

Assoc. Prof. SELİS ÖNEL

Personal Information

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Education Information

Post Doctorate, Harvard University, Harvard Tıp Fakültesi, Center For Engineering İn Medicine / Biyomedikal Muhendisligi, United States Of America 2010 - 2010

Post Doctorate, Harvard University, Harvard Tıp Fakültesi, Center For Engineering İn Medicine / Biyomedikal Muhendisligi, United States Of America 2009 - 2009

Post Doctorate, Harvard University, Harvard Tıp Fakültesi, Center For Engineering İn Medicine / Biyomedikal Muhendisligi, United States Of America 2008 - 2008

Doctorate, Northeastern University, Graduate School Of Engineering, Makina Muhendisligi, United States Of America 2000 - 2006

Post Graduate, Orta Doğu Teknik Üniversitesi, Risk Analizi A.B.D., Kimya Muhendisligi, Turkey 1997 - 2000

Under Graduate, Orta Doğu Teknik Üniversitesi, Muhendislik Fakültesi, Kimya Muhendisligi, Turkey 1992 - 1997

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Comparison and extension of free dendritic growth models through application to silver-15 mass percent copper alloy, Northeastern University, Department Of Mechanical And Industrial Engineering, 2006

Post Graduate, Energy optimization of the yankee-hood dryer, Orta Doğu Teknik Üniversitesi, Risk Analizi A.B.D., Kimya Mühendisliği (YI) (Tezli), 2000

Research Areas

Biomedical Engineering, Bioengineering and MEMS, Bioinstrumentation and Microelectromechanical Systems (MEMS), Chemical Engineering and Technology, Biotechnology, Biomedical Engineering, Basic Operations and Thermodynamics, Thermodynamics, Heat Transfer, Transport Events, Mechanical Engineering, Construction and Manufacturing, Non-traditional manufacturing methods, Thermodynamics, Heat and Mass Transfer, Computational fluid dynamics, Thermal Systems, Metallurgical and Materials Engineering, Material science and engineering, Chemical and Electrochemical Properties, Mathematics, Numerical Analysis, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Middle East Technical University Northern Cyprus Campus, Engineering, Mechanical Engineering,

2018 - Continues

Associate Professor, National Defense University, Alparslan Defense Sciences Institute, Department Of Weapon Systems,
2017 - Continues

Researcher, Harvard University, Harvard Medical School / Massachusetts General Hospital, Biomedical Engineering,
2016 - 2017

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2011 - 2017

Assistant Professor, Land War Academy Command, Institute Of Defense Sciences, 2012 - 2016

Researcher, Harvard University, Massachusetts General Hospital, Center for Engineering in Medicine, 2008 - 2015

Lecturer PhD, Land War Academy Command, Institute Of Defense Sciences, Department Of Operation Research, 2008 -
2011

Research Assistant, Northeastern University, College of Engineering, Department of Mechanical and Industrial
Engineering, 2000 - 2006

Research Assistant, Middle East Technical University, Risk Analizi A.B.D., International Center for Heat and Mass Transfer
(ICHMT), 1998 - 2000

Professional Experience

Erasmus Coordinator, Hacettepe Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2008 - Continues

Courses

Advanced Chemical Engineering Thermodynamics, Post Graduate, 2020 - 2021

Solid State Chemistry, Doctorate, 2018 - 2019

Advanced Engineering Mathematics, Post Graduate, 2017 - 2018, 2018 - 2019, 2019 - 2020

Introduction to Microfluidic Systems, Doctorate, 2019 - 2020

KMU600 ÖZEL KONULAR, Post Graduate, 2016 - 2017, 2017 - 2018

KMU700 ÖZEL KONULAR, Doctorate, 2016 - 2017, 2017 - 2018

NNT600 ÖZEL KONULAR, Post Graduate, 2016 - 2017, 2017 - 2018

KMU479 MALZEME BİLİMİ VE TEKNOLOJİSİ II, Under Graduate, 2017 - 2018

KMÜ403 KIMYA MÜHENDİSLİĞİ LABORATUVARI I, Under Graduate, 2017 - 2018

BYM600 ÖZEL KONULAR, Post Graduate, 2016 - 2017, 2017 - 2018

NNT700 ÖZEL KONULAR, Doctorate, 2016 - 2017

Advising Theses

Önel S., Al-6061 alaşımı için uygun elektrokimyasal işleme parametrelerinin ve elektrolitin araştırılması, Post Graduate,
G.ŞEHNAZ(Student), 2018

Önel S., Yeni bir elektrokimyasal işleme tezgahında çalışma parametrelerinin titanyum alaşımları için eniyilemesi, Post
Graduate, N.HANLIOĞLU(Student), 2018

Önel S., Beyin damar akışında gaz halde emboli davranışının matematiksel modellemesi, Post Graduate,
P.KIZILTAŞ(Student), 2018

Önel S., Ekmeklik buğday kalitesini değerlendirmede kullanılan kimyasal ve fiziksel özelliklerin incelenmesi, Post
Graduate, Y.OKUR(Student), 2017

Önel S., Examination and mathematical modelling of shrinkage rate of uniform droplets in a microfluidic system designed
for biopreservation, Post Graduate, U.OKUMUŞ(Student), 2015

ÖNEL S., Bir elektrokimyasal işleme uygulamasında atık elektrolitin ağır metal iyonlarından arındırılması ve geri
kazanımı, Post Graduate, G.ERGİN(Student), 2012

Jury Memberships

Doctoral Examination, Doctoral Examination, Orta Doğu Teknik Üniversitesi, December, 2019

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, December, 2019

Doctorate, Doctorate, Orta Doğu Teknik Üniversitesi, November, 2019

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, September, 2019

Doctoral Examination, Doctoral Examination, Hacettepe Üniversitesi, June, 2019

Doctoral Examination, Doctoral Examination, Hacettepe Üniversitesi, February, 2019

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

- I. **Multistep Treatment of a Complex Electrolyte for Removal of Heavy Metal Ions and Recycling in Electrochemical Machining**
ÖNEL S., Ergin G.
JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING-TRANSACTIONS OF THE ASME, vol.142, no.7, 2020
(Journal Indexed in SCI)
- II. **Permeability and fluid flow-induced wall shear stress in bone scaffolds with TPMS and lattice architectures: A CFD analysis**
ALI D., ÖZALP M., Blanquer S. B. G. , ÖNEL S.
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.79, pp.376-385, 2020 (Journal Indexed in SCI)
- III. **Application of a simple subregular solution model to the computation of phase boundaries and free dendritic growth in the Ag-Cu system**
ÖNEL S., Ando T.
ACTA MATERIALIA, vol.113, pp.109-115, 2016 (Journal Indexed in SCI)
- IV. **Simulations of nanoscale Ni/Al multilayer foils with intermediate Ni₂Al₃ growth**
GUNDUZ I. E. , ÖNEL S., DOUMANIDIS C. C. , Rebholz C., SON S. F.
JOURNAL OF APPLIED PHYSICS, vol.117, no.21, 2015 (Journal Indexed in SCI)
- V. **INVESTIGATION AND APPLICATION OF AUTOMATIC CONTROLLED ELECTROCHEMICAL MACHINING (ECM)**
Onel S.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.29, no.1, pp.1-8, 2014 (Journal Indexed in SCI)
- VI. **DETERMINATION AND REMOVAL OF COPPER IONS (Cu²⁺) IN THE WASTE ELECTROLYTE IN AN ELECTROCHEMICAL MACHINING APPLICATION**
ERGIN G., ÖNEL S.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.29, no.3, pp.487-494, 2014 (Journal Indexed in SCI)
- VII. **Comparison and extension of free dendritic growth models through application to a Ag-15 mass pct Cu alloy**
Onel S., Ando T.
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.10, pp.2449-2458, 2008 (Journal Indexed in SCI)
- VIII. **Energy optimization of the Yankee-Hood dryer**
Onel S., Guruz G.
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.47, no.8, pp.512-518, 2001 (Journal Indexed in SCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Effect of Blood Viscosity on Pressure and Shear Stress on the Walls of an Artery with Stenosis**
Ali D., ÖNEL S.
Medical Technologies National Congress (TIPTEKNO), Magusa, CYPRUS, 8 - 10 November 2018
- II. **Entropy based classification of road-profiles**
Caglar Baslamisli S. Ç. , ÖNEL S.
ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis, ESDA2010, İstanbul, Turkey,
12 - 14 July 2010, vol.4, pp.401-408

Supported Projects

- Önel S., TUBITAK Project, Biyosaklama için Mikro Akışkan bir Sistemde Eşboyutlu Sulu Mikro Damlacıkların Küçülme Hızının İncelenmesi Matematiksel Modellenmesi ve Simulasyonu, 2015 - 2020
- ÖNEL S., Project Supported by Higher Education Institutions, Biyomalzemeleri Önderiştirme için geliştirilen BiyoMEMS Cihazda Biyomalzemelerle Performans Testleri, 2015 - 2016
- ÖNEL S., Project Supported by Higher Education Institutions, Biyosaklama ve Önderiştirme Yöntemlerinde İlerlemeler, 2015 - 2015
- ÖNEL S., Project Supported by Higher Education Institutions, Biomedikal amaçlı mikro-kanallı akışkan bir sistemde kütle aktarımının matematiksel modellemesi, 2014 - 2015
- ÖNEL S., TUBITAK Project, Otomatik Kontrollü Elektrokimyasal İşleme Tezgahında Geliştirme Çalışmaları Elektrolit Devri Tasarımı ve Modellemesi, 2011 - 2012
- ÖNEL S., Industrial Thesis Project, CNC Kontrollü Elektrokimyasal İşleme Tezgahı, 2010 - 2011
- Project Supported by Other Private Institutions, Yankee Hood Kurutucusunda Enerji Optimizasyonu, 1998 - 2000

Activities in Scientific Journals

Technology, Assistant Editor, 2016 - Continues

Scientific Refereeing

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Hacettepe University, Turkey, November 2019

Citations

Total Citations (WOS):32

h-index (WOS):3