

## Assoc. Prof. DERYA ÖZGÜR

### Personal Information

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### Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), Turkey 2008 - 2015

Postgraduate, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Turkey 2005 - 2008

Undergraduate Double Major, Gazi University, Mühendislik Fakültesi, Endüstri Mühendisliği, Turkey 2003 - 2006

Undergraduate, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Turkey 2000 - 2005

### Foreign Languages

English, C2 Mastery

### Dissertations

Doctorate, Amonyak boran sentezi, dehidrojenasyonu ve kinetik parametrelerin belirlenmesi, Gazi University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), 2014

Postgraduate, Gliserinden sıvı faz katalitik reforming yöntemi ile hidrojen üretimi, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2008

### Research Areas

Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği, 2019 - Continues

Research Assistant, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği, 2005 - 2019

Researcher, Purdue University, Engineering Faculty, Chemical Engineering, 2015 - 2016

### Courses

Temel Malzeme Bilimi, Undergraduate, 2021 - 2022

Graduation Research Project, Undergraduate, 2021 - 2022

Heat Transfer, Undergraduate, 2021 - 2022

Kimya Mühendisliği Laboratuvarı I, Undergraduate, 2021 - 2022  
Bitirme Ödevi, Undergraduate, 2020 - 2021  
Chemical Engineering Laboratory I, Undergraduate, 2020 - 2021  
Chemical Engineering Laboratory II, Undergraduate, 2021 - 2022  
Mass Transfer I, Undergraduate, 2021 - 2022  
Kimya Mühendisliği Laboratuvarı II, Undergraduate, 2021 - 2022  
Kütle Aktarımı II, Undergraduate, 2020 - 2021  
Graduation Project, Undergraduate, 2021 - 2022  
Material Science, Undergraduate, 2020 - 2021  
Elektrokimya, Undergraduate, 2019 - 2020  
İleri Malzeme Teknolojisi, Postgraduate, 2020 - 2021  
Lisans Araştırma Projesi, Undergraduate, 2019 - 2020  
Introduction to transport phenomena, Undergraduate, 2018 - 2019

## Advising Theses

Özgür D., Karbon Nanotüp Katkılı Epoksi Reçinenin Karbon Fiber Takviyeli Kompozit-Çelik veya Alüminyum Arayüzeyindeki Yapışmaya Etkisinin İncelenmesi, Postgraduate, M.ŞAHBAZ(Student), Continues  
Özgür D., Optimization of the adhesion process to enhanced mechanical properties of carbon epoxy composite-steel joints for aircraft application, Postgraduate, Y.AKALIN(Student), 2023

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

- I. **A novel 0D/2D/2D hetero-layered nitrogen-doped graphene/MoS<sub>2</sub> architecture for catalytic hydrogen evolution reaction**  
ÖZGÜR D.  
FUEL, vol.328, 2022 (SCI-Expanded)
- II. **Substitution effects in distyryl BODIPYs for near infrared organic photovoltaics**  
Tok M., Say B., Dolek G., Tatar B., Özgür D., Kurukavak C. K., Kuş M., Dede Y., Cakmak Y.  
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.429, 2022 (SCI-Expanded)
- III. **Facile Ion-Exchange Method for Zn Intercalated MoS<sub>2</sub> As an Efficient and Stable Catalyst toward Hydrogen Evaluation Reaction**  
Özgür D., ÖZKAN G., Atakol O., ÇELİKKAN H.  
ACS APPLIED ENERGY MATERIALS, vol.4, no.3, pp.2398-2407, 2021 (SCI-Expanded)
- IV. **Green synthesis of highly dispersed Ag nanoparticles on polydopamine-functionalized graphene oxide and their high catalytic reduction reaction**  
ÖZGÜR D.  
MICROPOROUS AND MESOPOROUS MATERIALS, vol.314, 2021 (SCI-Expanded)
- V. **New insights on the mechanism of vapour phase hydrolysis of sodium borohydride in a fed-batch reactor**  
Akkus M. S., MURATHAN H. B., ÖZGÜR D., ÖZKAN G., ÖZKAN G.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.23, pp.10734-10740, 2018 (SCI-Expanded)
- VI. **The Hydrolysis of ammonia borane by using Amberlyst-15 supported catalysts for hydrogen generation**  
ÖZGÜR D., Simsek T., ÖZKAN G., Akkus M. S., ÖZKAN G.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.23, pp.10765-10772, 2018 (SCI-Expanded)
- VII. **Hydrogen production from the methanolysis of ammonia borane by Pd-Co/Al<sub>2</sub>O<sub>3</sub> coated monolithic catalyst**  
MURATHAN H. B., ÖZKAN G., Akkus M. S., ÖZGÜR D., ÖZKAN G.

- INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.23, pp.10728-10733, 2018 (SCI-Expanded)
- VIII. **Solution Combustion Synthesis of High Surface Area CeO<sub>2</sub> Nanopowders for Catalytic Applications: Reaction Mechanism and Properties**  
KANG W., ÖZGÜR D., VARMA A.  
ACS APPLIED NANO MATERIALS, vol.1, no.2, pp.675-685, 2018 (SCI-Expanded)
- IX. **Power-Law Kinetic Models for Synthesis of Ammonia Borane**  
ÖZGÜR D., ÖZKAN G.  
INTERNATIONAL JOURNAL OF CHEMICAL KINETICS, vol.49, no.12, pp.875-883, 2017 (SCI-Expanded)
- X. **Hydrogen production by aqueous phase catalytic reforming of glycerine**  
Özgür D., Uysal B. Z.  
BIOMASS & BIOENERGY, vol.35, no.2, pp.822-826, 2011 (SCI-Expanded)

### Articles Published in Other Journals

- I. **The synthesis of NiO@ N-doped reduced graphene oxide and its application for hydrogen generation**  
Özgür D.  
Bor Dergisi, vol.6, no.2, pp.290-297, 2021 (Peer-Reviewed Journal)

### Books & Book Chapters

- I. **The Effect of Temperature and Initial Concentration on Synthesis of Ammonia Borane**  
ÖZGÜR D., ÖZKAN G.  
in: Progress in Clean Energy Volume 1, I. Dincer et al, Editor, Springer International Publishing Switzerland 2015, pp.571-576, 2015

### Refereed Congress / Symposium Publications in Proceedings

- I. **Yüksek Hidrojen Depolama Kapasitesine Sahip Amonyak Boranın Sentezi ve Karakterizasyonu**  
KIZILTAŞ R., ÖZKAN G., ÖZGÜR D., SÜRDEM S.  
International Symposium on Boron, Nevşehir, Turkey, 17 - 19 April 2019
- II. **Trietilamin-Boranın Katalitik Ve Katalitik Olmayan Hidrolizi**  
ÖZGÜR D., Erinmez Z., MURATHAN H. B.  
13. Ulusal Kimya Mühendisliği Kongresi, Van, Turkey, 3 - 06 September 2018
- III. **Trietilamin- Boranın Katalitik ve Katalitik Olmayan Hidrololizi**  
ÖZGÜR D., Erinmez Z., Murathan H. B.  
13. Ulusal Kimya Mühendisliği Kongresi, Turkey, 3 - 06 September 2018
- IV. **Selection of Effective Support for Ru catalyst by using Fuzzy AHP and TOPSIS Methods**  
KIZILOĞLU K., YILMAZ AYDIN D., ÖZGÜR D., SAKALLI Ü. S.  
International Eurasian Conference on biological and Chemical Sciences, 26 - 27 April 2018
- V. **Solution Combustion Synthesis of Porous CeO<sub>2</sub> Nanopowders: Reaction Mechanism and Physical Properties**  
KANG W., ÖZGÜR D., VARMA A.  
17 AIChE Annual Meeting, 29 October - 03 November 2017
- VI. **High Yield Hydrogen Production from Sodium Borohydride by Non-Catalytic Steam Reforming:A Parametric Study**  
Akkuş M. S., Murathan H. B., ÖZGÜR D., ÖZKAN G., ÖZKAN G.  
2nd International Hydrogen Technologies Congress, 15 - 18 March 2017
- VII. **Hydrogen Generation From the Dehydrogenation of ammonia Borane by Using Amberlyst-15**

## **Supported Catalyst**

ÖZGÜR D., ŞİMŞEK T., ÖZKAN G., AKKUŞ M. S., ÖZKAN G.

2nd International Hydrogen Technologies Congress, 15 - 18 March 2017

- VIII. **High Yield Hydrogen Production From Sodium Borohydride By NonCatalytic Steam Reforming: A Parametric Study**  
AKKUŞ M. S., MURATHAN H. B., ÖZGÜR D., ÖZKAN G., ÖZKAN G.  
2nd International Hydrogen Technologies Congress, 15 - 18 March 2017
- IX. **Hydrogen Production from the Methanolysis of Ammonia Borane by Pd-Co/Al<sub>2</sub>O<sub>3</sub> Coated Monolithic Catalyst**  
MURATHAN H. B., ÖZKAN G., AKKUŞ M. S., ÖZGÜR D., ÖZKAN G.  
2nd International Hydrogen Technologies Congress, 15 - 18 March 2017
- X. **Hydrogen Generation from Hydrous Hydrazine over Nickel Doped Ceria Catalysts Prepared By Solution Combustion Synthesis**  
KANG W., ÖZGÜR D., VARMA A.  
AIChE Annual Meeting, San-Francisco, Costa Rica, 13 - 18 November 2016
- XI. **Energy storage key component ammonia borane catalytic hydrolysis and kinetic parameters**  
ÖZKAN G., ŞİMŞEK T., ÖZGÜR D., MURATHAN H. B., AKKUŞ S., ÖZKAN G.  
22nd International Congress of Chemical and Process Engineering, Prague, 27 - 31 August 2016
- XII. **Energy Storage Key Component Ammonia Borane: Catalytic Kinetic Parameters**  
ÖZKAN G., ŞİMŞEK T., ÖZGÜR D., MURATHAN H. B., AKKUŞ M. S., ÖZKAN G.  
22nd International Congress of Chemical and Process Engineering, 27 - 31 August 2016
- XIII. **Energy Storage Key Component Ammonia Borane Catalytic Kinetic Parameters**  
ÖZKAN G., ŞİMŞEK T., ÖZGÜR D., Murathan H. B., ÖZKAN G., Akkuş M. S.  
19th Conference of Process Integration, Modelling Saving and Pollution Reduction 28-31 August, PRES 2016, 27 - 31 August 2016
- XIV. **FARKLI AMONYUM TUZLARI ve SODYUM BOR HİDRÜRDEN AMONYAK BORAN SENTEZİ VE KAŞILAŞTIRILMASI**  
ÖZGÜR D., ÖZKAN G.  
27. Ulusal Kimya Kongresi, Turkey, 23 - 28 August 2015, vol.1, pp.301
- XV. **HYDROGEN PRODUCTION BY STEAM REFORMING OF GLYCEROL**  
ÖZGÜR D., UYSAL B. Z.  
7th International Conference on Sustainable Energy Environmental Protection (SEEP 2014), 23 - 25 November 2014
- XVI. **LEWIS ASİT BAZ YERDEĞİŞTİRME REAKSİYONU VE AMONYAK BORAN ÜRETİMİ**  
ÖZGÜR D., ÖZKAN G.  
11. Ulusal Kimya Mühendisliği Kongresi, Turkey, 2 - 05 September 2014
- XVII. **Production of hydrogen from ammonia borane with amberlyst supported catalyst**  
ÖZGÜR D., ÖZKAN G.  
11. Ulusal Kimya Mühendisliği Kongresi, Turkey, 2 - 05 September 2014
- XVIII. **The Effect of Temperature and Initial Concentration on Synthesis of Ammonia Borane**  
ÖZGÜR D., ÖZKAN G.  
13th International Conference on Clean Energy, 8 - 12 June 2014
- XIX. **Alumina Supported Catalyst For Hydrogen Production From Ammonia Borane In Liquid Phase**  
tayyibe ş., ÖZGÜR D., ÖZKAN G., ÖZKAN G.  
13th International Conference on Clean Energy, 8 - 12 June 2014
- XX. **SENTEZ GAZI ÜRETİMİNE YÖNELİK KÖMÜR GAZLAŞTIRMA PARAMETRELERİNİN TAYİNİ**  
BIYIKOĞLU A., KASNAKOĞLU C., ÖZBAYOĞLU A. M., GÜNGÖR A., ÖZGÜR D., UYSAL B. Z.  
9. Ulusal Kimya Mühendisliği Kongresi, Turkey, 22 - 25 June 2010
- XXI. **Sıvı Faz Katalitik Reforming Yöntemi İle Gliserinden Hidrojen Üretimi**  
ÖZGÜR D., UYSAL B. Z.  
8. Ulusal Kimya Mühendisliği Kongresi, Turkey, 26 - 29 August 2008

## Supported Projects

ÖZGÜR D., Project Supported by Higher Education Institutions, Nikel@Azot Katkılı Grafen/MoS<sub>2</sub> Hibrit Katalizörünün Geliştirilmesi ve Elektrokimyasal Hidrojen Üretiminde Kullanılması, 2021 - 2023

ÖZGÜR D., Project Supported by Higher Education Institutions, Polidopamin ile Fonksiyonellendirilmiş İndirgenmiş Grafen Destekli Gümüş Nano Kompozit Katalizör Geliştirilmesi ve Reaksiyon Uygulamaları, 2018 - 2021

Özkan G., ÖZGÜR D., BOREN, Ulusal Bor Araştırma Enstitüsü Projesi, Amonyak Boran Sentezi ve Dehidrojenasyonu, Ulusal Bor Araştırma Enstitüsü (BOREN),Proje Kodu: 2018-31-06-30-004, Proje Yürütücüsü, 2020., 2018 - 2020

Özgür D., Özkan G., BOREN, Ulusal Bor Araştırma Enstitüsü Projesi, Hidrojen Üretimi İçin Polimer Destekli Katı Faz Katalitik Amonyum Boran Üretim Koşulları ve Kinetiğinin Belirlenmesi, 2011 - 2013

Özgür D., Uysal B. Z., Project Supported by Higher Education Institutions, Gliserinden Buhar Reforming Yöntemi ile Hidrojen Üretimi, 2009 - 2011

## Patent

ÖZKAN G., ÖZGÜR D., İKİ AŞAMALI YÜKSEK SAFLIKTA AMONYAK BORAN (NH<sub>3</sub>BH<sub>3</sub>) ÜRETİM METODU, Patent, CHAPTER C Chemistry; Metallurgy, 2016

## Metrics

Publication: 33

Citation (WoS): 111

Citation (Scopus): 143

H-Index (WoS): 5

H-Index (Scopus): 6

## Awards

Özgür D., Mühendislik Fakültesi, Fakülte Birinciliği, Gazi Üniversitesi, June 2005

## Non Academic Experience

Purdue University