

## Asst. Prof. AYŞE DEMİRBAŞ

### Personal Information

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### Education Information

Post Doctorate, Erciyes University, Eczacılık Fakültesi, Kimya/ Analitik Kimya, Turkey 2018 - 2019

Doctorate, University of Florida, College Of Agricultural And Life Science, Agricultural And Biological Engineering , United States Of America 2012 - 2016

### Certificates, Courses and Trainings

Education Management and Planning, Avrupa Birliği Horizon 2020 Programı Proje Yazma Eğitimi, Sabancı Üniversitesi- Recep Tayyip Erdoğan Üniversitesi, 2020

Other, 1512 TUBITAK BIGG (BIREYSEL GENÇ GİRİŞİMCİ DESTEĞİ), İSTANBUL TEKNİK ÜNİVERSİTESİ, 2018

### Dissertations

Doctorate, Red Cabbage Extract as a Natural Antioxidant with Application to Packaged Fresh Tilapia and Enhancement of Silver and Iron Nanoparticles , University of Florida, College Of Agricultural And Life Sciences, Agricultural And Biological Engineering, 2016

### Research Areas

Agricultural Sciences, Seafood, Seafood Processing Technologies, Food Engineering, Food Technology, Food Biotechnology, Food Packaging, Life Sciences, Biotechnology, Biosensor, Chemistry, Analytical Chemistry, Food Analysis, Natural Sciences, Engineering and Technology

### Courses

Gıda Kodeksi ve Uygulamaları, Undergraduate, 2021 - 2022

Gıda Paketleme Sanayisinde Nanoteknoloji, Postgraduate, 2020 - 2021

Antioksidanlar ve gıda uyulamaları, Postgraduate, 2020 - 2021

Su ürünleri ekonomisi ve pazarlama, Undergraduate, 2020 - 2021

### Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

1. Synthesis of taurine-Cu-3(P04)(2) hybrid nanoflower and their peroxidase-mimic and antimicrobial

## properties

Yilmaz S. G. , DEMİRBAŞ A., Karaagac Z., Dadi S., Celik C., Yusufbeyoglu S., ILDIZ N., Mandal A. K. , ÇİMEN B., ÖÇSOY İ.  
JOURNAL OF BIOTECHNOLOGY, vol.343, pp.96-101, 2022 (Journal Indexed in SCI)

- II. **Investigation of ellagic acid rich-berry extracts directed silver nanoparticles synthesis and their antimicrobial properties with potential mechanisms towards Enterococcus faecalis and Candida albicans**  
Ekrikaya S., Yilmaz E., Çelik Ç., Demirbuğa S., Ildız N., Demirbaş A., Öçsoy İ.  
Journal Of Biotechnology, vol.341, pp.155-162, 2021 (Journal Indexed in SCI Expanded)
- III. **Comparison Study of Synthesized Red (or Blood) Orange Peels and Juice Extract-Nanoflowers and Their Antimicrobial Properties on Fish Pathogen (Yersinia ruckeri)**  
DEMİRBAŞ A.  
INDIAN JOURNAL OF MICROBIOLOGY, vol.61, no.3, pp.324-330, 2021 (Journal Indexed in SCI)
- IV. **Green synthesis of silver nanoparticles using aqueous extracts of three Sideritis species from Turkey and evaluations bioactivity potentials**  
Ceylan R., DEMİRBAŞ A., ÖÇSOY İ., Aktumsek A.  
SUSTAINABLE CHEMISTRY AND PHARMACY, vol.21, 2021 (Journal Indexed in SCI)
- V. **Heavy metal concentration levels and biometric analysis of Liocarcinus depurator from different locations on the western Black Sea coast of Turkey**  
DEMİRBAŞ A., GÖZLER A. M. , BAYTAŞOĞLU H., KAYA C.  
ENVIRONMENTAL MONITORING AND ASSESSMENT, vol.193, no.6, 2021 (Journal Indexed in SCI)
- VI. **One step preparation of stable gold nanoparticle using red cabbage extracts under UV light and its catalytic activity**  
Unal I. S. , Demirbas A., Onal I., ILDIZ N., ÖÇSOY İ.  
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY B-BIOLOGY, vol.204, 2020 (Journal Indexed in SCI)
- VII. **Preparation of biocompatible and stable iron oxide nanoparticles using anthocyanin integrated hydrothermal method and their antimicrobial and antioxidant properties**  
Demirbas A., Kislakci E., Karaagac Z., Onal I., ILDIZ N., ÖÇSOY İ.  
MATERIALS RESEARCH EXPRESS, vol.6, no.12, 2019 (Journal Indexed in SCI)
- VIII. **Synthesis of Long-Term Stable Gold Nanoparticles Benefiting from Red Raspberry (Rubus idaeus), Strawberry (Fragaria ananassa), and Blackberry (Rubus fruticosus) Extracts-Gold Ion Complexation and Investigation of Reaction Conditions**  
Demirbas A., Buyukbezirci K., Celik C., Kislakci E., Karaagac Z., Gokturk E., KATI A., ÇİMEN B., YILMAZ V., ÖÇSOY İ.  
ACS OMEGA, vol.4, no.20, pp.18637-18644, 2019 (Journal Indexed in SCI)
- IX. **Biosynthesis of silver nanoparticles and their versatile antimicrobial properties**  
SOME S., SEN I. K. , MANDAL A., ASLAN T., ÜSTÜN Y., Yilmaz E. S. , KATI A., Demirbas A., MANDAL A. K. , ÖÇSOY İ.  
MATERIALS RESEARCH EXPRESS, vol.6, no.1, 2019 (Journal Indexed in SCI)
- X. **Cryoconcentration of flavonoid extract for enhanced biophotovoltaics and pH sensitive thin films**  
Demirbas A., Groszman K., PAZMINO-HERNANDEZ M., VANEGAS D. C. , WELT B., Hondred J. A. , Garland N. T. , Claussen J. C. , MCLAMORE E. S.  
BIOTECHNOLOGY PROGRESS, vol.34, no.1, pp.206-217, 2018 (Journal Indexed in SCI)
- XI. **Formation of functional nanobiocatalysts with a novel and encouraging immobilization approach and their versatile bioanalytical applications**  
Celik C., Tasdemir D., Demirbas A., KATI A., Gul O. T. , ÇİMEN B., ÖÇSOY İ.  
RSC ADVANCES, vol.8, no.45, pp.25298-25303, 2018 (Journal Indexed in SCI)
- XII. **Anthocyanins-rich berry extracts directed formation of Ag NPs with the investigation of their antioxidant and antimicrobial activities**  
Demirbas A., YILMAZ V., ILDIZ N., Baldemir A., ÖÇSOY İ.  
JOURNAL OF MOLECULAR LIQUIDS, vol.248, pp.1044-1049, 2017 (Journal Indexed in SCI)
- XIII. **Formation of Matricaria chamomilla extract-incorporated Ag nanoparticles and size-dependent enhanced antimicrobial property**  
Dogru E., Demirbas A., Altinsoy B., DUMAN F., ÖÇSOY İ.

JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY B-BIOLOGY, vol.174, pp.78-83, 2017 (Journal Indexed in SCI)

- XIV. **Green synthesis with incorporated hydrothermal approaches for silver nanoparticles formation and enhanced antimicrobial activity against bacterial and fungal pathogens**

ÖÇSOY İ., Demirbaş A., MCLAMORE E. S. , Altinsoy B., ILDIZ N., Baldemir A.

JOURNAL OF MOLECULAR LIQUIDS, vol.238, pp.263-269, 2017 (Journal Indexed in SCI)

- XV. **Biosynthesis of red cabbage extract directed Ag NPs and their effect on the loss of antioxidant activity**

Demirbaş A., Welt B. A. , Öçsoy I.

MATERIALS LETTERS, vol.179, pp.20-23, 2016 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **Comparison Study of Morphologic Structures of Synthesized Hybrid Nanoflowers Using Goldenberry / Cape gooseberry (*Physalis peruviana*) and Their Antimicrobial Activity on Food Pathogens**

Demirbaş A.

JOURNAL OF ANATOLIAN ENVIRONMENTAL AND ANIMAL SCIENCES, vol.6, no.2, pp.157-161, 2021 (National Refreed University Journal)

- II. **Designing New Multifunctional Food Pads Using Red Cabbage (*Brassica oleracea*) Extract**

Demirbaş A.

Journal of Anatolian Environmental and Animal Sciences, vol.5, no.3, pp.419-424, 2020 (National Refreed University Journal)

- III. **Antimicrobial and catalytic activity of citrus fruits peels mediated nano-flowers**

Demirbaş A.

J. Biol. Macromol., vol.20, no.2, pp.41-51, 2020 (Refereed Journals of Other Institutions)

- IV. **Red Cabbage Extracts as Inhibitors of Lipid Oxidation in Fresh Minced Tilapia (*Nile perch*) During Refrigerated Storage**

DEMİRBAŞ A.

Turkish Journal of Agriculture and Forestry, vol.8, no.1, pp.81-88, 2020 (Other Refereed National Journals)

- V. **Effect of Red Cabbage Extract on Minced Nile Perch Fish Patties Vacuum Packaged in High and Low Oxygen Barrier Films**

DEMİRBAŞ A., yağız y., boz z., welt b. a. , McLamore E. S. , marshall m., pelletier w.

Journal of Applied Packaging Research, vol.9, pp.35-46, 2016 (Refereed Journals of Other Institutions)

## Books & Book Chapters

- I. **Synthesis of Metallic and Metal Oxide Nanomaterials**

Demirbaş A., Karaytug T., Arabacı İstifli N., Yilmaz E. S. , Ocsoy I.

in: Green Synthesis of Nanomaterials for Bioenergy Applications, Neha Srivastava, Manish Srivastava, P. K. Mishra, Vijai Kumar Gupta, Editor, John Wiley & Sons, West Sussex, UK , New Jersey, pp.99-123, 2020

- II. **Nanomaterials for Enzyme Immobilization**

Arabacı İstifli N., Karaytug T., Demirbaş A., Ocsoy I., Kati A.

in: Green Synthesis of Nanomaterials for Bioenergy Applications, Neha Srivastava, Manish Srivastava, P. K. Mishra, Vijai Kumar Gupta, Editor, John Wiley & Sons, West Sussex, UK , New Jersey, pp.165-190, 2020

## Refereed Congress / Symposium Publications in Proceedings

- I. **Synthesis and Characterization of Flower Shaped Magnetic Nanostructures From Amino Acids**

**(Glycin and Phenilalanin)**

DEMİRBAŞ A., KARSLI B.

6th International Zeugma Conference on Scientific Researches, Gaziantep, Turkey, 19 - 20 June 2021, pp.156-160

- II. **Çilek Ekstresinden Tek Basamakta Sentezlenen Gümüş Nanopartiküllerin Antimikrobiyal Özelliklerinin Endodontik Patojenler Üzerine Etkisi**  
Yılmaz E., DEMİRBAŞ A., Celik C., Ildiz N., Demirbuga S., Ocsoy I.  
ERDIS 2020, Kayseri, Turkey, 26 February - 29 May 2020, pp.160-161
- III. **Preparation of Ag@GO nanocomposite using the Antarctic endemic lichenized fungus Umbilicaria antarctica extract and investigation of its antimicrobial properties.**  
HALICI M. G. , KOCA F. D. , ÖÇSOY İ., DEMİRBAŞ A.  
Nanotechnology and Nanomaterials (NANO-2019), Lviv, Ukraine, 27 - 30 September 2019
- IV. **Synthesis of Orange Peel Extract Nanoflowers and Its Antimicrobial Properties on Bacterial Fish Pathogen (Yersinia ruckeri)**  
DEMİRBAŞ A.  
5 th ICNES (International Congress on Natural and Engineering Sciences), İstanbul, Turkey, 27 - 30 August 2019
- V. **Biosynthesis of Ag@GO nanocomposite using the colchicine and evaluation of its antimicrobial properties.**  
DEMİRBAŞ A., öçsoy i., Koca F. D. , Halici M. G.  
Nanotechnology and Nanomaterials (NANO-2019), Lviv, Ukraine, 27 - 30 August 2019
- VI. **Antimicrobial and Peroxidase-mimicking Activity of Nano-flowers Synthesized Using Sweet Lemon and Lemon peels**  
DEMİRBAŞ A.  
5 th International Agriculture Congress, İstanbul, Turkey, 21 - 24 August 2019
- VII. **Synthesis of mannanase hybrid nanocomposite and investigation of its stain removal performance.**  
ÖÇSOY İ., YILMAZ V., ÇİMEN B., DEMİRBAŞ A.  
3rd International Mediterranean Science and Engineering Congress (IMSEC), 24 - 26 October 2018
- VIII. **Çiçek Şekli Hibrid Nano Yapıların Standard Bitki Molekülleri ile Sentezlenmesi ve Antimikrobiyal, Peroksidaz Benzeri Aktivitelerinin İncelenmesi**  
DEMİRBAŞ A.  
3rd International Mediterranean Science and Engineering Congress (IMSEC 2018), Adana, Turkey, 24 - 26 October 2018, pp.1-5
- IX. **Effect of Red Cabbage Extract on Minced Nile Perch Fish Patties Vacuum Packaged in High and Low Oxygen Barrier Films**  
DEMİRBAŞ A.  
2nd International Mediterranean Science Engineering Congress, Adana, Turkey, 25 - 27 October 2017, pp.22
- X. **Green Synthesis of Ag NPs Using Extract of Red Cabbage (Brassica oleracea var. capitata) and Their Effect on Antioxidant Activity**  
DEMİRBAŞ A., ÖÇSOY İ., WELT B. A.  
NANOTR-13 13th Nanoscience and Nanotechnology Conference, 22 October 2017 - 25 January 2018
- XI. **Green synthesis of Silver Nanoparticles using Berries ((Strawberry (Fragaria vesca), Raspberry (Rubus idaeus), Blackberry (Rubus fruticosus)) and evaluation of their antimicrobial activity**  
DEMİRBAŞ A.  
2nd International Mediterranean Science Engineering Congress, Adana, Turkey, 25 - 27 October 2017, pp.21
- XII. **Matricaria chamomilla extract mediated synthesis of silver nanoparticle and its antibacterial activity**  
DEMİRBAŞ A., DOĞRU E., ALTINSOY B., DUMAN F., ÖÇSOY İ.  
INESEC 2017 INTERNATIONAL ENGINEERING CONFERENCE (IEC), 19 - 21 October 2017
- XIII. **DETERMINATION OF QUALITY AND SHELF-LIFE EXTENSION OF REFRIGERATED MINCED TILAPIA (NILE PERCH) USING RED CABBAGE (BRASSICA OLERACEA) EXTRACTS**  
DEMİRBAŞ A., WELT B. A. , Marshall M.  
INESEC 2017 INTERNATIONAL ENGINEERING CONFERENCE (IEC), 19 - 21 October 2017

## Other Publications

- I. **Red Cabbage Extract as a Natural Antioxidant with Application to Packaged Fresh Tilapia and Enhancement of Silver and Iron Nanoparticles**

DEMİRBAŞ A.

Other, pp.1-99, 2016

## Supported Projects

DEMİRBAŞ A., KARSLI B., Project Supported by Higher Education Institutions, Liocarcinus depurator kullanılarak metalik nanokompozitlerin sentezlenmesi antimikrobiyal antifungal antioksidant ve katalitik aktivitelerinin incelenmesi, 2020 - Continues

DEMİRBAŞ A., ÖÇSOY İ., KARSLI B., Project Supported by Higher Education Institutions, Aminoasitlerden (Glisin, Fenilalanin) çiçek şekilli manyetik nanoyapıların sentezlenmesi katalitik aktivitesinin ve endüstriyel boyaların giderilmesi amacı ile kullanılabilirliğinin araştırılması, 2020 - 2021

Demirbaş A., Oral M., Baytaşoğlu H., TUBITAK Project, Temiz Deniz, Temiz Dünya!, 2019 - 2020

DEMİRBAŞ A., KAÇAR Z. Z. , Project Supported by Higher Education Institutions, Kırmızı lahana Brassica oleracea var capitata L ekstraktı kullanılarak metalik çiçek şekilli hibrid nano yapıların sentezlenmesi mikrobiyal katalitik aktivitelerinin incelenmesi ve bu yapıların pH indikatör fonksiyonu yüklenmiş absorban pede uygulanması, 2018 - 2020

DEMİRBAŞ A., ER A., KAÇAR Z. Z. , Project Supported by Higher Education Institutions, Çiçek şekilli hibrid nano yapıların standard bitki molekülleri ile sentezlenmesi ve bunların antimikrobiyal, peroksidaz benzeri aktivitelerinin incelenmesi, 2018 - 2018

## Patent

Demirbaş A., ÇOK FONKSİYONLU BİR GIDA PEDİ, Patent, CHAPTER A Human Needs, The Invention Registration Number: 2020/16794 , Standard Registration, 2022

Demirbaş A., Zengin besin içeriğine sahip bir balkabağı pestili., Utility patents, CHAPTER A Human Needs, The Invention Registration Number: TR 2019 09465 Y , Standard Registration, 2021

## Edit Congress and Symposium Activities

Nanotechnology and Nanomaterials (NANO 2019), Attendee, Ukraine, 2019

5 th ICNES (International Congress on Natural and Engineering Sciences), Attendee, Turkey, 2019

3rd International Mediterranean Science and Engineering Congress (IMSEC 2018), Attendee, Adana, Turkey, 2018

NanoTR 13, Attendee, Antalya, Turkey, 2017

The International Engineering Conference (IEC 2017), Attendee, Turkey, 2017

2nd International Mediterranean Science and Engineering Congress (IMSEC 2017), Attendee, Adana, Turkey, 2017

Institute of Food Technologists (IFT 2016), Attendee, Illinois, United States Of America, 2016

## Citations

Total Citations (WOS):318

h-index (WOS):9

## Scholarships

National Postdoctoral Research Scholarship Programme, TUBITAK, 2018 - 2019  
YLSY – Yurtdışı Dil Eğitimi ve Lisansüstü Eğitim, Ministry of Education, 2010 - 2016