# Asst. Prof. HATİCE BEGÜM MURATHAN

## Personal Information

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## Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), Turkey 2016 - 2021
Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Yl) (Tezli), Turkey 2015 - 2016
Undergraduate, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Turkey 2010 - 2014

## Dissertations

Doctorate, ALKİL AMİN BORAN ÜRETİMİ VE DEHİDROJENASYON KARAKTERİSTİĞİ, Gazi University, Fen Bilimleri Enstitüsü, 2021
Postgraduate, Amonyak boranın katalitik metanolizi ile hidrojen üretimi ve kinetiği, Gazi University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Yl) (Tezli), 2016

## Research Areas

Chemical Engineering and Technology, Engineering and Technology

## Academic Titles / Tasks

Lecturer, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği, 2018 - Continues

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

I. **Innovation in the synthesis of hydrazine borane by mechanochemical method and hydrolysis of hydrazine borane with Pd/TiO2 catalyst**
Bayram Ö., Murathan H. B., Angı O. S., Özkan G., Özkan G.
MATERIALS CHEMISTRY AND PHYSICS, 2024 (SCI-Expanded)

II. **Catalytic dehydrogenation of ethylene diamine bisborane in ethylene diamine media**
MURATHAN H. B., ÖZKAN G., ÖZKAN G.
International Journal of Hydrogen Energy, vol.51, pp.388-397, 2024 (SCI-Expanded)

III. **Hydrogen generation from the hydrolysis of ethylenediamine bisborane using Ni/NixBy-Zr and Pd-Ni/NixBy-Zr as highly active catalysts**
MURATHAN H. B., ÖZKAN G., ÖZKAN G.

Environmental Progress and Sustainable Energy, vol.42, no.4, 2023 (SCI-Expanded)

IV. **Non-linear kinetic analysis of catalytic hydrolysis of ethylenediamine bisborane with nano-structured Pd/TiO2 catalyst**
Angı O. S., Murathan H. B., Özkan G., Özkan G.
International Journal of Hydrogen Energy, vol.47, no.95, pp.40430-40444, 2022 (SCI-Expanded)

V. **The Hydrolysis of Tert-Butylamine Borane By Using Ni-Zr-B-O Catalyst For Hydrogen Production**
MURATHAN H. B., ÖZKAN G.
Journal Of The Indian Chemical Society, vol.97, pp.1-170, 2020 (SCI-Expanded)

VI. **Hydrogen production from the methanolysis of ammonia borane by Pd-Co/Al2O3 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)

VII. **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)

VIII. **Effect of reaction time on synthesis of boron nitride microtube (BNMT)**
Arslan K., Murathan A. M., Murathan H. B.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.32, no.3, pp.977-986, 2017 (SCI-Expanded)

IX. **LOW COST REMOVAL OF REACTIVE DYE FROM WATER USING SEPIOLITE**
Orman F., Murathan H. B., Murathan A.
FRESENIUS ENVIRONMENTAL BULLETIN, vol.24, pp.2898-2905, 2015 (SCI-Expanded)

## Articles Published in Other Journals

I. **Adsorption of Rhodamine B Dye From Aqueous Solution with Modified Active Carbon Made From Pine Cone**
Goren M., Murathan H. B., Kaya N., Murathan A. M.
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, 2022 (ESCI)

II. **Removal of Rhodamine B from Aqueous Solution by Using Pine ConeActivated with HNO3**
Gören M., Murathan H. B., Kaya N., Murathan A. M.
J. Int. Env. Application Science, vol.16, no.3, pp.123-132, 2021 (Peer-Reviewed Journal)

III. **Evaluation of Aluminum Anodic Wastes as Flame Retardant**
Murathan A., Bayis E., Koc A., MURATHAN H. B.
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.21, no.1, pp.149-154, 2018 (ESCI)

## Refereed Congress / Symposium Publications in Proceedings

I. **Hydrogen production from hydrolysis of ethylenediamine bisborane over mono-bimetallic Pd-Co catalysts and CeO2/ZrO2 as supports**
GEZGEN S., MURATHAN H. B., ÖZKAN G., ÖZKAN G.
7th International Hydrogen Technologies Congress, Elazığ, Turkey, 10 May 2023

II. **Catalytic Hydrolysis of Ethylenediamine Bisborane with Pd/Ni Foam Catalyst**
ŞAHİN E., KALKAN K., DURMAZ Ö., ANGI O. S., MURATHAN H. B., ÖZKAN G.
2nd International Conference on Engineering and Applied Natural Sciences, Konya, Turkey, 15 October 2022

III. **Efficient Hydrolytic Dehydrogenation Of Ethylene Diamine Bisborane Over Pd-Ni-Zr-B Catalyst in the Ethylene Diamine Media**
MURATHAN H. B., ÖZKAN G., ÖZKAN G.

23rd World Hydrogen Energy Conference, İstanbul, Turkey, 26 June 2022

IV. **Catalytic Hydrolysis of Ethylenediamine Bis Borane with Nano-structured Pd/TiO2 Catalyst**
ANGI O. S., MURATHAN H. B., ÖZKAN G., ÖZKAN G.
3rd International Hydrogen Energy Conference and Exhibitions, Turkey, 14 June 2021

V. **Catalytic Hydrolysis of Hydrazine Borane Using Nano Structured Titania Supported Pd Catalyst**
BAYRAM Ö., ANGI O. S., MURATHAN H. B., ÖZKAN G., ÖZKAN G.
3rd International Hydrogen Energy Conference and Exhibitions, Turkey, 14 June 2021

VI. **The Hydrolysis of Tert-Butylamine Borane By Using Ni-Zr-B Catalyst for Hydrogen Production**
Murathan H. B., Özkan G.
6th International Conference on New Trends in Chemistry, İstanbul, Turkey, 17 October 2020

VII. **Investigation of Parametric Synthesis Conditions of n-Butylamine Borane as Hydrogen Storage Material**
MURATHAN H. B., ÖZKAN G., ÖZKAN G.
4th International Hydrogen Technologies Congress, Edirne, Turkey, 20 - 23 June 2019

VIII. **Investigation of the Synthesis Conditions of the Hydrogen Storage Material: n-Butylamine Borane**
MURATHAN H. B., ÖZKAN G., ÖZKAN G.
Uluslararası Bor Sempozyumu, Nevşehir, Turkey, 17 - 19 April 2019

IX. **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

X. **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

XI. **Hydrogen Production from the Methanolysis of Ammonia Borane by Pd-Co/Al2O3 Coated Monolithic Catalyst**
MURATHAN H. B., ÖZKAN G., AKKUŞ M. S., ÖZGÜR D., ÖZKAN G.
2nd International Hydrogen Technologies Congress, 15 - 18 March 2017

XII. **Energy Storage Key Component Ammonia Borane: Catalytic Kinetic Parameters**
ÖZKAN G., Şimşek T., ÖZGÜR D., MURATHAN H. B., AKKUŞ M. S., ÖZKAN G.
22nd International Congress of Chemical and Process Engineering, 27 - 31 August 2016

XIII. **Amonyak boranın Pd-Co/Al2O3 katalizörü eşliğinde katalitik metanolizi ile hidrojen üretimi ve kinetiği**
MURATHAN H. B., AKKUŞ M. S., ÖZKAN G., ÖZKAN G.
12. Ulusal Kimya Mühendisliği Kongresi, İzmir, Turkey, 23 - 26 August 2016

XIV. **Sodyum bor hidrürün buhar fazı hidrolizinde sıcaklık ve derişimin hidrojen verimine etkisi**
AKKUŞ M. S., ÖZKAN G., MURATHAN H. B., ÖZKAN G.
12. Ulusal Kimya Mühendisliği Kongresi, İzmir, Turkey, 23 - 26 August 2016

XV. **Low Cost Flame Retarder in Interior Wall Paints,**
MURATHAN H. B., Murathan A.
TURKCOAT 2016, 22 - 23 March 2016

XVI. **Semi-conductor properties of solid-state boron nitride**
MURATHAN H. B., aksu a., SOYSAL K., MURATHAN A. M.
4th Rostocker International Symposium, Baku, Azerbaijan, 17 - 18 September 2015

## Supported Projects

ÖZKAN G., MURATHAN H. B., Project Supported by Higher Education Institutions, Alkil Amin Boranların Üretimi ve Dehidrojenasyon Karakteristiği, 2018 - 2021

## Metrics

Publication: 28
Citation (WoS): 27
Citation (Scopus): 38
H-Index (WoS): 3
H-Index (Scopus): 3