

## Assoc. Prof. Melih Onay

### Personal Information

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### Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biyokimya, Turkey 2008 - 2015

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biyokimya, Turkey 2005 - 2008

Undergraduate, Ankara University, Fen Fakültesi, Biyoloji, Turkey 1999 - 2003

### Certificates, Courses and Trainings

Education Management and Planning, Yurt Dışı Doktora Araştırma Bursu, GEPEA Lab, France, 2014

Education Management and Planning, Tübitak 2214-A Yurt Dışı Doktora Araştırma Bursu, University of California, Berkeley, USA, 2013

### Dissertations

Doctorate, Biofuel Production from Microalgae, Middle East Technical University, Fen Bilimleri Enstitüsü, Biyokimya, 2015

Postgraduate, Investigation for Natural Extract Inhibitors of Bovine Lens Aldose Reductase Responsible for the formation of Diabetis Dependent Cataract, Middle East Technical University, Fen Bilimleri Enstitüsü, Biyokimya, 2008

### Research Areas

Environmental Engineering, Environmental Sciences, Environmental Chemistry, Environmental Microbiology, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Van Yüzüncü Yıl University, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2021 - Continues

Assistant Professor, Van Yüzüncü Yıl University, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2018 - 2021

Assistant Professor, Van Yüzüncü Yıl University, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2016 - 2018

Research Assistant, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biyokimya, 2005 - 2015

## Courses

Araştırma ve Sunum Teknikleri, Undergraduate, 2017 - 2018  
Mesleki İngilizce, Undergraduate, 2017 - 2018  
Mühendislik Matematiği, Undergraduate, 2017 - 2018  
Çevrede Biyomoleküler Mühendisliğin Yöntemleri, Postgraduate, 2017 - 2018  
İleri Çevre Mikrobiyolojisi, Postgraduate, 2017 - 2018  
Çevre Toksikolojisi, Undergraduate, 2017 - 2018  
Genel Kimya II, Undergraduate, 2017 - 2018  
Mikroalglerden Biyoyakıt Üretim Teknolojileri, Postgraduate, 2017 - 2018  
Gürültü Kirliliği, Undergraduate, 2017 - 2018  
Genel Kimya I, Undergraduate, 2017 - 2018  
Çevre Mikrobiyolojisi, Undergraduate, 2017 - 2018  
İleri Çevre Sistemleri Modellenmesi ve Simülasyonu, Postgraduate, 2017 - 2018  
Genel Kimya I, Undergraduate, 2016 - 2017  
Genel Kimya II, Undergraduate, 2016 - 2017  
Mühendislik Matematiği, Undergraduate, 2016 - 2017  
Çevre Mikrobiyolojisi, Undergraduate, 2016 - 2017  
Mesleki İngilizce, Undergraduate, 2016 - 2017

## Advising Theses

Onay M., Investigation of nitrogen and phosphorus removal from *Borodinelopsis texensis* at bioreactor, Postgraduate, E.EBİNÇ(Student), 2022  
Onay M., Bioethanol production from *gloeocystis vesiculosa* in synthetic wastewater, Postgraduate, S.GHAEB(Student), 2021  
Onay M., Aladağ E., Investigation of harvesting effect of microalgae grown in the flat-panel airlift photobioreactor by using various membranes, Postgraduate, E.ERCAN(Student), 2021  
Onay M., Design of 1L bubble column photobioreactor for microalgal biomass production, Postgraduate, S.NUR(Student), 2020  
Onay M., DESIGN OF FLAT-PANEL AIRLIFT PHOTOBIOREACTOR AND HIGH BIODIESEL PRODUCTION FROM MICROALGAE WITH LED AT VARIOUS WAVELENGTHS, Postgraduate, M.Onur(Student), 2020  
Onay M., Nuhoglu A., Investigation of lipid production in bubble column photobioreactor by *Botryococcus braunii* and *Chlorella zofingiensis*, Doctorate, E.Aladağ(Student), 2019

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Sequential modelling for carbohydrate and bioethanol production from *Chlorella saccharophila* CCALA 258: a complementary experimental and theoretical approach for microalgal bioethanol production**  
Onay M.  
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, vol.29, no.10, pp.14316-14332, 2022 (Journal Indexed in SCI)
- II. **The effects of indole-3-acetic acid and hydrogen peroxide on *Chlorella zofingiensis* CCALA 944 for bio-butanol production**  
Onay M.  
FUEL, vol.273, 2020 (Journal Indexed in SCI)
- III. **Enhancing carbohydrate productivity from *Nannochloropsis gaditana* for bio-butanol production**  
Onay M.  
ENERGY REPORTS, vol.6, pp.63-67, 2020 (Journal Indexed in SCI)
- IV. **A Drug Decision Support System for Developing a Successful Drug Candidate Using Machine**

### **Learning Techniques**

Onay A., Onay M.

CURRENT COMPUTER-AIDED DRUG DESIGN, vol.16, no.4, pp.407-419, 2020 (Journal Indexed in SCI)

- V. **Bioethanol production via different saccharification strategies from *H. tetrachotoma* ME03 grown at various concentrations of municipal wastewater in a flat-photobioreactor**

Onay M.

Fuel, vol.239, pp.1315-1323, 2019 (Journal Indexed in SCI)

- VI. **Classification of nervous system withdrawn and approved drugs with ToxPrint features via machine learning strategies**

Onay A., Onay M., Abul O.

Computer Methods and Programs in Biomedicine, vol.142, pp.9-19, 2017 (Journal Indexed in SCI)

- VII. **Thermo-resistant green microalgae for effective biodiesel production: Isolation and characterization of unialgal species from geothermal flora of Central Anatolia**

Onay M., Sonmez C., ÖKTEM H. A. , YÜCEL A. M.

BIORESOURCE TECHNOLOGY, vol.169, pp.62-71, 2014 (Journal Indexed in SCI)

- VIII. **Bio-fuel production from olive oil by transesterification reactions**

Onay M., OKTEM H. A. , YUCEL A. M.

NEW BIOTECHNOLOGY, vol.29, pp.43, 2012 (Journal Indexed in SCI)

### **Articles Published in Other Journals**

- I. **Enhancing Phycoerythrin and Phycocyanin Production from *Porphyridium cruentum* CCALA 415 in Synthetic Wastewater: The Application of Theoretical Methods on Microalgae**

Onay M.

Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.25, no.3, pp.499-512, 2021 (National Refreed University Journal)

- II. **Biomass and Bio-butanol Production from *Borodinellopsis texensis* CCALA 892 in Synthetic Wastewater: Determination of Biochemical Composition**

Onay M.

Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.24, no.2, pp.306-316, 2020 (National Refreed University Journal)

- III. **Investigation of Biobutanol Efficiency of *Chlorella* sp. Cultivated in Municipal Wastewater**

Onay M.

Journal of Geoscience and Environment Protection, vol.6, pp.140-150, 2018 (Refereed Journals of Other Institutions)

- IV. **Evaluation of various extraction techniques for efficient lipid recovery from thermo-resistant microalgae, *Hindakia*, *Scenedesmus* and *Micractinium* species.**

Onay M., SONMEZ C., OKTEM H. A. , YUCEL A. M.

American Journal of Analytical Chemistry, vol.7, pp.141-150, 2016 (Refereed Journals of Other Institutions)

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **DESIGN OF FLAT PANEL PHOTOBIOREACTOR AND HIGH BIODIESEL PRODUCTION FROM MICROALGAE**

Çelikaş M. O. , Onay M.

12. Uluslararası Bilimsel Araştırmalar Kongresi - Fen ve Mühendislik Bilimleri - (UBAK), Ankara, Turkey, 17 - 18 December 2021, pp.204-208

- II. **Investigation of Salinity Stress Effects on *Borodinellopsis Texensis***

Onay M.

5th International Congress on Engineering, Architecture and Design, İstanbul, Turkey, 21 - 22 December 2019, pp.549-554

- III. **Enhancing Carbohydrate Productivity from *Nannochloropsis Gaditana* for Bio-Butanol Production**  
Onay M.  
ICEER 2019 The 6th International Conference on Energy and Environment Research, Aveiro, Portugal, 22 - 25 July 2019, pp.37-38
- IV. **Biobutanol efficiency of *Dunaliella salina* DEE002 grown at various concentrations of wastewater**  
Onay M.  
EurasianSciEnTech 2018, Ankara, Turkey, 22 - 23 November 2018, pp.2470-2476
- V. **Bioethanol production from *Nannochloropsis gaditana* in municipal wastewater**  
Onay M.  
5th International Conference on Energy and Environment Research (ICEER), Prague, Czech Republic, 23 - 27 July 2018, vol.153, pp.253-257
- VI. **Investigation of superoxide dismutase activity and carotenoid content in *Dunaliella salina* under different stress conditions**  
Onay M.  
The 3rd International Conference on Energy and Environment Research(ICEER 2016), Barcelona, Spain, 7 - 09 September 2016, vol.1, no.1, pp.31-32
- VII. **Computational studies of isoflavanes: isovestitol and sativan**  
Onay A. K. , Onay M.  
International Symposium on Biotechnology and other Omics in Vegetable Science, Antalya, Turkey, 29 April - 02 May 2012, vol.1145, pp.39-42
- VIII. **Theoretical calculations and structural and electronic properties of isoflavanes: arvensan and isosativan**  
Onay M., Onay A. K.  
International Symposium on Biotechnology and other Omics in Vegetable Science, Antalya, Turkey, 29 April - 02 May 2012, vol.1145, pp.97-100
- IX. **Yerel Mikroalg Türlerinin Verimli Biyodizel Üretimi için Farklı Sıcaklık ve Besi Ortamlarında Detaylı Analizleri**  
SONMEZ C., Elçin E., Akın D., Onay M., OKTEM H. A. , YUCEL M.  
18. National Biotechnology Congress (Sözlü Bildiri), Konya, Turkey, 18 - 19 December 2015, pp.1
- X. **Isıya Dirençli Yeşil Mikroalglerden Etkili Biyodizel Üretimi**  
Onay M., SONMEZ C., OKTEM H. A. , YUCEL M.  
18. National Biotechnology Congress (Sözlü Bildiri), Konya, Turkey, 18 - 19 December 2015, pp.1
- XI. **Isolation and characterization of microalgae from geothermal flora of Anatolia for biodiesel production**  
Onay M.  
International Conference on Microalgae and Biofuels (Invited Speaker), İstanbul, Turkey, 30 - 31 July 2015, pp.1
- XII. **Comparison of *Chlamydomonas reinhardtii* and *Dunaliella salina* for Bio-fuel Production**  
Onay M., OKTEM H. A. , YUCEL M.  
2nd International Conference on Algal Biomass, Biofuels and Bioproducts, San Diego, United States Of America, 10 - 13 June 2012, pp.2
- XIII. **International Food, Agriculture and Gastronomy Congress**  
Onay M., CORUH N., CELEP F., DOGAN M.  
Antioxidant capacity of ethyl acetate extract of *Salvia aucheri*, Antalya, Turkey, 15 - 19 February 2012, pp.270
- XIV. **Antioxidant activity of ethyl acetate extract of *Salvia pomifera***  
Onay M., CORUH N., CELEP F., DOGAN M.  
International Food Congress, "Novel Approaches in Food Industry (NAFI)", İzmir, Turkey, 26 - 29 May 2011, pp.86
- XV. **Aldose reductase natural inhibitors from ethyl acetate extracts from Southern Turkey**  
Onay M., ISGOR B., CORUH N.  
9th International Society for the Study of Xenobiotics (ISSX), İstanbul, Turkey, 4 - 09 September 2010, pp.248

## Supported Projects

Onay M., ÇELİKTAŞ M. O. , Project Supported by Higher Education Institutions, Düzpanel hava kaldırmalı fotobiyoreaktörün tasarımı ve çeşitli dalgaboylarında led ışık ile mikroalglerden yüksek biyodizel üretimi, 2018 - 2020

Şapcı Ayas Z., Onay M., DURMAZ BEKMEZCİ H., Project Supported by Higher Education Institutions, Atıksudaki ağır metalin işlem yapılmış ve yapılmamış patates kabuğu ile gideriminin araştırılması, 2017 - 2020

Onay M., Şapcı Ayas Z., Project Supported by Higher Education Institutions, Mikroalglerin yağ miktarlarının belirlenmesi için uygun florasan metodun geliştirilmesi ve bunun biyodizel üretiminde kullanılması, 2017 - 2019

Onay M., Project Supported by Higher Education Institutions, Çevre mühendisliği çevre mikrobiyolojisi laboratuvarı altyapısının geliştirilmesi, 2017 - 2018

Onay M., Project Supported by Higher Education Institutions, Investigation of superoxide dismutase activity and carotenoid content in Dunaliella salina under different stress conditions, 2016 - 2016

## Memberships / Tasks in Scientific Organizations

Ulusal Biyoteknoloji Derneği, Board Member, 2014 - 2018

International Society for the Study of Xenobiotics, Member, 2011 - 2018

Türk Biyokimya Derneği, Member, 2010 - 2018

The Federation of European Biochemical Societies, Member, 2010 - 2018

## Scientific Refereeing

Energy Conversion and Management, SCI Journal, December 2018

Recent Patents on Computer Sc, Other Indexed Journal, January 2018

## Edit Congress / Symposium Activities

2st International Mediterranean Science and Engineering Congress, Attendee, Adana, Turkey, 2017

1st International Mediterranean Science and Engineering Congress, Attendee, Adana, Turkey, 2016

The 3rd International Conference on Energy and Environment Research (ICEER 2016), Attendee, Barcelona, Spain, 2016

18. National Biotechnology Congress, Attendee, Konya, Turkey, 2015

International Conference on Microalgae and Biofuels, Attendee, İstanbul, Turkey, 2015

International Conference on Microalgae and Biofuels, Invited Speaker, İstanbul, Turkey, 2015

39th FEBS & EMBO Conference, Attendee, Paris, France, 2014

38th FEBS Congress, Attendee, Sankt Peterburg, Russia, 2013

15th European Congress on Biotechnology of the European Federation of Biotechnology, Attendee, İstanbul, Turkey, 2012

22nd IUBMB & 37th FEBS Congress, Attendee, Sevilla, Spain, 2012

2nd International Conference on Algal Biomass, Biofuels and Bioproducts, Attendee, California, United States Of America, 2012

International Symposium on Biotechnology and other Omics in Vegetable Science, Attendee, Turkey, 2012

International Food, Agriculture and Gastronomy Congress, Attendee, Antalya, Turkey, 2012

23th National Biochemistry Congress, Attendee, Adana, Turkey, 2011

59th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA 2011), Attendee, Antalya, Turkey, 2011

International European Biotechnology Congress 2011 (Euro Biotech 2011), Attendee, İstanbul, Turkey, 2011

36 th FEBS Congress ( Biochemistry for Tomorrow's Medicine), Attendee, Torino, Italy, 2011

International Food Congress, "Novel Approaches in Food Industry (NAFI), Attendee, İzmir, Turkey, 2011

22th National Biochemistry Congress, Attendee, Eskişehir, Turkey, 2010

9th International Society for the Study of Xenobiotics (ISSX), Attendee, İstanbul, Turkey, 2010

## Citations

Total Citations (WOS):83

h-index (WOS):5

## Scholarships

Tübitak 2214-A Yurt Dışı Doktora Araştırma Bursu, GEPEA Lab, France, TUBITAK, 2014 - Continues

Tübitak 2214-A Yurt Dışı Doktora Araştırma Bursu, University of California, Berkeley, USA, TUBITAK, 2013 - Continues

Tübitak 2211-Yurt içi Doktora Bursu, TUBITAK, 2008 - Continues

Tübitak 2210-Yurt içi Yüksek Lisans Bursu, TUBITAK, 2005 - Continues

## Awards

Onay M., Marine Algae Culture Course, CIHEAM (Spain), June 2016

Onay M., Prof. Dr. Mustafa Parlar 2014-2015 ODTÜ Fen Bilimleri Enstitüsü Yılın Tez Ödülü, Prof. Dr. Mustafa Parlar Eğitim ve Araştırma Vakfı, December 2015

Onay M., Orta Doğu Teknik Üniversitesi Fen Bilimleri Enstitüsü Doktora Ders Performans Birincilik Ödülü, ODTÜ, June 2012