

Assoc. Prof. LEYLA NESRİN KAHYAOĞLU

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: X-7590-2019

ScopusID: 35490703600

Yoksis Researcher ID: 278001

Education Information

Doctorate, Purdue University, Engineering, Agricultural and Biological Engineering, United States Of America 2011 - 2017

Postgraduate, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, Turkey 2007 - 2009

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, Turkey 2002 - 2007

Dissertations

Doctorate, Three dimensional micro/nano-patterning of biomolecules for high throughput physiological sensing, Purdue University, 2017

Postgraduate, Usage of spouted bed and microwave assisted spouted bed dryers in bulgur production, Middle East Technical University, Graduate School of Natural and Applied Sciences, 2009

Research Areas

Food Engineering, Food Science, Food Technology, Food Packaging

Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, 2019 - Continues

Research Assistant, Tekirdağ Namik Kemal University, 2018 - 2019

Courses

Chemistry of Food Preservation and Packaging, Undergraduate, 2023 - 2024

Physical Chemistry of Foods, Undergraduate, 2020 - 2021

Food Materials Laboratory, Undergraduate, 2021 - 2022

Food Chemistry, Undergraduate, 2021 - 2022

Food Engineering Operation III, Undergraduate, 2019 - 2020

Supervised Theses

Kahyaoğlu L. N., Development of anthocyanins-based colorimetric film under visible light irradiation for the detection of food spoilage, Postgraduate, İ.KİT(Student), 2023

Kahyaoğlu L. N., Monitoring food freshness using a multilayer colorimetric sensor film, Postgraduate, C.OKTAY(Student), 2023

Kahyaoğlu L. N., ŞÜMNÜ S. G., CURCUMIN-INCORPORATED COMPOSITE ACTIVE FILMS BASED ON CHITIN AND GLUCAN COMPLEXES EXTRACTED FROM AGARICUS BISPORUS, Postgraduate, E.KAYA(Student), 2023

KAHYAOĞLU L. N., ŞÜMNÜ S. G., Food spoilage monitoring using carbon nanodots and uv irradiation reinforced colorimetric fish gelatin films, Postgraduate, M.BEYZA(Student), 2022

KAHYAOĞLU L. N., ŞÜMNÜ S. G., Utilization of curcumin and biodegradable polymers in intelligent and active food packaging, Doctorate, E.YILDIZ(Student), 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Colorimetric core/shell ZIF-8/PEO/PDA nanofibers for detection of fish spoilage**
NAJAFI Z., Han S., ŞÜMNÜ S. G., KAHYAOĞLU L. N.
Food Chemistry, vol.466, 2025 (SCI-Expanded)
- II. **Biodegradable active films based on Chlorella biomass and cellulose nanocrystals isolated from hemp stalk fibers**
Najafi Z., Kahyaoğlu L. N.
Food Bioscience, vol.62, 2024 (SCI-Expanded)
- III. **Colorimetric Sensing Films of Visible-Light Curable Furfuryl Gelatin for Visual Monitoring of Chicken Freshness**
Kit I., KAHYAOĞLU L. N.
FOOD AND BIOPROCESS TECHNOLOGY, vol.17, no.2, pp.528-543, 2024 (SCI-Expanded)
- IV. **On-site colorimetric food spoilage monitoring with smartphone embedded machine learning**
Doğan V., Evliya M., Nesrin Kahyaoglu L., Kılıç V.
Talanta, vol.266, 2024 (SCI-Expanded)
- V. **Food freshness monitoring using poly(vinyl alcohol) and anthocyanins doped zeolitic imidazolate framework-8 multilayer films with bacterial nanocellulose beneath as support**
Oktay C., KAHYAOĞLU L. N., Moradi M.
Carbohydrate Polymers, vol.319, 2023 (SCI-Expanded)
- VI. **Application of bacterial nanocellulose decorated with zeolitic imidazolate framework (ZIF-L) as a platform for food freshness monitoring**
Molaei R., Moradi M., Kahyaoğlu L. N., Forough M.
International Journal of Biological Macromolecules, vol.223, pp.713-721, 2022 (SCI-Expanded)
- VII. **Citric acid cross-linked curcumin/chitosan/chickpea flour film: An active packaging for chicken breast storage**
Yildiz E., Emir A. A., Sumnu G., Kahyaoglu L. N.
FOOD BIOSCIENCE, vol.50, 2022 (SCI-Expanded)
- VIII. **Development of curcumin incorporated composite films based on chitin and glucan complexes extracted from Agaricus bisporus for active packaging of chicken breast meat**
Kaya E., KAHYAOĞLU L. N., ŞÜMNÜ S. G.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.221, pp.536-546, 2022 (SCI-Expanded)
- IX. **Optimization of temperature for effective cleaning with a novel cleaning rig: Influence of soil and**

surface types

PALABIYIK İ., Atik D. S., Sivri G. T., Uzun S., KAHYAOĞLU L. N., Koc Y., Celebi E., Calisir K., Boluk E.
FOOD AND BIOPRODUCTS PROCESSING, vol.136, pp.36-46, 2022 (SCI-Expanded)

- X. **Assessment of curcumin incorporated chickpea flour/PEO (polyethylene oxide) based electrospun nanofiber as an antioxidant and antimicrobial food package**
YILDIZ E., ŞÜMNÜ S. G., KAHYAOĞLU L. N.
FOOD AND BIOPRODUCTS PROCESSING, vol.135, pp.205-216, 2022 (SCI-Expanded)
- XI. **Colorimetric food spoilage monitoring with carbon dot and UV light reinforced fish gelatin films using a smartphone application**
Kilic B., Dogan V., Kilic V., Kahyaoglu L. N.
International Journal of Biological Macromolecules, vol.209, pp.1562-1572, 2022 (SCI-Expanded)
- XII. **Monitoring freshness of chicken breast by using natural halochromic curcumin loaded chitosan/PEO nanofibers as an intelligent package**
YILDIZ E., ŞÜMNÜ S. G., KAHYAOĞLU L. N.
International Journal of Biological Macromolecules, vol.170, pp.437-446, 2021 (SCI-Expanded)
- XIII. **Robust Covalent Coupling Scheme for the Development of FRET Aptasensor based on Amino-Silane-Modified Graphene Oxide**
Kahyaoglu L. N., Rickus J. L.
LANGMUIR, vol.34, no.48, pp.14586-14596, 2018 (SCI-Expanded)
- XIV. **Integration of a Genetically Encoded Calcium Molecular Sensor into Photopolymerizable Hydrogels for Micro-Optrode-Based Sensing**
Kahyaoglu L. N., Madangopal R., Park J. H., Rickus J. L.
ACS APPLIED MATERIALS & INTERFACES, vol.9, no.37, pp.31557-31567, 2017 (SCI-Expanded)
- XV. **Spouted bed and microwave-assisted spouted bed drying of parboiled wheat**
Kahyaoglu L. N., Sahin S., Sumnu G.
FOOD AND BIOPRODUCTS PROCESSING, vol.90, pp.301-308, 2012 (SCI-Expanded)
- XVI. **Physical properties of parboiled wheat and bulgur produced using spouted bed and microwave assisted spouted bed drying**
Kahyaoglu L. N., ŞAHİN S., Sumnu G.
JOURNAL OF FOOD ENGINEERING, vol.98, no.2, pp.159-169, 2010 (SCI-Expanded)

Articles Published in Other Journals

- I. **Fish Waste to Valuable Products: Nanotechnological Approach**
Yesilsu A. F., Alp-Erbay E., KAHYAOĞLU L. N., Aydin İ.
BioNanoScience, vol.14, no.5, pp.4733-4751, 2024 (ESCI)
- II. **KURKUMİN TABANLI BİYOPOLİMER FİLMERİN GÖRÜNÜR IŞIK ALTINDA GELİŞTİRİLMESİ**
Kit İ., Kahyaoglu L. N.
GIDA, vol.47, no.6, pp.1104-1117, 2022 (Peer-Reviewed Journal)
- III. **The effects of crosslinking agents on faba bean flour–chitosan–curcumin films and their characterization**
YILDIZ E., İLHAN E., KAHYAOĞLU L. N., ŞÜMNÜ S. G., ÖZTOP H. M.
Legume Science, vol.4, no.1, 2022 (ESCI)
- IV. **Integration of a Glutamate Sensitive Genetically Encoded Sensor Protein into Photocrosslinkable Hydrogel Optrodes**
Kahyaoglu L. N., Rickus J. L.
MRS ADVANCES, vol.1, no.8, pp.539-546, 2016 (ESCI)

Books

I. New approaches in microbial pathogen detection

KAHYAOĞLU L. N., irudayaraj j.

in: Advances in Microbial Food Safety, Sofos John, Editor, Woodhead Publishing, pp.202-226, 2013

Refereed Congress / Symposium Publications in Proceedings

I. Light-directed functionalization methods for high-resolution optical fiber based biosensors

Kahyaoglu L. N., Madangopal R., Stensberg M., Rickus J. L.

Conference on Advanced Environmental, Chemical, and Biological Sensing Technologies XII, Maryland, United States Of America, 20 - 21 April 2015, vol.9486

Supported Projects

KAHYAOĞLU L. N., Project Supported by Higher Education Institutions, Taze Gıda Ürünlerinin Aktif Paketlenmesi için Aktif KarbonZIF8 Katkılı Siklodekstrin Aerojel Activated CarbonZIF8 Doped Cyclodextrin Aerogel for Active Packaging of Fresh Food Produce, 2023 - Continues

KAHYAOĞLU L. N., TÜBİTAK International Bilateral Joint Cooperation Program Project, Gıda Tazeliğini Çok Katmanlı Kolorimetrik Sensör Film Kullanarak Akıllı Telefon Uygulaması Vasıtası ile İzlemek, 2020 - 2022

KAHYAOĞLU L. N., TÜBİTAK Project, Gıda Bozulmasının Takibinde Karbon Nanonoktaları ile Kuvvetlendirilmiş Kolorimetrik Balık Jelatini Filmlerinin Kullanılması, 2020 - 2022

Kahyaoglu L. N., TÜBİTAK Project, Gıda Paketleme Uygulamaları İçin Zeolitik İmidazol Çerçeve-8 ile Antimikrobiyal Film Yapımı, 2020 - 2021

KAHYAOĞLU L. N., Project Supported by Higher Education Institutions, Gıda bozulmalarının tespiti için kurkumin temelli kolorimetrik biyofilm geliştirilmesi, 2019 - 2021

Scientific Refereeing

JOURNAL OF HAZARDOUS MATERIALS , Journal Indexed in SCI-E, June 2024

RSC ADVANCES, Journal Indexed in SCI-E, June 2024

INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, Journal Indexed in SCI-E, June 2024

Applied Food Research, Journal Indexed in SCI-E, May 2024

FOOD PACKAGING AND SHELF LIFE, Journal Indexed in SCI-E, March 2024

RSC Sustainable Food Technology, National Scientific Refreed Journal, February 2024

FOOD HYDROCOLLOIDS, Journal Indexed in SCI-E, January 2024

FOOD CHEMISTRY, Journal Indexed in SCI-E, January 2024

FOOD HYDROCOLLOIDS, Journal Indexed in SCI-E, September 2023

INTERNATIONAL JOURNAL OF SUSTAINABLE ENGINEERING, Journal Indexed in ESCI, August 2023

FOOD CHEMISTRY, Journal Indexed in SCI-E, June 2023

BIOMASS CONVERSION AND BIOREFINERY, Journal Indexed in SCI-E, December 2022

TUBİTAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Middle East Technical University, Turkey, June 2022

Metrics

Publication: 23

Citation (WoS): 189

Citation (Scopus): 235

H-Index (WoS): 11

H-Index (Scopus): 11

Congress and Symposium Activities

9th International Conference on Food Chemistry&Technology, Attendee, Paris, France, 2023

1st International Conference on Scientific and Academic Research, Attendee, Konya, Turkey, 2022

4th Euro Congress on November 11-12, 2022 | Rome, Italy DIABETES & FOOD TECHNOLOGY, Session Moderator, Rome, Italy, 2022

Gıda Kimyası Kongresi, Attendee, Antalya, Turkey, 2022

2nd International Congress on Advances in Bioscience and Biotechnology (ICABB), Attendee, Podgorica, Montenegro, 2018

Non Academic Experience

Progıda A.Ş., Gıda Mühendisi