

# Öğr. Gör. Dr. İPEK BAYRAM

## Kişisel Bilgiler

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## Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: HNQ-7355-2023

ScopusID: 57218582752

## Eğitim Bilgileri

Bütünleşik Doktora, University of Massachusetts Amherst, College of Natural Sciences, Food Science, Amerika Birleşik Devletleri 2019 - 2023

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Gıda Mühendisliği Bölümü, Türkiye 2014 - 2018

## Sertifika, Kurs ve Eğitimler

Diğer, Current research in food science webinar series 3: oil foams: from design to applications, Elsevier, 2024

Diğer, Working with mice in research settings, CITI Program, 2023

Diğer, Working with the IACUC - Investigators, staff and students, CITI Program, 2023

Diğer, Physical science responsible conduct of research, CITI Program, 2023

Diğer, Lipidomics minimal reporting checklist, American Oil Chemists` Society, 2023

Diğer, New sample preparation tips and tricks for the extraction of polar analytes, Phenomenex, 2022

Diğer, Emerging microbial approaches to produce sustainable and functional fats for food applications, American Oil Chemists` Society, 2022

Diğer, Five basic chromatography tools for LC or LC-MS method development, Phenomenex, 2022

Diğer, Fall back to basics: Chemistry, LC systems, MS systems, informatics, service, Waters Corporation, 2022

Diğer, Tips and tricks for troubleshooting common HPLC/UHPLC challenges, American Oil Chemists` Society, 2022

Diğer, Decrypting liquid chromatography variation: Achieving reproducibility in results, Phenomenex, 2021

Diğer, Surface science online course, Kruss, 2020

Diğer, English for academic purposes, Ohio University, 2019

Diğer, BRC FOOD V.7 global food safety, FDE R&D Food Engineering Services , 2018

## Yaptığı Tezler

Bütünleşik Doktora, Analysis of antioxidant synergism and its mechanisms in different food systems, University of Massachusetts Amherst, College of Natural Sciences, Food Science, 2023

## Araştırma Alanları

Gıda Mühendisliği, Gıda Bilimleri, Gıda Kimyası

## Akademik Unvanlar / Görevler

Öğretim Görevlisi Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Gıda Mühendisliği Bölümü, 2024 - Devam Ediyor

Araştırmacı, University of Massachusetts Amherst, College of Natural Sciences, Food Science, 2023 - 2024

Araştırma Görevlisi, University of Massachusetts Amherst, College of Natural Sciences, Food Science, 2019 - 2023

## Verdiği Dersler

Food and Health, Lisans, 2024 - 2025

Food Chemistry, Lisans, 2024 - 2025

## Jüri Üyelikleri

Ödül, Edwin N. Frankel Best Paper Award, American Oil Chemists' Society, Eylül, 2022

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

- I. A machine learning-guided modeling approach to the kinetics of  $\alpha$ -tocopherol and myricetin synergism in bulk oil oxidation  
Parra-Escudero C., Bayram I., Decker E. A., Singh S., Corvalan C., Lu J.  
FOOD CHEMISTRY, cilt.463, sa.4, ss.1-7, 2024 (SCI-Expanded)
- II. A strategy to minimize the chlorophyll content in the phenolic extract of sugar beet leaves: Can this extract work as a natural antioxidant in vegetable oils?  
Ebrahimi P., Bayram I., Mihaylova D., Lante A.  
FOOD AND BIOPROCESS TECHNOLOGY, cilt.2024, ss.1-14, 2024 (SCI-Expanded)
- III. Antioxidant and prooxidant activity of acid-hydrolyzed phenolic extracts of sugar beet leaves in oil-in-water emulsions  
Ebrahimi P., Bayram I., Lante A., Decker E. A.  
JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, 2024 (SCI-Expanded)
- IV. Acid-hydrolyzed phenolic extract of parsley (*Petroselinum crispum* L.) leaves inhibits lipid oxidation in soybean oil-in-water emulsions  
Ebrahimi P., Bayram I., Lante A., Decker E. A.  
FOOD RESEARCH INTERNATIONAL, cilt.187, 2024 (SCI-Expanded)
- V. Analysis of the mechanism of antioxidant synergism between  $\alpha$ -tocopherol and myricetin in bulk oil  
Bayram I., Decker E. A.  
JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, cilt.101, sa.5, ss.477-492, 2024 (SCI-Expanded)
- VI. Mathematical Modeling of Alpha-Tocopherol Early Degradation Kinetics to Predict the Shelf-Life of Bulk Oils  
Bayram I., Parra-Escudero C., Decker E. A., Lu J.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, cilt.72, sa.9, ss.4939-4946, 2024 (SCI-Expanded)
- VII. Oxidative stability of emulsions made with self-extracted oil from euryhaline microalgae *Spirulina* and *Scenedesmus*  
Kaur M., Bhatia S., Bayram I., Decker E. A., Phutela U. G.

- ALGAL RESEARCH-BIOMASS BIOFUELS AND BIOPRODUCTS, cilt.75, 2023 (SCI-Expanded)
- VIII. **Synergistic Mechanisms of Interactions between Myricetin or Taxifolin with  $\alpha$ -Tocopherol in Oil-in-Water Emulsions**  
 Bayram İ., Laze A., Decker E. A.  
 JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, cilt.71, sa.24, ss.9490-9500, 2023 (SCI-Expanded)
- IX. **Underlying mechanisms of synergistic antioxidant interactions during lipid oxidation**  
 Bayram İ., Decker E. A.  
 TRENDS IN FOOD SCIENCE & TECHNOLOGY, cilt.133, ss.219-230, 2023 (SCI-Expanded)
- X. **Enzymatic Modification of Lecithin for Improved Antioxidant Activity in Combination with Tocopherol in Emulsions and Bulk Oil**  
 Culler M. D., Bayram İ., Decker E. A.  
 JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, cilt.70, sa.41, ss.13404-13412, 2022 (SCI-Expanded)
- XI. **Determination of antioxidant synergism between tocopherols and myricetin in bulk oil.**  
 Bayram İ., Decker E. A.  
 JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, ss.120, 2022 (SCI-Expanded)
- XII. **Enzymatic modification of lecithin for improved antioxidant activity in combination with tocopherol in emulsions and bulk oil.**  
 Culler M., Decker E. A., Bayram İ.  
 JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, ss.126, 2022 (SCI-Expanded)
- XIII. **Improvement of stability and bioaccessibility of  $\beta$ -carotene by curcumin in pea protein isolate-based complexes-stabilized emulsions: Effect of protein complexation by pectin and small molecular surfactants**  
 Guo Q., Bayram İ., Shu X., Su J., Liao W., Wang Y., Gao Y.  
 FOOD CHEMISTRY, cilt.367, 2022 (SCI-Expanded)
- XIV. **Why Does Lipid Oxidation in Foods Continue to Be Such a Challenge?**  
 Decker E.  
 JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, ss.6, 2021 (SCI-Expanded)
- XV. **Ability of Sodium Dodecyl Sulfate (SDS) Micelles to Increase the Antioxidant Activity of  $\alpha$ -Tocopherol**  
 Inchingolo R., Bayram İ., ULUATA S., Kiralan S. S., Rodriguez-Estrada M. T., McClements D. J., Decker E. A.  
 JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, cilt.69, sa.20, ss.5702-5708, 2021 (SCI-Expanded)
- XVI. **Fabrication and characterization of curcumin-loaded pea protein isolate-surfactant complexes at neutral pH**  
 Guo Q., Bayram İ., Zhang W., Su J., Shu X., Yuan F., Mao L., Gao Y.  
 FOOD HYDROCOLLOIDS, cilt.111, 2021 (SCI-Expanded)
- XVII. **Development of pea flour based active films produced through different homogenization methods and their effects on lipid oxidation**  
 YILDIZ E., Bayram İ., Sumnu G., SAHİN S., Ibis O. I.  
 FOOD HYDROCOLLOIDS, 2021 (SCI-Expanded)

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

- I. **Optimization of phenolic extracts of sugar beet leaves with minimal chlorophyll content using response surface methodology (RSM) to enhance the oxidative stability of different oils**  
 Ebrahimi P., Bayram İ., Mihaylova D., Decker E. A., Lante A.  
 22nd IUFoST World Congress 2024 of Food Science and Technology, Rimini, İtalya, 8 - 12 Eylül 2024, ss.1
- II. **Modeling the kinetics of antioxidant loss and antioxidant capacity loss to predict the lag phase of bulk oils during storage**  
 Bayram İ., Parra-Escudero C., Cantele C., Lu J., Decker E. A.  
 5th International Symposium on Lipid Oxidation and Antioxidants, Bologna, İtalya, 8 - 10 Temmuz 2024, ss.1

- III. Exploring the synergistic effect of  $\alpha$ -tocopherol and myricetin on lipid oxidation: a novel approach to predicting shelf-life**  
Parra-Escudero C., Bayram I., Decker E. A., Lu J.  
5th International Symposium on Lipid Oxidation and Antioxidants, Bologna, İtalya, 8 - 10 Temmuz 2024, ss.1
- IV. Impact of the acid-hydrolyzed phenolic extracts of parsley (*Petroselinum crispum L.*) leaves on soybean oil-in-water emulsions**  
Bayram I., Ebrahimi P., Lante A., Decker E. A.  
5th International Symposium on Lipid Oxidation and Antioxidants, Bologna, İtalya, 8 - 10 Temmuz 2024, ss.1
- V. Early shelf-life prediction of soybean oil using computational modeling of tocopherol depletion kinetics during lipid oxidation**  
Bayram I., Parra-Escudero C., Decker E. A., Lu J.  
2024 AOCS Annual Meeting & Expo, Montreal, Kanada, 28 Nisan - 03 Mayıs 2024, ss.1
- VI. Determination of antioxidant capacity as a tool for mathematical modeling to predict the lipid oxidation lag phase**  
Cantele C., Bayram I., Parra-Escudero C., Lu J., Cardenia V., Decker E. A.  
2024 AOCS Annual Meeting & Expo, Montreal, Kanada, 28 Nisan - 01 Mayıs 2024, ss.1
- VII. Inhibition of lipid oxidation in soybean oil-in-water emulsions and bulk oil using acid hydrolyzed extracts of sugar beet leaves**  
Ebrahimi P., Bayram I., Lante A., Decker E. A.  
19th Food Colloids Conference - Using colloid science to find new sustainable solutions in food, Thessaloniki, Yunanistan, 14 - 18 Nisan 2024, ss.1
- VIII. Predicting the lag phase of lipid oxidation to decrease food waste**  
Decker E. A., Bayram I.  
Food Analytics Conference, Kobenhavn, Danimarka, 15 Kasım 2023, ss.1
- IX. Mechanisms of synergistic antioxidant interactions between  $\alpha$ -tocopherol and myricetin in bulk oil and emulsions**  
Bayram I., Laze A., Decker E. A.  
IFT First Annual Meeting & Expo, Illinois, Amerika Birleşik Devletleri, 16 - 19 Temmuz 2023, ss.1
- X. Analysis of antioxidant synergism and its mechanisms between alpha-tocopherol and myricetin in stripped soybean oil-in-water emulsions at different pH values**  
Bayram I., Laze A., Decker E. A.  
2023 AOCS Annual Meeting & Expo, Colorado, Amerika Birleşik Devletleri, 30 Nisan - 03 Mayıs 2023, ss.1
- XI. Enzymatic modification of lecithin for improved antioxidant activity in combination with tocopherol in emulsions and bulk oil**  
Culler M., Bayram I., Decker E. A.  
2022 AOCS Annual Meeting & Expo, Georgia, Amerika Birleşik Devletleri, 1 - 05 Mayıs 2022, ss.126
- XII. Modeling the kinetics of tocopherol degradation during the lag phase to predict shelf-life**  
Lu J., Bayram I., Decker E. A.  
2022 AOCS Annual Meeting & Expo, Georgia, Amerika Birleşik Devletleri, 1 - 05 Mayıs 2022, ss.111
- XIII. Determination of antioxidant synergism between tocopherols and myricetin in bulk oil**  
Bayram I., Decker E. A.  
2022 AOCS Annual Meeting & Expo, Georgia, Amerika Birleşik Devletleri, 1 - 05 Mayıs 2022, ss.120
- XIV. Gallic acid incorporated pea flour films as an edible and active food packaging**  
Yıldız E., Bayram I., Şümnü S. G., Şahin S.  
15TH INTERNATIONAL HYDROCOLLOIDS CONFERENCE-FOOD2020, Melbourne, Avustralya, 2 - 05 Mart 2020

## Bilimsel Hakemlikler

JOURNAL OF FOOD MEASUREMENT AND CHARACTERIZATION, SCI Kapsamındaki Dergi, Şubat 2024  
JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE, SCI Kapsamındaki Dergi, Aralık 2023

JOURNAL OF THE AMERICAN OIL CHEMISTS' SOCIETY, SCI Kapsamındaki Dergi, Kasım 2023  
JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE, SCI Kapsamındaki Dergi, Kasım 2023  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, SCI Kapsamındaki Dergi, Ekim 2023  
JOURNAL OF KING SAUD UNIVERSITY - SCIENCE, SCI Kapsamındaki Dergi, Şubat 2023

## Metrikler

Yayın: 33  
Atıf (WoS): 195  
Atıf (Scopus): 208  
H-İndeks (WoS): 6  
H-İndeks (Scopus): 6

## Burslar

College of Natural Sciences (CNS)- NIH SF 424 (R&R) Grant Fellowship, Üniversite, 2021 - 2023  
Fulbright Doctoral Scholarship, Fulbright Programı, 2019 - 2021

## Ödüller

2023 Hultin Competition Award, University Of Massachusetts Amherst, Nisan 2023  
2023 Manuchehr (Manny) Ejjadi Award, American Oil Chemists' Society, Mart 2023  
2023 Honored Student Award , American Oil Chemists' Society, Ocak 2023  
Manley Graduate Scholarship, University Of Massachusetts Amherst, Eylül 2022  
Love of Learning Award, The Honor Society Of Phi Kappa Phi , Eylül 2022  
IFT Feeding Tomorrow - Institute for Thermal Processing Specialists Ph.D. Degree Award, Institute Of Food Technologists, Ağustos 2022  
Graduate Scholarship, Northeast Section Of The Institute Of Food Technologists, Mayıs 2022  
2022 Lipid Oxidation and Quality (LOQ) ePoster Pitch Competition Winner Award, American Oil Chemists` Society, Nisan 2022  
2022 Lipid Oxidation and Quality (LOQ) Student Travel Grant, American Oil Chemists` Society, Şubat 2022