., TURGAY O. C., SINAĞ A., DONAR Y. O.
6th Congress on Soil Water Resources with International Participation, İzmir, Turkey, 12 - 14 November 2019
- II. **Gallic acid and ammonium fluoride functionalized TiO₂ nanoparticles**
Baykal B., DONAR Y. O., BİLGE YÜCEL S., SINAĞ A.
Euroanalysis-2019, İstanbul, Turkey, 1 - 05 September 2019
- III. **A new sensor material from cigarette butt for the sensitive determination of antihypertensive drug trandolapril**
BİLGE YÜCEL S., KARADAŞ BAKIRHAN N., DONAR Y. O., SINAĞ A., ÖZKAN S. A.

Euroanalysis-2019, İstanbul, Turkey, 1 - 05 September 2019

- IV. **A new sensor material from cigarette butt for the sensitive determination of antihypertensive drug trandolapril**
BİLGE S., KARADAŞ BAKIRHAN N., DONAR Y. O., SINAĞ A., ÖZKAN S. A.
EUROANALYSIS2019, 1 - 05 September 2019
- V. **Tar Production From Nano Metal Oxide Catalyzed Coal Pyrolysis.” Nanotechnology And Nanomaterials**
SINAĞ A., DONAR Y. O., BİLGE YÜCEL S.
Nanotechnology and Nanomaterials 2018 (Kiev, Ukrayna), Kiev, Ukraine, 27 - 30 August 2018
- VI. **Wet Torrefaction Of Alkali Lignin-Effects Of Experimental Conditions On The Nano Structure Of Char**
BİLGE YÜCEL S., DONAR Y. O., SINAĞ A.
Nanotechnology And Nanomaterials (nano-2018 Ukrayna/Kiev), Kiev, Ukraine, 27 - 30 August 2018
- VII. **Zeolite/Nano Metal Oxide Composite Catalyst For Biomass Pyrolysis**
SINAĞ A., DONAR Y. O., BİLGE YÜCEL S.
World Chemistry And Organic Chemistry (2018Almanya/Frankfurt), Frankfurt, Germany, 23 September 2018
- VIII. **Nonlinear and Staurable Absorption Characteristic Of TiO₂/ Nanocomposites in PMMA**
KARATAY A., ELMALI A., DONAR Y. O., SINAĞ A., BİLGE YÜCEL S.
Nanotechnology And Nanomaterials (nano-2018 Ukrayna/Kiev), Kiev, Ukraine, 27 - 30 August 2018
- IX. **Effects of Hydrochars Obtained from Different Organic Wastes on Soil Enzyme Activities**
Ommolbanin J. T., AKÇA M. O., DONAR Y. O., TURGAY O. C., SINAĞ A.
Ecology 2018, Kastamonu, Turkey, 19 - 23 June 2018
- X. **Effects of Different Carbonization Processes on Pyrochars and Hydrochars Characteristics**
TARF O. J., AKÇA M. O., DONAR Y. O., TURGAY O. C., SINAĞ A.
International Agricultural Science Congress, 9 - 12 May 2018
- XI. **Nano Metal Oksit Katalizörlerin Düşük Kaliteli Linyit Pirolizine Etkisi**
BİLGE YÜCEL S., DONAR Y. O., SINAĞ A.
2. Ulusal Karbon Konferansı, İstanbul, Turkey, 16 - 17 March 2018
- XII. **Farklı karbonizasyon uygulamaları ile elde edilen biyokömür ve hidrokömürlerin bazı toprak özellikleri üzerine etkileri**
Ommolbanin Jafari T., AKÇA M. O., TURGAY O. C., SINAĞ A., DONAR Y. O.
V. Uluslararası Katılımlı Toprak ve Su Kaynakları Kongresi, Kırklareli, Turkey, 12 - 15 September 2017
- XIII. **Effect of nano metal oxides on coal pyrolysis.**
BİLGE YÜCEL S., DONAR Y. O., SINAĞ A.
Nanotechnology and Nanomaterials 2017 (Chernivtsi, Ukrayna), Chernivtsi, Ukraine, 23 August 2017
- XIV. **Catalytic application of metal oxide (TiO₂ and ZnO) Nanoparticles on Cellulose pyrolysis**
BİLGE YÜCEL S., DONAR Y. O., SINAĞ A.
Nanotechnology and Nanomaterials 2017 (Chernivtsi, Ukrayna), Chernivtsi, Ukraine, 23 August 2017
- XV. **Effect of nano metal oxides on coal pyrolysis**
Bilge S., DONAR Y. O., SINAĞ A.
Nanotechnology and Nanomaterials (Nano-2017), Chernivtsi, Ukraine, 23 - 26 August 2017, pp.290
- XVI. **Catalytic applications of metal oxide (TiO₂ and ZnO) nano particles on cellulose pyrolysis**
Bilge S., DONAR Y. O., SINAĞ A.
Nanotechnology and Nanomaterials (Nano-2017), 23 - 26 August 2017

Supported Projects

Donar Y. O., Bilge Yücel S., Project Supported by Higher Education Institutions, Pestisitlerin hassas tayinine yönelik bimetal katkılı atık temelli iyotermlal karbon modifiye sensör tasarımı ve voltametrik uygulamaları, 2022 - 2025
Semerci N. I., Sınağ A., Donar Y. O., Gökçe Y., TÜBİTAK International Bilateral Joint Cooperation Program Project, Use of Biomass Components Separated by Protic Ionic Liquid Pretreatment in Electrode Material Production and

Supercapacitor Applications, 2022 - 2024

Donar Y. O., Sınağ A., TÜBİTAK International Bilateral Joint Cooperation Program Project, Mikrogözenekli Biyochar Eldesinin Optimizasyonu İçin Olivine Katalizör Varlığında Hidrotermal Atık Biyokütle Karbonizasyonunun Hesaplamalı Akışkanlar Dinamiği İle Simülasyonu, 2021 - 2024

Donar Y. O., Sınağ A., Erdem Gürsan K. A., TUBITAK Project, Biyokütle kaynaklı grafitize karbon malzemelerle modifiye tek kullanımlık elektrotların geliştirilmesi ve invaziv olmayan yöntemle kanser teşhisine yönelik uygulamaları, 2021 - 2023

Sınağ A., Türkşen Ö., Donar Y. O., TUBITAK Project, Biyoyağın Bileşimindeki Oksijenli Bileşiklerin Giderimi İçin Yeni Tip Trimetalik WO_xZrO₂ Destekli Katalizör Sentezi Ve Uygulamaları, 2019 - 2022

Donar Y. O., Sınağ A., Bilge Yücel S., Project Supported by Higher Education Institutions, Farklı karbon kaynaklarından hidrotermal karbonizasyon yöntemiyle sentezlenen malzemelerin elektrokimyasal uygulamaları, 2018 - 2020

Sınağ A., TUBITAK Project, TiO₂'nin Fotokatalitik Özelliklerinin İyileştirilmesinde Destek Malzemesi Olarak Kullanılacak Yeni Tip Kondanse Furanik Yapılı, Karbon Temelli Malzeme (Biyokömür) Sentezi Ve Uygulamaları, 2014 - 2016

Patent

Sınağ A., Donar Y. O., FURFURALIN 2-METİL FURAN'A DÖNÜŞÜMÜ İÇİN Ni-Fe KATKILI TUNGSTEN-ZİRKONYUM OKSİT TABANLI KATALİZÖR, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2021/019920 , Standard Registration, 2021

Sınağ A., Donar Y. O., BİLGE YÜCEL S., Alg Esaslı Karbon Malzemededen Elde Edilen Biyosensör, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2019/20423 , Standard Registration, 2019

SINAĞ A., DONAR Y. O., NANOKATALİZÖRLERİN KULLANILDIĞI BİR BİYOKÜTLE PİROLİZ YÖNTEMİ, Patent, CHAPTER C Chemistry; Metallurgy, 2017

SINAĞ A., DONAR Y. O., HİDROTERMAL KARBONİZASYON TEKNİĞİ İLE FINDIKKABUĞU VE PİRİNADAN FARKLI AMAÇLAR İÇİN KULLANILABİLECEK BİYOKÖMÜR ÜRETİM YÖNTEMİ, Patent, CHAPTER C Chemistry; Metallurgy, 2017

Scientific Refereeing

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Ankara University, Turkey, July 2022

JOURNAL OF ENVIRONMENTAL MANAGEMENT, SCI Journal, June 2022

JOURNAL OF ENVIRONMENTAL MANAGEMENT, SCI Journal, June 2022

JOURNAL OF ENVIRONMENTAL MANAGEMENT, SCI Journal, May 2022

BIOENERGY RESEARCH, SCI Journal, May 2022

ENVIRONMENTAL PROGRESS AND SUSTAINABLE ENERGY, SCI Journal, January 2022

Metrics

Publication: 41

Citation (WoS): 339

Citation (Scopus): 376

H-Index (WoS): 11

H-Index (Scopus): 13