Prof. Gürbüz Güneş

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Biography

Dr. Gunes obtained his B.S. degree in Food Engineering department at Middle East Technical University in 1993. He received his M.S and Ph.D. degree in Food Science from Cornell University in 1997 and 2001, respectively. After working as a Postdoct. in Horticulture department at Cornell University for a year he started working as a research assistant at Kocaeli University. Since August 2002 he has been working as a faculty member in Food Engineering Department at Istanbul Technical University.

Education Information

Doctorate, Cornell University, Food Science, United States Of America 1997 - 2001
Postgraduate, Cornell University, Food Science, United States Of America 1995 - 1997
Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Food Engineering, Turkey 1988 - 1993

Foreign Languages

English

Dissertations

Doctorate, Effect of Gamma Irradiation and Modified Atmospheres on Physiology and Quality of Minimally Processed Apples, Cornell University, Food Science, 2001
Postgraduate, Effect of Modified Atmosphere Packaging and Antibrowning Agents on Shelf-Life of Minimally Processed Potatoes, Cornell University, Food Science, 1997

Research Areas

Food Engineering, Food Science, Food Microbiology, Food Hygiene and Sanitation, Food Technology, Meat, Poultry and Game Technology, Fruits, Vegetables and Nuts, Food Processing (pasteurisation, sterilisation, refrigeration,

lyophilisation, etc.), Food Packaging, Engineering and Technology

Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Kimya-Metalurji Fakültesi, Gıda Mühendisliği Bölümü, 2014 - Continues
İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, 2008 - 2010
İstanbul Teknik Üniversitesi, Kimya-Metalurji Fakültesi, Gıda Mühendisliği Bölümü, 2004 - 2007

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Comparison of high intensity ultrasound and heat treatment for extending shelf life of a fermented milk beverage**
Kılıç Akyılmaz M., Kurt Ç., Parlak Uzunoğlu T., Türkmen F., Güneş G., Erem E.
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II. **Quality of thyme (Thymus vulgaris L.) and black pepper (Piper nigrum L.) during storage as affected by the combination of gamma-irradiation and modified atmosphere packaging**
Kırkın Gözükırmızı C., Güneş G.
South African Journal of Botany, vol.150, pp.978-985, 2022 (SCI-Expanded)

III. **Effects of modified atmosphere packaging on physicochemical properties of fresh-cut 'Deveci' pears**
Oguz-Korkut G., Kucukmehmetoglu S., Güneş G.
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IV. **Thermoresponsive polyurethane films for packaging applications: Effects of film formulation on their properties**
Ilhan I., Kaya M., Turan D., Güneş G., Güner F. S., Kılıç A.
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V. **Development of CNC-reinforced PBAT nanocomposites with reduced percolation threshold: a comparative study on the preparation method**
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VI. **Effect of preparation method on the properties of polylactide/cellulose nanocrystal nanocomposites**
Arslan D., Vatansever E., Sarul D. S., Kahraman Y., Güneş G., DURMUŞ A., Nofar M.
POLYMER COMPOSITES, vol.41, no.10, pp.4170-4180, 2020 (SCI-Expanded)

VII. **Enzymatic synthesis of prebiotic carbohydrates from lactose: Kinetics and optimization of transgalactosylation activity of beta-galactosidase from Aspergillus oryzae**
Cinar K., Güneş G., Gulec H. A.
JOURNAL OF FOOD PROCESS ENGINEERING, vol.43, no.8, 2020 (SCI-Expanded)

VIII. **Assessment of overall migration and specific migration of 1,4-butanediol from a thermoplastic polyurethane film developed for fresh produce packaging**
Turan Kunter D., Güneş G.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.137, no.18, 2020 (SCI-Expanded)

IX. **Ultraviolet (UV-C) radiation as a practical alternative to decontaminate thyme (Thymus vulgaris L.)**
Doğu Baykut E., Güneş G.
Journal Of Food Processing And Preservation, vol.43, no.6, pp.13842-13850, 2019 (SCI-Expanded)

X. **Modified atmosphere packaging and gamma-irradiation of some herbs and spices: Effects on antioxidant and antimicrobial properties**
Kirkin C., Güneş G.
JOURNAL OF FOOD PROCESSING AND PRESERVATION, vol.42, no.8, 2018 (SCI-Expanded)

XI. **Modified atmosphere packaging and gamma-irradiation of someherbs and spices: Effects on antioxidant and antimicrobialproperties**

KIRKIN C., GÜNEŞ G.
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XII. **The impact of the molecular weight of dextran on formation of whey protein isolate (WPI)-dextran conjugates in fibers produced by needleless electrospinning after annealing**
Turan D., GİBİS M., Güneş G., BAİER S. K., WEİSS J.
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XIII. **Gas permeabilities of polyurethane films for fresh produce packaging: Response of O-2 permeability to temperature and relative humidity**
Turan D., Saengerlaub S., Stramm C., Güneş G.
POLYMER TESTING, vol.59, pp.237-244, 2017 (SCI-Expanded)

XIV. **Synthesis, Characterization and O-2 Permeability of Shape Memory Polyurethane Films for Fresh Produce Packaging**
Turan D., Güneş G., Güner F. S.
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XV. **Use of Bacillus indicus HU36 as a probiotic culture in set-type, recombined nonfat yoghurt production and its effects on quality**
Ersan S., GULTEKIN-OZGUVEN M., BERKTAS I., ERDEM O., TUNA H. E., GUNES G., Özçelik B.
INTERNATIONAL JOURNAL OF DAIRY TECHNOLOGY, vol.69, no.1, pp.81-88, 2016 (SCI-Expanded)

XVI. **Impact of shortwave ultraviolet (UV-C) radiation on the antioxidant activity of thyme (Thymus vulgaris L.)**
Dogu-Baykut E., Güneş G., DECKER E. A.
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XVII. **Combined effects of gamma-irradiation and modified atmosphere packaging on quality of some spices**
Kirkin C., Mitrevski B., Güneş G., Marriott P. J.
FOOD CHEMISTRY, vol.154, pp.255-261, 2014 (SCI-Expanded)

XVIII. **Essential-Oil Analysis of Irradiated Spices by Using Comprehensive Two-Dimensional Gas Chromatography**
Kirkin C., MITREVSKI B., Güneş G., MARRIOTT P. J.
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XIX. **Development of a novel synbiotic dark chocolate enriched with Bacillus indicus HU36, maltodextrin and lemon fiber: Optimization by response surface methodology**
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XX. **Quality of ready to cook marinated chicken drumsticks as affected by modified atmosphere packaging during refrigerated storage**
Güneş G.
Journal of Food Processing and Preservation, vol.38, pp.615-624, 2014 (SCI-Expanded)

XXI. **Combined effects of gamma irradiation and modified atmosphere packaging on quality of some spices**
Mitrevski B., Güneş G., Güneş G., Marriott P.
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XXII. **Preservation of precut white cheese by modified atmosphere packaging**
Kirkin C., GUNES G., KILIC-AKYILMAZ M.
INTERNATIONAL JOURNAL OF DAIRY TECHNOLOGY, vol.66, no.4, pp.576-586, 2013 (SCI-Expanded)

XXIII. **Effects of Irradiation Dose and O-2 and CO2 Concentrations in Packages on Foodborne Pathogenic Bacteria and Quality of Ready-to-Cook Seasoned Ground Beef Product (Meatball) during Refrigerated Storage**
Güneş G., YILMAZ N., OZTURK A.
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XXIV. **Maintenance of Safety and Quality of Refrigerated Ready-to-Cook Seasoned Ground Beef Product (Meatball) by Combining Gamma Irradiation with Modified Atmosphere Packaging**
Güneş G., OZTURK A., YILMAZ N., Özçelik B.
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XXV. **Respiration Rate of Pomegranate Arils as Affected by O 2 and CO2 and Design of Modified Atmosphere Packaging**
ersan s., Güneş G., Zor Ö. A.
Acta Horticulturae, vol.876, pp.189-196, 2010 (SCI-Expanded)

XXVI. **Effect of Different Modified Atmosphere Packaging on Microbial Quality, Oxidation and Colour of a Seasoned Ground Beef Product (Meatball)**
Ozturk A., YILMAZ N., Güneş G.
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Güneş G.
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XXVIII. **Influence of gamma irradiation on growth and survival of Escherichia coli O157 : H7 and quality of cig kofte, a traditional raw meat product**
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Sokmen A., Gunes G.
LWT-FOOD SCIENCE AND TECHNOLOGY, vol.39, no.10, pp.1053-1058, 2006 (SCI-Expanded)

XXX. **Inactivation of Escherichia coli ATCC 4157 in diluted apple cider by dense phase carbon dioxide**
Güneş G., Blum l. k., Hotchkiss J. H.
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XXXI. **Consumer awareness and acceptance of irradiated foods: Results of a survey conducted on Turkish consumers**
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XXXIII. **Controlled-atmosphere effects on postharvest quality and antioxidant activity of cranberry fruits**
Gunes G., LIU R., WATKINS C.
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.50, no.21, pp.5932-5938, 2002 (SCI-Expanded)

XXXIV. **Growth and Survival of Escherichia coli O157 H7 on Fresh Cut Apples in Modified Atmospheres at Abusive Temperatures**
Güneş G., Hotchkiss J. H.
JOURNAL OF FOOD PROTECTION, vol.65, no.10, pp.1641-1645, 2002 (SCI-Expanded)

XXXV. **Physiological responses of fresh-cut apple slices under high CO2 and low O-2 partial pressures**
Gunes G., WATKINS C., HOTCHKISS J.
POSTHARVEST BIOLOGY AND TECHNOLOGY, vol.22, no.3, pp.197-204, 2001 (SCI-Expanded)

XXXVI. **Effects of gamma irradiation on the texture of minimally processed apples**
Güneş G., Hotchkiss J. H., Watkins C. B.
JOURNAL OF FOOD SCIENCE, vol.66, no.1, pp.63-67, 2001 (SCI-Expanded)

XXXVII. **Effects of irradiation on respiration and ethylene production of apple slices**
Güneş G., Watkins C. B., Hotchkiss J. H.
JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE, vol.80, no.8, pp.1169-1175, 2000 (SCI-Expanded)

XXXVIII. **Microbial quality of fresh potatoes Effect of minimal processing**

Güneş G., Spplittoesser D. F., Lee C. Y.
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XXXIX. **Color of minimally processed potatoes as affected by modified atmosphere packaging and antibrowning agents**
Gunes G., LEE C.
JOURNAL OF FOOD SCIENCE, vol.62, no.3, pp.572-576, 1997 (SCI-Expanded)

Articles Published in Other Journals

I. **EFFECT OF ULTRAVIOLET (UV-C) LIGHT AND GASEOUS OZONE ON MICROBIAL AND COLOR QUALITIES OF WHOLE BLACK PEPPER SEEDS (PIPER NIGRUM L.)**
DOĞU BAYKUT E., Güneş G.
CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY, vol.14, no.2, pp.122-131, 2022 (ESCI)

II. **Türkiye Gıda Endüstrisinde AR-GE Çalışmalarının Durumu ve Geliştirilmesine Yönelik Öneriler.**
BAKKALOĞLU Z., GÜNEŞ G.
Academic Food Journal, 2018 (Peer-Reviewed Journal)

III. **New Technologies and Edible Coatings for Minimally Processed and Refrigerated (MPR) Fruits and Vegetables (Fresh Cuts and Freshly Squeezed Juices)**
Güneş G., Turan Kunter D.
MINIMALLY PROCESSED REFRIGERATED FRUITS AND VEGETABLES, 2ND EDITION, pp.587-617, 2017 (Peer-Reviewed Journal)

IV. **QUALITY OF 'MANTI' (MEAT-FILLED PASTA PRODUCT) AS AFFECTED BY MODIFIED ATMOSPHERE PACKAGING DURING REFRIGERATED STORAGE**
YÜCETEPE A., Güneş G.
JOURNAL OF FOOD AND HEALTH SCİENCE, vol.2, no.4, pp.189-198, 2016 (Peer-Reviewed Journal)

V. **Gıda muhafazasında iyonize ışınların kullanımı**
Güneş G.
GIDA TEKNOLOJİSİ, vol.14, no.4, pp.86-88, 2012 (Peer-Reviewed Journal)

VI. **Green Leafy Vegetables: Spinach and Lettuce**
Güneş G., Dogu E.
HANDBOOK OF VEGETABLES AND VEGETABLE PROCESSING, pp.705-716, 2011 (Peer-Reviewed Journal)

VII. **1-Metilsiklopropen (MCP) uygulamalarının taze meyve sebzeler üzerindeki etkisi**
KÜŞÜMLER A. S., Güneş G.
HASAD GIDA, vol.274, no.2, pp.16-19, 2008 (Peer-Reviewed Journal)

VIII. **Meyve ve sebzelerde soğuk zararlanması (chilling injury) ve kontrolü.**
ARDUZLAR D., Güneş G.
HASAD GIDA, vol.257, pp.28-37, 2006 (Peer-Reviewed Journal)

IX. **Gama ışınlarının gıdaların besin değeri üzerindeki etkileri**
KARADAG A., Güneş G.
DÜNYA GIDA, no.9, pp.55-60, 2005 (Peer-Reviewed Journal)

X. **Tüketici perspektifinde gıda ışınlama teknolojisi ve ışınlanmış gıdalar**
Güneş G., TEKİN M. D.
GIDA TEKNOLOJİSİ, vol.8, no.12, pp.55-61, 2004 (Peer-Reviewed Journal)

XI. **Gıdaların gama ışınları ile muhafazası**
GEZGIN Z., Güneş G.
DÜNYA GIDA, no.12, pp.82-87, 2003 (Peer-Reviewed Journal)

Books & Book Chapters

I. **Packaging criteria for non-thermally processed fruits and vegetable products**
GÜNEŞ G., Cellat A. M., Sonverdi F.
in: Non-Thermal Processing Technologies for the Fruit and Vegetable Industry, Selvamuthukumaran M, Editor, Taylor and Francis, NJ, pp.197-223, 2022

II. **Influence of Modified Atmosphere Packaging on Food Bioactives**
OGUZ-KORKUT G., GÜNEŞ G.
in: Retention of Bioactives in Food Processing, Seid Mahdi Jafari and Esra Capanoglu, Editor, Springer Nature, pp.341-366, 2022

III. **Perspectives of Bio-nanocomposites for Food PackagingApplications**
TURAN KUNTER D., GÜNEŞ G., KILIÇ A.
in: Bionanocomposites for Packaging Applications, Jawaid Mohammad, Swain Sarat Kumar, Editor, Springer, pp.1-32, 2018

IV. **Green Leafy Vegetables: Spinach and Lettuce**
GÜNEŞ G., DOĞU BAYKUT E.
in: Handbook of Vegetables and Vegetable Processing, Siddiq M., Uebersax M., Editor, Wiley-Blackwell, pp.683-700, 2018

V. **New Technologies and Edible Coatings for Minimally Processed and Refrigerated (MPR) Fruits and Vegetables (Fresh Cuts and Freshly Squeezed Juices)**
Güneş G., Turan D.
in: Minimally Processed Refrigerated Fruits and Vegetables, Yildiz F., Wiley R.C., Editor, Springer, Us, Ny, pp.587-617, 2017

VI. **Design of Modifi ed and Controlled Atmospheres**
Güneş G., Kirkin C.
in: Handbook of Food Process Design, J. Ahmed and M.Shafiur Rahman, Editor, Willey-Blackwell, Londra, pp.1340-1368, 2012

VII. **Design of modified and controlled atmospheres**
Güneş G., Kırkın Gözükırmızı C.
in: Handbook of Food Process Design, J. Ahmed,M. S. Rahman, Editor, John Wiley & Sons, West Sussex, UK , Oxford, pp.1340-1368, 2012

VIII. **Green Leafy Vegetables: Spinach and Lettuce**
Güneş G., DOGU-BAYKUT E.
in: Handbook of Vegetables and Vegetable Processing, Sinha, N.K., Hui, Y.H., Evranuz, E.Ö., Siddiq, M., Ahmed, J., Editor, Blackwell Publishing, Ames, pp.705-716, 2011

Non Academic Experience

TÜBİTAK