

# Prof. OĞUZHAN İLGEN

## Personal Information

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## Education Information

Doctorate, Kocaeli University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği Anabilim Dalı, Turkey 2003 - 2009

Postgraduate, Kocaeli University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği Anabilim Dalı, Turkey 2000 - 2002

Undergraduate, Eskisehir Osmangazi University, Mühendislik-Mimarlık Fakültesi, Kimya Mühendisliği Bölümü, Turkey 1996 - 2000

## Foreign Languages

English, B2 Upper Intermediate

## Research Areas

Chemical Engineering and Technology, Process and Reactor Design, Chemical Reaction Engineering, Catalysis and Catalytic Processes, Engineering and Technology

## Academic Titles / Tasks

Professor, Kocaeli University, Mühendislik Fakültesi, Kimya Mühendisliği, 2022 - Continues

Associate Professor, Kocaeli University, Mühendislik Fakültesi, Kimya Mühendisliği, 2014 - 2022

Assistant Professor, Kocaeli University, Mühendislik Fakültesi, Kimya Mühendisliği, 2009 - 2015

Research Assistant, Kocaeli University, Mühendislik Fakültesi, Kimya Mühendisliği, 2000 - 2009

## Academic and Administrative Experience

Vice Dean, Kocaeli University, Mühendislik Fakültesi, 2020 - Continues

Fakülte Yönetim Kurulu Üyesi, Kocaeli University, Mühendislik Fakültesi, 2016 - 2019

Fakülte Yönetim Kurulu Üyesi, Kocaeli University, Mühendislik Fakültesi, 2012 - 2015

## Advising Theses

İlgen O., Metanol ve oleik asidin Purolite CT151 katalizörü ile esterifikasyonu, Postgraduate, E.BAYTAŞ(Student), 2022

İlgen O., Kaprilik asit esterifikasyonunda deney parametreleri ve reaksiyon kinetiğinin incelenmesi, Postgraduate, A.ADOUM(Student), 2022

İlgen O., Oleik asit içeriği yüksek atık ayçiçek yağından katalitik olarak biyodizel üretimi, Doctorate, M.İMGE(Student), 2019

İlgen O., Heterojen katalizör ile gliserin ve aseton kullanılarak solketal üretimi ve yakıt katkısı olarak kullanımı, Postgraduate, Ş.YERLİKAYA(Student), 2019  
İlgen O., Adsorban olarak amberlyst a21 kullanılarak ayçiçeği yağından oleik asidin adsorpsiyonunun incelenmesi, Postgraduate, E.TÜMKOR(Student), 2018  
İlgen O., Ayçiçeği yağından oleik asidin Zeolit 13X üzerine adsorpsiyonu, Postgraduate, H.SEDA(Student), 2014

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

- I. **Study on kinetics and reaction parameters of biodiesel production from sunflower oil and methanol using zinc oxide supported calcium oxide**  
İlgen O.  
Periodica Polytechnica-Chemical Engineering, vol.66, no.2, pp.261-268, 2022 (Journal Indexed in SCI Expanded)
- II. **Catalytic activity of CaO-based catalyst in transesterification of microalgae oil with methanol**  
Çakırca E. E. , Tekin G. N. , İlgen O., Akın A. N.  
ENERGY & ENVIRONMENT, vol.30, pp.176-187, 2019 (Journal Indexed in SSCI)
- III. **Esterification of Oleic Acid with Methanol Using Zr(SO<sub>4</sub>)(2) as a Heterogeneous Catalyst**  
Tarakci M. İ. , İLGEN O.  
CHEMICAL ENGINEERING & TECHNOLOGY, vol.41, no.4, pp.845-852, 2018 (Journal Indexed in SCI)
- IV. **Improvement of fuel properties of biodiesel with bioadditive ethyl levulinate**  
Unlu D., Boz N., İLGEN O., HİLMİOĞLU N.  
OPEN CHEMISTRY, vol.16, no.1, pp.647-652, 2018 (Journal Indexed in SCI)
- V. **Reactive separation system for effective upgrade of levulinic acid into ethyl levulinate**  
Unlu D., İLGEN O., Hilmioglu N.  
CHEMICAL ENGINEERING RESEARCH & DESIGN, vol.118, pp.248-258, 2017 (Journal Indexed in SCI)
- VI. **Synthesis of Solketal from Glycerol and Acetone over Amberlyst-46 to Produce an Oxygenated Fuel Additive**  
İLGEN O., YERLİKAYA S., AKYÜREK F. O.  
PERIODICA POLYTECHNICA-CHEMICAL ENGINEERING, vol.61, no.2, pp.144-148, 2017 (Journal Indexed in SCI)
- VII. **Biodiesel additive ethyl levulinate synthesis by catalytic membrane: SO<sub>4</sub>-2/ZrO<sub>2</sub> loaded hydroxyethyl cellulose**  
Unlu D., İLGEN O., Hilmioglu N.  
CHEMICAL ENGINEERING JOURNAL, vol.302, pp.260-268, 2016 (Journal Indexed in SCI)
- VIII. **Removal of oleic acid from sunflower oil on zeolite 13X: Kinetics, equilibrium and thermodynamic studies**  
İLGEN O., DULGER H. S.  
INDUSTRIAL CROPS AND PRODUCTS, vol.81, pp.66-71, 2016 (Journal Indexed in SCI)
- IX. **Biodiesel production from waste sunflower oil by using Amberlyst 46 as a catalyst**  
Senoymak M. İ. , İLGEN O.  
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.38, no.21, pp.3139-3143, 2016 (Journal Indexed in SCI)
- X. **Investigation of reaction parameters, kinetics and mechanism of oleic acid esterification with methanol by using Amberlyst 46 as a catalyst**  
İLGEN O.  
FUEL PROCESSING TECHNOLOGY, vol.124, pp.134-139, 2014 (Journal Indexed in SCI)
- XI. **Adsorption of oleic acid from sunflower oil on Amberlyst A26 (OH)**  
İLGEN O.  
FUEL PROCESSING TECHNOLOGY, vol.118, pp.69-74, 2014 (Journal Indexed in SCI)
- XII. **Determination of reaction orders for the transesterification of canola oil with methanol by using KOH/MgO as a heterogeneous catalyst**  
İLGEN O., AKIN A. N.

APPLIED CATALYSIS B-ENVIRONMENTAL, vol.126, pp.342-346, 2012 (Journal Indexed in SCI)

- XIII. **Production of biodiesel catalyzed by immobilized thermomyces lanuginose lipase from canola oil: process optimization using response surface methodology**  
Akbin M., GÜRKAYA B., UYAR B., İLGEN O., KAPUCU N.  
NEW BIOTECHNOLOGY, vol.29, 2012 (Journal Indexed in SCI)
- XIV. **Reaction kinetics of dolomite catalyzed transesterification of canola oil and methanol**  
İLGEN O.  
FUEL PROCESSING TECHNOLOGY, vol.95, pp.62-66, 2012 (Journal Indexed in SCI)
- XV. **Transesterification of Canola Oil Using Marble Dust as a Heterogeneous Catalyst**  
İLGEN O.  
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.34, no.18, pp.1688-1694, 2012 (Journal Indexed in SCI)
- XVI. **Dolomite as a heterogeneous catalyst for transesterification of canola oil**  
İLGEN O.  
FUEL PROCESSING TECHNOLOGY, vol.92, no.3, pp.452-455, 2011 (Journal Indexed in SCI)
- XVII. **Transesterification of Canola Oil to Biodiesel Using MgO Loaded with KOH as a Heterogeneous Catalyst**  
İlgen O., AKIN A. N.  
ENERGY & FUELS, vol.23, pp.1786-1789, 2009 (Journal Indexed in SCI)
- XVIII. **Development of Alumina Supported Alkaline Catalysts Used for Biodiesel Production**  
İLGEN O., AKIN A. N.  
TURKISH JOURNAL OF CHEMISTRY, vol.33, no.2, pp.281-287, 2009 (Journal Indexed in SCI)
- XIX. **Investigation of Biodiesel Production from Canola Oil Using Amberlyst-26 as a Catalyst**  
İLGEN O., AKIN A. N., Boz N.  
TURKISH JOURNAL OF CHEMISTRY, vol.33, no.2, pp.289-294, 2009 (Journal Indexed in SCI)
- XX. **Investigation of biodiesel production from canola oil using Mg-Al hydrotalcite catalysts**  
İLGEN O., DINCER I., YILDIZ M., ALPTEKİN E., BOZ N., ÇANAKCI M., AKIN A. N.  
TURKISH JOURNAL OF CHEMISTRY, vol.31, no.5, pp.509-514, 2007 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **Purolite CT169DR Heterojen Katalizörü Varlığında Metanol İle Oleik Asidin Esterifikasyonu**  
Şenoymak Tarakçı M. İ. , İlgen O.  
Konya mühendislik bilimleri dergisi (Online), vol.0, no.0, 2022 (Peer-Reviewed Journal)
- II. **KALSİYUM ASETAT YÜKLENMİŞ DOLOMİT KATALİZÖRÜ İLE KANOLA YAĞI VE METANOLDEN BİYODİZEL ÜRETİMİ**  
İLGEN O.  
Anadolu University Journal of Science and Technology-A Applied Sciences and Engineering, vol.17, pp.413-421, 2016 (Refereed Journals of Other Institutions)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Ion Exchange Capacity and Interaction Parameter Calculations in PVA / PAMPS Catalytic Membranes**  
Güler H., İlgen O., Hilmioğlu N.  
International Marmara Science Sciences Congress (imascon 2019 autumn), Kocaeli, Turkey, 1 - 03 November 2019, pp.521-525
- II. **Fuel additive solketal synthesis using catalytic membrane**  
Güler H., İlgen O., Hilmioğlu N.  
5th International Turkic World Conference on Chemical Sciences and Technologies, Sakarya, Turkey, 25 - 29

October 2019, pp.85-87

- III. **SYNTHESIS OF SOLKETAL BY ECONOMIC CATALYST SULFO SUCCINIC ACID**  
Hasırcı G., İLGEN O., HİLMİOĞLU N.  
2nd International Conference on Life and Engineering Sciences, 27 - 29 June 2019, pp.113-117
- IV. **Adsorption of Oleic Acid from Sunflower Oil by Using Pumice**  
İLGEN O., ŞENOYMAK TARAKÇI M. İ.  
1st International Balkan Chemistry Congress (IBCC-2018), Edirne, Turkey, 17 September 2018, pp.1
- V. **Improvement of fuel properties of biodiesel with bioadditive ethyl levulinate**  
ÜNLÜ D., BOZ N., İLGEN O., HİLMİOĞLU N.  
4th International Conference on Computational and Experimental Science and Engineering (ICCESEN 2017), 4 - 08 October 2017
- VI. **Conversion of waste vegetable oil into Biodiesel by using Purolite CT275DR as catalyst**  
ŞENOYMAK M. İ. , İLGEN O.  
Europacat 2017, Florence, Italy, 27 - 31 August 2017
- VII. **Biyodizel İçeriğinin Fourier Dönüşümlü Kızılötesi**  
KUTLUK T., İLGEN O.  
12.Ulusal Kimya Mühendisliği Kongresi, Turkey, 23 - 26 August 2016
- VIII. **Using solketal gasoline fuel blends in a vehicle with spark ignition engine**  
ALPTEKİN E., İLGEN O., YERLİKAYA Ş., ÇANAKCI M.  
5th International Renewable Energy and Environment Conference, 11 - 13 July 2016, vol.1, pp.1-4
- IX. **Biodiesel Production from High Acid Value Sunflower Oil By Using Zirconium Sulfate as a Heterogeneous Acid Catalyst**  
ŞENOYMAK M. İ. , İLGEN O.  
8th International Exergy, Energy and Environment Symposium (IEEES-8), 1 - 04 May 2016
- X. **Biodiesel Production from Model Waste Vegetable Oil by Using Zirconium Sulfate Catalyst**  
ŞENOYMAK TARAKÇI M. İ. , İLGEN O.  
NCC 6- Uluslararası Kataliz Konferansı, Bursa, Turkey, 26 April 2016, pp.1
- XI. **Investigation of Reaction Parameters of Oleic Acid Esterification With Methanol by Using Zirconium Sulfate as a Heterogeneous Acid Catalyst**  
ŞENOYMAK M. İ. , İLGEN O.  
Global Conference on Global Warming - GCGW2015, ATİNA, Greece, 24 - 27 May 2015
- XII. **Investigation of Reaction Parameters of Oleic Acid Esterification with Methanol by Using Zirconium Sulfate as a Heterogeneous Acid Catalyst**  
ŞENOYMAK M. İ. , İLGEN O.  
GCGW15- Global Conference on Global Warming, 24 - 27 May 2015
- XIII. **Atık Ayçiçeği Yağından Biyodizel Üretimi Sürecinde Serbest Yağ Asidi Miktarının Etkisi**  
ŞENOYMAK M. İ. , İLGEN O.  
11. Ulusal Kimya Mühendisliği Kongresi, Turkey, 2 - 05 September 2014
- XIV. **Atık Ayçiçek Yağından Biyodizel Üretimi Sürecinde Serbest Yağ Asidi Miktarının Etkisi**  
ŞENOYMAK TARAKÇI M. İ. , İLGEN O.  
UKMK 11- 11. Ulusal Kimya Mühendisliği Kongresi, Eskişehir, Turkey, 02 September 2014, pp.1-3
- XV. **Biyodizel İçeriğinin Kırılma İndisi ile Belirlenmesi**  
KUTLUK T., İLGEN O.  
11. Ulusal Kimya Mühendisliği Kongresi, Turkey, 2 - 05 September 2014
- XVI. **Transesterification of Canola Oil by Immobilized Lipase Thermomyces Lanuginosus**  
AKBİN H. M. , Gürkaya Kutluk B., İLGEN O., UYAR B., KAPUCU N.  
2nd International Conference on Environmental Science and Technology (ICOEST), 14 - 17 May 2014
- XVII. **Biodiesel Production from High Acid Value Sunflower Oil by Using Amberlyst 46 as a Heterogeneous Catalyst**  
ŞENOYMAK TARAKÇI M. İ. , İLGEN O.  
NCC 5- 5. Ulusal Kataliz Konferansı, Adana, Turkey, 23 April 2014, pp.1

- XVIII. **Tutuklanmış Thermomyces lanuginosa Lipazı ile Kanola Yağından Biyodizel Üretimi: Yüzey Cevap Yöntemi ile Proses Optimizasyonu**  
AKBİN H. M. , Gürkaya Kutluk B., UYAR B., İLGEN O., KAPUCU N.  
17.Ulusal Biyoteknoloji Kongresi, Turkey, 23 - 26 September 2012
- XIX. **Biodiesel Production from Canola Oil by Thermomyces Lanuginose Lipase Immobilized on Mg-Al Hydrotalcite.**  
AKBİN H. M. , Gürkaya Kutluk B., İLGEN O., UYAR B., KAPUCU N.  
4th National Catalysis Conference, Turkey, 21 - 24 March 2012
- XX. **Biodiesel production by lipase from different origins immobilized on Mg-Al hydrotalcite**  
Gürkaya Kutluk B., AKBİN H. M. , UYAR B., İLGEN O., KAPUCU N.  
EnCAMP, Energy Challenges for Advanced Materials and Processes: Harvesting, Storage and Efficient Utilization, 25 - 29 May 2011
- XXI. **Biodiesel Production from Canola Oil by Thermomyces Lanuginose Lipase Immobilized on Mg-Al Hydrotalcite 4th National Catalysis Conference**  
AKBİN H. M. , Gürkaya Kutluk B., İLGEN O., UYAR B., KAPUCU N.  
NCC-4 4th National Catalysis Conference, 21 March 2012 - 24 March 2011
- XXII. **Düşük Kaliteli Atık Tavuk Yağından Biyodizel Üretimi**  
ÇANAKCI M., ALPTEKİN E., ŞANLI H., İLGEN O.  
Fuels and Combustion in Engines (FCE 09), İstanbul, Turkey, 8 - 09 October 2009, pp.199-203
- XXIII. **Investigation of Biodiesel Production from Canola Oil by Using Mg-Al Hydrotalcite Catalyst**  
İLGEN O., DİNÇER İ., YILDIZ M., ALPTEKİN E., BOZ N., ÇANAKÇI M., AKIN A. N.  
First National Catalysis Conference (NCC-1), Ankara, Turkey, 17 - 20 January 2007
- XXIV. **Alumina Destekli Platin Katalizörlerinin Birlikte Çöktürme Yöntemi ile Hazırlanma Koşullarının İncelenmesi**  
YILDIZ M., İLGEN O., AKIN A. N.  
Altıncı Ulusal Kimya Mühendisliği Kongresi (UKMK-6), İzmir, Turkey, 7 - 10 September 2004

## Supported Projects

- HİLMİOĞLU N., OKTOR K., İLGEN O., Project Supported by Higher Education Institutions, Sulardan doğal organik madde giderimi için kompozit adsorban geliştirilmesi ve adsorpsiyon uygulaması, 2022 - Continues
- İLGEN O., Project Supported by Higher Education Institutions, KAPRİLİK ASİTİN ESTREFİKASYON REAKSİYONUNUN TEPKİME PARAMETRELERİNİN İNCELENMESİ, 2018 - 2019
- HİLMİOĞLU N., İLGEN O., TUBITAK Project, Katalitik Membran Reaktörde Biyokatki Etil Levulinat Üretiminin Ve Biyodizele Uyumunun İncelenmesi, 2014 - 2017
- İLGEN O., Project Supported by Higher Education Institutions, GLİSERİN VE ASETAN REAKSİYONUNDAN AMBERLYST..., 2014 - 2015
- İLGEN O., Project Supported by Higher Education Institutions, Oleik Asitin metanol ile Esterifikasyonu İçin Katı Katalizör Geliştirilmesi, 2011 - 2012
- Kapucu N., Uyar B., Özsezen A. N. , İlgen O., TUBITAK Project, 1001-MAG 109M466Biyodizel Yakıt ve biyoyağlayıcıların yenilenebilir kaynaklardan lipaz katalizli üretimi, 2010 - 2012

## Metrics

- Publication: 47  
Citation (WoS): 427  
Citation (Scopus): 475  
H-Index (WoS): 13  
H-Index (Scopus): 13