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Research Areas

Natural Sciences

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. **Biosensors for stem cell-based applications: Current trends and future prospects**
Arif T., BİLGE YÜCEL S., UYAR R., ÖZÇELİKAY AKYILDIZ G., Summak G. Y., ÜNAL M. A., YILMAZER AKTUNA A., ÖZKAN S. A.
Microchemical Journal, vol.198, 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. **Human hair rich in pyridinic nitrogen-base DNA biosensor for direct electrochemical monitoring of palbociclib-DNA interaction**
Bilge S., Dogan Topal B., Caglayan M. G., Unal M. A., Nazır H., Atici E. B., Sinağ A., Ozkan S. A.
BIOELECTROCHEMISTRY, vol.148, 2022 (SCI-Expanded)
- V. **Recent advances in electrochemical sensing of cocaine: A review**
Bilge S., DOĞAN TOPAL B., Gürbüz M. M., Yücel A., SINAĞ A., ÖZKAN S. A.
TRAC-TRENDS IN ANALYTICAL CHEMISTRY, vol.157, 2022 (SCI-Expanded)
- VI. **TiO₂/core-shell structured carbon support materials derived from hydrothermal carbonization of waste masks biomass: A green photocatalyst**
Bilge S., SINAĞ A.
Inorganic Chemistry Communications, vol.144, 2022 (SCI-Expanded)
- VII. **Molecularly imprinted polymer (MIP)-Based sensing for detection of explosives: Current perspectives and future applications**
KARADURMUŞ L., Bilge S., SINAĞ A., ÖZKAN S. A.
TrAC - Trends in Analytical Chemistry, vol.155, 2022 (SCI-Expanded)
- VIII. **A novel electrochemical sensor based on magnetic Co₃O₄ nanoparticles/carbon recycled from waste sponges for sensitive determination of anticancer ruxolitinib**

Bilge S., KARADURMUŞ L., Atici E. B., SINAĞ A., ÖZKAN S. A.

SENSORS AND ACTUATORS B-CHEMICAL, vol.367, 2022 (SCI-Expanded)

- IX. **Investigation of the interaction between anticancer drug ibrutinib and double-stranded DNA by electrochemical and molecular docking techniques**
Bilge S., DOĞAN TOPAL B., Taskin Tok T., Atici E. B., SINAĞ A., ÖZKAN S. A.
Microchemical Journal, vol.180, 2022 (SCI-Expanded)
- X. **Electrochemical Investigation of Ruxolitinib: Sensitive Voltammetric Assay in Drug Product and Human Serum by Using Different Solid Electrodes**
Bilge S., KARADURMUŞ L., Atici E. B., SINAĞ A., ÖZKAN S. A.
ELECTROANALYSIS, vol.34, no.8, pp.1318-1328, 2022 (SCI-Expanded)
- XI. **Recent advances in flower-like nanomaterials: Synthesis, characterization, and advantages in gas sensing applications**
Bilge S., DOĞAN TOPAL B., Yücel A., SINAĞ A., ÖZKAN S. A.
TrAC - Trends in Analytical Chemistry, vol.153, 2022 (SCI-Expanded)
- XII. **New analytical strategies Amplified with 2D carbon nanomaterials for electrochemical sensing of food pollutants in water and soils sources**
Özçelikay G., Karadurmuş L., Bilge S., Sınağ A., Özkan S. A.
Chemosphere, vol.296, 2022 (SCI-Expanded)
- XIII. **The role and the place of ionic liquids in molecularly imprinted polymer-based electrochemical sensors development for sensitive drug assay**
Cetinkaya A., Bilge S., KARADURMUŞ L., SINAĞ A., ÖZKAN S. A.
TrAC - Trends in Analytical Chemistry, vol.147, 2022 (SCI-Expanded)
- XIV. **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)
- XV. **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., Sınağ A.
BIOMASS CONVERSION AND BIOREFINERY, vol.12, no.1, pp.129-139, 2022 (SCI-Expanded)
- XVI. **Green synthesis and characterization of carbon-based materials for sensitive detection of heavy metal ions**
Bilge S., KARADURMUŞ L., SINAĞ A., ÖZKAN S. A.
TRAC-TRENDS IN ANALYTICAL CHEMISTRY, vol.145, 2021 (SCI-Expanded)
- XVII. **Rod-like CuO nanoparticles/waste masks carbon modified glassy carbon electrode as a voltammetric nanosensor for the sensitive determination of anti-cancer drug pazopanib in biological and pharmaceutical samples**
Bilge S., DOĞAN TOPAL B., Atici E. B., SINAĞ A., ÖZKAN S. A.
SENSORS AND ACTUATORS B-CHEMICAL, vol.343, 2021 (SCI-Expanded)
- XVIII. **Recycled algae-based carbon materials as electroconductive 3D printed skeletal muscle tissue engineering scaffolds**
Bilge S., Ergene E., Talak E., Gokyer S., DONAR Y. O., SINAĞ A., HURİ P.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE, vol.32, no.7, 2021 (SCI-Expanded)
- XIX. **Tuning the linear and nonlinear optical absorption properties of ZnS/hydrochar nanocomposites by concentration of nanoparticles**
Tekin S., KARATAY A., DONAR Y. O., Bilge S., Yildiz E., SINAĞ A., ELMALI A.
OPTICAL MATERIALS, vol.113, 2021 (SCI-Expanded)
- XX. **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)

- XXI. **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., Yildiz E., YÜKSEK M., SINAĞ A., ELMALI A.
MATERIALS CHEMISTRY AND PHYSICS, 2020 (SCI-Expanded)
- XXII. **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)
- XXIII. **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)
- XXIV. **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)
- XXV. **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)
- XXVI. **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)
- XXVII. **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)

Refereed Congress / Symposium Publications in Proceedings

- I. **Yeşil Sentez Tekniği ile Atık Maskelerden Geri Dönüştürülmüş Karbonların Destek Malzemesi Olarak Kullanıldığı ZnO Nanoparçacıklarının Görünür Işık Altında Fotokatalitik Özelliklerinin İncelenmesi**
BİLGE YÜCEL S.
34. Ulusal Kimya Kongresi, Yalova, Turkey, 1 - 06 September 2022
- II. **Electrochemical Analysis of DNA Methylation using various carbon working electrodes**
Doğan Topal B., Bilge Yücel S., Gürbüz M. M., Özkan S. A.
12th International Symposium of Drug Analysis 32nd International Symposium on Pharmaceutical and Biomedical Analysis, Mons, Belgium, 11 - 14 September 2022, pp.126
- 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. **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
- 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. **Nano Metal Oksit Katalizörlerin Düşük Kaliteli Linyit Piroлизine Etkisi**
BİLGE YÜCEL S., DONAR Y. O., SINAĞ A.
2. Ulusal Karbon Konferansı, İstanbul, Turkey, 16 - 17 March 2018
- X. **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
- XI. **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

Supported Projects

Donar Y. O., Bilge Yücel S., Project Supported by Higher Education Institutions, Pestisitlerin hassas tayinine yönelik bimetal katkılı atık temelli iyonotermal karbon modifiye sensör tasarımı ve voltametrik uygulamaları, 2022 - 2025
Akçalı K. C., Yılmaz Aktuna A., Ünal M. A., Bitirim C. V., Kıran F., Kaya B., Oto Ç., Kiliç P., Özkan S. A., Kıyan Z., et al., TUBITAK Project, Regenerative and Restorative Medicine Research and Practice, 2022 - 2025

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

Doğan Topal B., TUBITAK Project, Epigenetik Biyobelirteçler 5-Metilsitozin ve 5-Hidroksimetilsitozinin Analizleri için 3D Pd-MoS₂-rGO Kombinasyonuna Dayalı Nanosensor Tasarımı, 2022 - 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

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

Bilge Yücel S., Project Supported by Other Official Institutions, Altındağ Bilim Festivali: Bilimin Aydınlığında Ulucanlar, 2020 - 2021

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

Patent

Sınağ A., BİLGE YÜCEL S., ATIK MASKELELERDEN FOTOKATALİZÖRLER İÇİN DESTEK MALZEMESİ ÜRETİM YÖNTEMİ, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2021/019264 , Standard Registration, 2021
Sınağ A., Donar Y. O., BİLGE YÜCEL S., Alg Esaslı Karbon Malzemeden Elde Edilen Biyosensör, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2019/20423 , Standard Registration, 2019

Metrics

Publication: 38
Citation (WoS): 292
Citation (Scopus): 347
H-Index (WoS): 12
H-Index (Scopus): 12

Scholarships

2218-Yurt İi Doktora Sonrası Arařtırma Burs Programı, TUBITAK, 2023 - 2025
2250 Lisansüstü Bursları Performans Programı, TUBITAK, 2022 - 2023
2211-A Genel Yurt İi Doktora Burs Programı, TUBITAK, 2019 - 2023
100/2000 YÖK Doktora Bursu, YOK, 2018 - 2021
Doktora Başarı Bursu, Other Government Agencies, 2018 - 2018
Yüksek Lisans Başarı Bursu, Other Government Agencies, 2016 - 2017
Lisans Projesi Başarı Bursu, Other Government Agencies, 2014 - 2014