

# Prof. BEHİÇ MERT

## Personal Information

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## Education Information

Doctorate, Purdue University, Food Engineering, United States Of America 2000 - 2004

Post Graduate, Michigan State University, Gıda Bilimi, United States Of America 1998 - 2000

Under Graduate, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, Turkey 1991 - 1995

## Foreign Languages

English, C1 Advanced

## Research Areas

Food Engineering, Food Science, Food Chemistry, Food Technology, Fats Technology, Cereals Technology, Sugars, Syrups, Starches and Candy, Engineering and Technology

## Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, 2015 - Continues  
Research Assistant, Max Planck Enstitüsü, 2014 - 2015

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, 2011 - 2015

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, 2008 - 2011

Lecturer, Middle East Technical University, Faculty of Engineering, 2006 - 2008

Research Assistant, Ankara Üniversitesi, Mühendislik Fakültesi, 2005 - 2006

Research Assistant, Purdue University, Mühendislik Fakültesi, Gıda Mühendisliği, 2000 - 2004

Research Assistant, Michigan State University, Mühendislik, Gıda Mühendisliği, 1998 - 1998

## Professional Experience

Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, 2009 - Continues

## Advising Theses

MERT B., Peanut milk production by the microfluidization, physicochemical, textural and rheological properties of peanut

milk products; yoghurt and kefir, Post Graduate, S.ARSLAN(Student), 2018

Öztop H. M. , Mert B., Characterization and formulation of gelatin based soft candies, Post Graduate, N.EFE(Student), 2018

Şensoy I., Mert B., Effect of microfluidized onion skin addition on the quality of extrudates, Post Graduate, E.BİLGİN(Student), 2016

BAYINDIRLI A., MERT B., Effect of different freezing rates on the texture and quality parameters of selected fruit and vegetable, Post Graduate, M.BULUT(Student), 2015

ÖZTOP H. M. , MERT B., Effect of some intense sweeteners on rheological, textural and sensory properties of chocolate, Post Graduate, M.YÜCEKUTLU(Student), 2015

MERT B., Production and characterization of microparticulated corn zein, and its applications on emulsions and bread-making, Post Graduate, O.KAAN(Student), 2014

MERT B., Utilization of inulin as fat replacer in cake and mayonnaise, Post Graduate, S.FARAHMAND(Student), 2014

BAYINDIRLI A., MERT B., Production of micro and nano fibers from hazelnut skin and utilization in biscuits, Post Graduate, E.YILDIZ(Student), 2014

Şensoy İ., Mert B., Effect of tomato, red pepper and carrot pulp addition on the quality of extrudates, Post Graduate, Ç.ÇALTINOĞLU(Student), 2014

MERT B., Production of micro and nano fibers from hazelnut skin and utilization in cakes, Post Graduate, S.ÇIKRIKCI(Student), 2013

MERT B., Production of cacao micro and nano fibers and utilization in cakes, Post Graduate, B.DUMAN(Student), 2013

MERT B., Chemical and rheological properties of yoghurt produced by lactic acid cultures isolated from traditional Turkish yoghurt, Post Graduate, S.DİNÇEL(Student), 2012

MERT B., Effect of different wheat varieties on pasta quality, Post Graduate, M.BOZKURT(Student), 2012

MERT B., Effect of hydrogenation conditions on rheological and micro-structural properties of fats, Post Graduate, A.BAŞKOÇAK(Student), 2011

BAYINDIRLI A., MERT B., Application of high dynamic microfluidization to improve some quality parameters and stability of orange juice, Post Graduate, Ö.YÜCE(Student), 2011

MERT B., Utilization of wheat bran fiber in crackers, Post Graduate, E.ŞAHİN(Student), 2011

MERT B., Conversion of lignocellulosic biomass into nanofiber by microfluidization and its effect on the enzymatic hydrolysis, Post Graduate, S.YAVAŞ(Student), 2010

MERT B., ALPAS H., Effect of high hydrostatic pressure (HHP) and high dynamic pressure (HDP) on stability and rheological properties of model oil-in-water emulsions, Post Graduate, E.BİGİKOÇİN(Student), 2010

MERT B., Producing micro and nano fibers having high water holding capacity from tomato and wheat waste products and using them in model foods, Post Graduate, G.KOÇAK(Student), 2010

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

- **Recent developments of oleogel utilizations in bakery products**  
Demirkesen I., MERT B.  
CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION, vol.60, pp.2460-2479, 2020 (Journal Indexed in SCI)
- **Utilization of Beeswax Oleogel-Shortening Mixtures in Gluten-Free Bakery Products**  
Demirkesen I., MERT B.  
JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, vol.96, pp.545-554, 2019 (Journal Indexed in SCI)
- **NMR relaxometry study of gelatin based low-calorie soft candies**  
Efe N., Bielejewski M., Tritt-Goc J., Mert B., Oztop M. H.  
MOLECULAR PHYSICS, vol.117, pp.1034-1045, 2019 (Journal Indexed in SCI)
- **Characterization and evaluation of emulsifying properties of high pressure microfluidized and pH shifted corn gluten meal**  
Ozturk O. K. , MERT B.  
INNOVATIVE FOOD SCIENCE & EMERGING TECHNOLOGIES, vol.52, pp.179-188, 2019 (Journal Indexed in SCI)
- **Development of pH Sensitive Alginate/Gum Tragacanth Based Hydrogels for Oral Insulin Delivery**

Cikrikci S., Mert B., Oztop M. H.

JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.66, pp.11784-11796, 2018 (Journal Indexed in SCI)

● **Effect of microfluidization on the microstructure and physical properties of a novel yoghurt formulation**

DEMİRKESEN I., VILGIS T. A. , MERT B.

JOURNAL OF FOOD ENGINEERING, vol.237, pp.69-77, 2018 (Journal Indexed in SCI)

● **The use of microfluidization for the production of xanthan and citrus fiber-based gluten-free corn breads**

OZTURK O. K. , MERT B.

LWT-FOOD SCIENCE AND TECHNOLOGY, vol.96, pp.34-41, 2018 (Journal Indexed in SCI)

● **Different sized wheat bran fibers as fat mimetic in biscuits: its effects on dough rheology and biscuit quality**

ERINC H., MERT B., Tekin A.

JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE, vol.55, pp.3960-3970, 2018 (Journal Indexed in SCI)

● **The effects of microfluidization on rheological and textural properties of gluten-free corn breads**

OZTURK O. K. , MERT B.

FOOD RESEARCH INTERNATIONAL, vol.105, pp.782-792, 2018 (Journal Indexed in SCI)

● **Changes in functional properties and in vitro bioaccessibilities of beta-carotene and lutein after extrusion processing**

Ortak M., Caltinoglu C., Şensoy İ., Karakaya S., Mert B.

JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE, vol.54, pp.3543-3551, 2017 (Journal Indexed in SCI)

● **Physical characterization of low-calorie chocolate formulations**

Cikrikci S., YUCEKUTLU M., MERT B., Oztop M. H.

JOURNAL OF FOOD MEASUREMENT AND CHARACTERIZATION, vol.11, pp.41-49, 2017 (Journal Indexed in SCI)

● **High Pressure Microfluidization of Agro by-product to Functionalized Dietary Fiber and Evaluation as a Novel Bakery Ingredient**

Yildiz E., DEMİRKESEN I., MERT B.

JOURNAL OF FOOD QUALITY, vol.39, pp.599-610, 2016 (Journal Indexed in SCI)

● **Evaluation of Isolated Impact of Trans Fatty Acids on Short Dough Product**

Sahin K., MERT B., Tekin A.

JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, vol.93, pp.1015-1024, 2016 (Journal Indexed in SCI)

● **Reducing saturated fat with oleogel/shortening blends in a baked product**

MERT B., Demirkesen I.

FOOD CHEMISTRY, vol.199, pp.809-816, 2016 (Journal Indexed in SCI)

● **Evaluation of highly unsaturated oleogels as shortening replacer in a short dough product**

MERT B., Demirkesen I.

LWT-FOOD SCIENCE AND TECHNOLOGY, vol.68, pp.477-484, 2016 (Journal Indexed in SCI)

● **Production of hazelnut skin fibres and utilisation in a model bakery product**

Cikrikci S., Demirkesen I., MERT B.

Quality Assurance and Safety of Crops and Foods, vol.8, pp.195-206, 2016 (Journal Indexed in SCI)

● **Optimization of Ethanol Production From Microfluidized Wheat Straw by Response Surface Methodology**

Turhan O., Isci A., MERT B., Sakiyan O., Donmez S.

PREPARATIVE BIOCHEMISTRY & BIOTECHNOLOGY, vol.45, pp.785-795, 2015 (Journal Indexed in SCI)

● **Production of Microfluidized Wheat Bran Fibers and Evaluation as an Ingredient in Reduced Flour Bakery Product**

MERT B., Tekin A., Demirkesen I., Kocak G.

FOOD AND BIOPROCESS TECHNOLOGY, vol.7, pp.2889-2901, 2014 (Journal Indexed in SCI)

● **EFFECTS OF MICROFLUIDIZED DIETARY FIBERS ON STABILITY PROPERTIES OF EMULSIONS**

Ketenoglu O., MERT B., Tekin A.

JOURNAL OF TEXTURE STUDIES, vol.45, pp.295-306, 2014 (Journal Indexed in SCI)

- **Rheological and Microscopic Properties of Fat Blends with Similar Solid Fat Content but Different Trans Composition**  
MERT B., Erinc H., Sahin K., Tekin A.  
JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, vol.90, pp.17-26, 2013 (Journal Indexed in SCI)
- **Using high pressure microfluidization to improve physical properties and lycopene content of ketchup type products**  
Mert B.  
JOURNAL OF FOOD ENGINEERING, vol.109, pp.579-587, 2012 (Journal Indexed in SCI)
- **Effect of high hydrostatic pressure and high dynamic pressure on stability and rheological properties of model oil-in-water emulsions**  
BIGIKOCIN E., MERT B., ALPAS H.  
HIGH PRESSURE RESEARCH, vol.31, pp.462-474, 2011 (Journal Indexed in SCI)
- **Utilization of chestnut flour in gluten-free bread formulations**  
Demirkesen I., MERT B., Sumnu G., ŞAHİN S.  
JOURNAL OF FOOD ENGINEERING, vol.101, pp.329-336, 2010 (Journal Indexed in SCI)
- **A novel method to measure the glass and melting transitions of pharmaceutical powders**  
Abiad M. G. , Gonzalez D. C. , MERT B., Campanella O. H. , Carvajal M. T.  
INTERNATIONAL JOURNAL OF PHARMACEUTICS, vol.396, pp.23-29, 2010 (Journal Indexed in SCI)
- **Rheological properties of gluten-free bread formulations**  
DEMIRKESEN L., MERT B., Sumnu G., ŞAHİN S.  
JOURNAL OF FOOD ENGINEERING, vol.96, pp.295-303, 2010 (Journal Indexed in SCI)
- **Chemical and rheological properties of bacterial succinoglycan with distinct structural characteristics**  
Simsek S., MERT B., Campanella O. H. , Reuhs B.  
CARBOHYDRATE POLYMERS, vol.76, pp.320-324, 2009 (Journal Indexed in SCI)
- **CHARACTERIZATION OF VISCOELASTIC PROPERTIES OF INDIVIDUAL RICE GRAIN BY MEASURING MECHANICAL IMPEDANCE**  
Mert B.  
JOURNAL OF TEXTURE STUDIES, vol.40, pp.66-81, 2009 (Journal Indexed in SCI)
- **The study of the mechanical impedance of foods and biomaterials to characterize their linear viscoelastic behavior at high frequencies**  
MERT B., Campanella O. H.  
RHEOLOGICA ACTA, vol.47, pp.727-737, 2008 (Journal Indexed in SCI)
- **A new instrumental setup for determination of small amplitude viscoelastic properties of dough during fermentation**  
Mert B.  
EUROPEAN FOOD RESEARCH AND TECHNOLOGY, vol.227, pp.151-157, 2008 (Journal Indexed in SCI)
- **A new method to determine viscoelastic properties of corn grits during cooking and drying**  
Mert B., Gonzalez D., Campanella O. H.  
JOURNAL OF CEREAL SCIENCE, vol.46, pp.32-38, 2007 (Journal Indexed in SCI)
- **Monitoring the rheological properties and solid content of selected food materials contained in cylindrical cans using audio frequency sound waves**  
Mert B., Campanella O. H.  
JOURNAL OF FOOD ENGINEERING, vol.79, pp.546-552, 2007 (Journal Indexed in SCI)
- **Biogenic amine content of beers consumed in Turkey and influence of storage conditions on biogenic amine formation**  
Anli R. E. , Vural N., Demiray S., Mert B.  
JOURNAL OF THE INSTITUTE OF BREWING, vol.112, pp.267-274, 2006 (Journal Indexed in SCI)
- **A new method to measure viscosity and intrinsic sound velocity of liquids using impedance tube principles at sonic frequencies**  
Mert B., Sumali H., Campanella O.

- REVIEW OF SCIENTIFIC INSTRUMENTS, vol.75, pp.2613-2619, 2004 (Journal Indexed in SCI)  
**Water Solubility Mechanical Barrier and Thermal Properties of Cross linked Whey Protein Isolate based Films**  
ZEYNEP U., MERT B.  
Journal Of Food Science, vol.69, pp.129-133, 2004 (Journal Indexed in SCI Expanded)
- **A new method to determine viscosity of liquids using vibration principles**  
Mert B., Sumali H., Campanella O.  
RHEOLOGICA ACTA, vol.42, pp.534-543, 2003 (Journal Indexed in SCI)

## Books & Book Chapters

- **The Use of Vibration Principles to Characterize the Mechanical Properties of Biomaterials** Chapter 15  
MERT B., OSVALDO C., HARTONO S., PATEL B.  
in: Biomaterials Physics and Chemistry, Rosario Pignatello, Editor, Intech, pp.299-323, 2016

## Refereed Congress / Symposium Publications in Proceedings

- **Oleosome based structures for designing new food products**  
MERT B.  
2017 KoSFoST International Symposium and Meeting, 21 - 23 June 2017
- **Ortam pH sınır Komposit Gıda Hidrojellerinin Şişme Davranışları Üzerine Etkisinin ve Hidrojellerin Manyetik Rezonans Görüntüleme MRG Kullanılarak Elde Edilen T2 Relaksasyon Haritalarının İncelenmesi**  
ÇIKRIKCI S., MERT B., ÖZTOP M. H.  
Türkiye 12. Gıda Kongresi, Edirne, Turkey, 5 - 07 October 2016
- **Microfluidized Fiber Based Oleojels for Encapsulation of Carotenoids**  
MERT B., TEKİN A.  
FOOD FACTOR CONFERENCE, 2 - 04 October 2016
- **Physical Properties of Extrudates After Microfluidized Onion Skin Addition**  
Bilgin E., ŞENSOY İ., MERT B.  
15th International Cereal and Bread Congress, 18 - 21 April 2016
- **The Effect of Onion Skin Powder Addition on Physical Parameters of Extrudates**  
TONYALI B., ŞENSOY İ., MERT B.  
4th International Conference and Exhibition on Food Processing & Technology. August 10-12, 2015 London, UK,  
12 - 15 August 2015
- **Characterization of Turkish Olive Varieties with NMR Relaxometry and Magnetic Resonance Imaging Experiments**  
KİLERCİOĞLU M., ÖZEL B., MERT B., ÖZTOP H. M.  
XII International Conference on the Applications of Magnetic Resonance in Food Science: Defining Food by Magnetic Resonance, Cesena, Italy, 20 - 23 May 2014

## Supported Projects

- MERT B., ÖZTOP H. M. , Project Supported by Higher Education Institutions, Fındık Meyvesinden Kefir Üretim Olanaklarının Araştırılması, 2018 - 2020
- ÖZTOP H. M. , MERT B., KÖYSÜREN B., Project Supported by Higher Education Institutions, Glike Olmuş Soya Proteinlerinin Sindirim ve Allerjenik Özelliklerinin İncelenmesi, 2018 - 2019
- Mert B., Öztop H. M. , TAGEM Tarımsal Araştırmalar ve Politikalar Genel Müdürlüğü Projesi, FINDIK OLEOSOMLARININ

ÖZÜTLENMESİ VE YENİ ÜRÜN GELİŞTİRİLMEK AMACIYLA KULLANIM OLANAKLARININ ARAŞTIRILMASI, 2016 - 2018  
ÖZTOP H. M. , MERT B., ÇIKRIKCI S., Project Supported by Higher Education Institutions, INSÜLİN YÜKLÜ GIDA POLİMERİ  
BAZLI HİDROJELLERİN TASARIM VE KARAKTERİZASYONU, 2017 - 2017  
ÖZTOP H. M. , MERT B., ÇIKRIKCI S., Project Supported by Higher Education Institutions, Tatlandırıcı ve Hacim artırıcı  
Polisakkaritlerin Çikolatalı Şekerleme Ürünlerinde Yağ Migrasyonuna olan Etkisi, 2016 - 2016  
MERT B., SÖYLER U. B. , Project Supported by Higher Education Institutions, Yeşil Yapraklı Sebzelerde Pestisit  
Kalıntıların Uzaklaştırılması için Yöntem Geliştirilmesi, 2014 - 2015  
MERT B., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ,  
2014 - 2014  
MERT B., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ,  
2014 - 2014  
MERT B., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ,  
2014 - 2014  
MERT B., YILDIZ BULUT E., ÇIKRIKCI S., Project Supported by Higher Education Institutions, Yüksek Kayma Hızında  
İşlenmiş Fındık Zarı Liflerinin Katkı Maddesi olarak Bisküvi ve Kek İçerisinde Kullanımı, 2013 - 2013

## Citations

Total Citations (WOS):621

h-index (WOS):11