

## Prof. Murat Rakap

### Personal Information

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### International Researcher IDs

ORCID: 0000-0001-6389-6711

Yoksis Researcher ID: 13686

### Education Information

Undergraduate, Anadolu University, Faculty Of Economics, Department Of Public Administration, Turkey 2020 - Continues

Undergraduate, Anadolu University, Faculty Of Economics, Department Of International Relations, Turkey 2013 - 2018

Doctorate, Middle East Technical University, Fen Bilimleri, Anorganik Kimya, Turkey 2004 - 2011

Postgraduate, Karadeniz Technical University, Fen Bilimleri, Anorganik Kimya, Turkey 2000 - 2002

Undergraduate, Karadeniz Technical University, Fen-Edebiyat , Kimya, Turkey 1995 - 1999

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Preparation and characterization of zeolite confined cobalt(0) nanoclusters as catalyst for hydrogen generation from the hydrolysis of sodium borohydride and ammonia borane , Middle East Technical University, Fen Bilimleri, Anorganik Kimya, 2011

Postgraduate, 20-Üyeli Taç Eter Grubu İçeren Simetrik Ftalosiyanınların Sentezi ve Karakterizasyonu, Karadeniz Technical University, Fen Bilimleri, Anorganik Kimya, 2002

### Research Areas

Chemistry, Chemical Kinetics, Fuel Cells, Inorganic Chemistry, Inorganic Reaction Mechanisms and Kinetics, Catalysis, nanoclusters, Natural Sciences

### Academic Titles / Tasks

Professor, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2021 - Continues

Associate Professor, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2016 - 2021

Assistant Professor, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2013

- 2016

Research Assistant PhD, Van Yüzüncü Yil University, Fen Fakültesi, Kimya Bölümü, 2011 - 2013

Other, The Florida State University, College Of Engineering, Department Of Chemical And Biomedical Engineering, 2010 - 2011

Research Assistant, Middle East Technical University, Faculty Of Arts And Sciences, Kimya, 2002 - 2011

Research Assistant, Karadeniz Technical University, Fen-Edebiyat, Kimya, 2000 - 2002

## Academic and Administrative Experience

Assistant Manager of Research and Application Center, Van Yüzüncü Yil University, Rektörlük, Rektörlük, 2018 - Continues

Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi, Van Yüzüncü Yil University, Rektörlük, Rektörlük, 2018 - Continues

Kalite Komisyonu Üyesi, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2017 - Continues

Danışma Kurulu Üyesi, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2017 - Continues

Fakülte Yönetim Kurulu Üyesi, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2016 - Continues

Akademik Teşvik Komisyonu Başkanı, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2015 - Continues

Araştırmacı Potansiyelinin Geliştirilmesi Desteği Komisyonu Başkanı, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2015 - Continues

Eğitim Komisyonu Başkanı, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2015 - Continues

Bilimsel Yayın Komisyonu Başkanı, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2015 - Continues

Fakülte Kurulu Üyesi, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2014 - Continues

Head of Department, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği , 2014 - Continues

Head of Department, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2014 - 2022

Muayene ve Kabul Komisyonu Başkanı, Van Yüzüncü Yil University, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2015 - 2021

## Courses

Anorganik Kimyada Temel Eğilimler, Postgraduate, 2014 - 2015

Kimyasal Bağlanma ve Moleküler Geometri, Postgraduate, 2014 - 2015

## Advising Theses

Rakap M., Poli(N-Vinil-2-Pirrolidon) ile Kararlılaştırılmış Nikel-Rutenyum Nanokümlerinin Sentezi Tanımlanması ve Amonyak Boranın Hidrolizinde Katalizör Olarak Kullanılması, Postgraduate, B.ABAY(Student), 2019

Rakap M., Karboksümetil Selüloz ile Kararlılaştırılmış Nikel-Rodyum Nanokümlerinin Sentezi Tanımlanması ve Hidrazin Boranın Hidrolizinde Katalizör Olarak Kullanılması, Postgraduate, N.TUNÇ(Student), 2019

## Jury Memberships

Post Graduate, Post Graduate, Van Yüzüncü Yıl Üniversitesi, February, 2021  
Doctorate, Doctorate, Van Yüzüncü Yıl Üniversitesi, September, 2020  
Doctorate, Doctorate, Van Yüzüncü Yıl Üniversitesi, August, 2020  
Doctoral Examination, Doctoral Examination, Van Yüzüncü Yıl Üniversitesi, August, 2020  
Doctoral Examination, Doktora Yeterlik Sınavı-Ahmet BULUT, Van Yüzüncü Yıl Üniversitesi, December, 2019  
Doctoral Examination, Doktora Yeterlik Sınavı-Yaşar KARATAŞ, Van Yüzüncü Yıl Üniversitesi, December, 2019  
Doctoral Examination, Doktora Yeterlik Sınavı-Mehmet YURDERİ, Van Yüzüncü Yıl Üniversitesi, December, 2019  
Appointment to Academic Staff-Assistant Professorship, Dr. Ömer SÖNER'in Dr. Öğr. Üyeliğine Atanması, Van Yüzüncü Yıl Üniversitesi, November, 2019  
Post Graduate, H. Fikret BARANSEL, Van Yüzüncü Yıl Üniversitesi, August, 2019  
Post Graduate, Alper YILDIRIM, Van Yüzüncü Yıl Üniversitesi, August, 2019  
Doctorate, Kadir KARAKAŞ, Van Yüzüncü Yıl Üniversitesi, January, 2019  
Academic Staff Examination, Araştırma Görevlisi Alım Sınavı-İsmail KARACA, Van Yüzüncü Yıl Üniversitesi, January, 2019  
Appointment to Academic Staff-Assistant Professorship, Dr. Beyza CABİR'in Dr. Öğr. Üyeliğine Atanması, Van Yüzüncü Yıl Üniversitesi, May, 2018  
Doctorate, Doktora Tez Savunması-Melike SEVİM YILMAZ, Atatürk Üniversitesi, February, 2018  
Doctoral Examination, Doktora Yeterlik Sınavı-İbtihel ZAIER, Atatürk Üniversitesi, February, 2018  
Post Graduate, Yüksek Lisans Tez Savunması-İsmail Burak BAĞUÇ, Yüzüncü Yıl Üniversitesi, December, 2017  
Doctorate, Doktora Tez Savunması-İlknur EFECAN ERTAŞ, Yüzüncü Yıl Üniversitesi, September, 2017  
Post Graduate, Yüksek Lisans Tez Savunması-Zekeriya BALLI, Yüzüncü Yıl Üniversitesi, July, 2017  
Doctoral Examination, Doktora Yeterlik Sınavı-Mehmet Salih KESKİN, Yüzüncü Yıl Üniversitesi, January, 2017  
Post Graduate, Yüksek Lisans Tez Savunması-Ahmet BULUT, Yüzüncü Yıl Üniversitesi, September, 2016  
Post Graduate, Yüksek Lisans Tez Savunması-Mehmet YURDERİ, Yüzüncü Yıl Üniversitesi, September, 2016  
Post Graduate, Yüksek Lisans Tez Savunması-Suzan GÜNKUT, Yüzüncü Yıl Üniversitesi, May, 2016  
Post Graduate, Yüksek Lisans Tez Savunması-Nihayet KONUŞ, Yüzüncü Yıl Üniversitesi, October, 2015  
Post Graduate, Yüksek Lisans Tez Savunması-Ceyhun KARATAŞ, Yüzüncü Yıl Üniversitesi, September, 2015  
Post Graduate, Yüksek Lisans Tez Savunması-Esra EKER, Osmaniye Korkutata Üniversitesi, April, 2015  
Post Graduate, Yüksek Lisans Tez Savunması-Yaşar KARATAŞ, Yüzüncü Yıl Üniversitesi, September, 2014  
Post Graduate, Yüksek Lisans Tez Savunması-Emrah DEDE, Yüzüncü Yıl Üniversitesi, July, 2014

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

- I. **Hydrogen liberation from ethylenediamine bisborane hydrolysis by platinum nanoparticles**  
Abay B., Rakap M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.47, no.42, pp.18396-18403, 2022 (SCI-Expanded)
- II. **Nanoceria-Supported Ru-Based Nanoparticles as Highly Efficient Catalysts for Hydrolysis of Ethane 1,2-Diamine Borane**  
Tunc N., Rakap M.  
CHEMISTRYSELECT, vol.7, no.13, 2022 (SCI-Expanded)
- III. **Hydrogen generation from ammonia borane by NiRu nanoparticles catalysts**  
Abay B., Rakap M.  
INORGANIC AND NANO-METAL CHEMISTRY, vol.51, no.9, pp.1177-1185, 2021 (SCI-Expanded)
- IV. **Surfactant-aided synthesis of RhCo nanoclusters as highly effective and recyclable catalysts for the hydrolysis of methylamine borane and dimethylamine borane**  
Tunç N., Rakap M.  
Catalysis Science & Technology, vol.10, pp.7865-7874, 2020 (SCI-Expanded)
- V. **Rh-M (M: Co, Cu, Fe) nanoclusters as highly efficient and durable catalysts for the methanolysis of ammonia borane**

Abay B., Rakap M.

Catalysis Science & Technology, vol.10, pp.7270-7279, 2020 (SCI-Expanded)

- VI. **Eco-Friendly Synthesis of Carboxymethyl Cellulose-Stabilized Ru<sub>0.57</sub>Co<sub>0.43</sub> Nanoclusters as Extremely Efficient and Durable Catalysts for Hydrolytic Dehydrogenation of Methylamine Borane**  
Abay B., Rakap M.  
ACS Sustainable Chemistry & Engineering, vol.8, pp.16197-16204, 2020 (SCI-Expanded)
- VII. **Preparation and characterization of Ni-M (M: Ru, Rh, Pd) nanoclusters as efficient catalysts for hydrogen evolution from ammonia borane methanolysis**  
Tunç N., Rakap M.  
RENEWABLE ENERGY, vol.155, pp.1222-1230, 2020 (SCI-Expanded)
- VIII. **Nickel-rhodium nanoparticles as active and durable catalysts for hydrogen liberation**  
Tunç N., Rakap M.  
INORGANIC AND NANO-METAL CHEMISTRY, vol.50, pp.665-673, 2020 (SCI-Expanded)
- IX. **Synthesis and characterization of bimetallic cobalt-rhodium nanoclusters as effective catalysts to produce hydrogen from ammonia borane hydrolysis**  
Rakap M.  
Renewable Energy, vol.154, pp.1076-1082, 2020 (SCI-Expanded)
- X. **Catalytic hydrolysis of hydrazine borane to release hydrogen by cobalt-ruthenium nanoclusters**  
Rakap M.  
International Journal Of Hydrogen Energy, vol.45, no.1, pp.15611-15617, 2020 (SCI-Expanded)
- XI. **Hydrolysis of ammonia borane and hydrazine borane by poly(N-vinyl-2-pyrrolidone)-stabilized CoPd nanoparticles for chemical hydrogen storage**  
Rakap M., Abay B., Tunc N.  
TURKISH JOURNAL OF CHEMISTRY, vol.41, no.2, pp.221-232, 2017 (SCI-Expanded)
- XII. **Hydrogen generation from hydrolytic dehydrogenation of hydrazine borane by poly(N-vinyl-2-pyrrolidone)-stabilized palladium nanoparticles**  
TUNC N., ABAY B., Rakap M.  
JOURNAL OF POWER SOURCES, vol.299, pp.403-407, 2015 (SCI-Expanded)
- XIII. **PVP-stabilized Ru-Rh nanoparticles as highly efficient catalysts for hydrogen generation from hydrolysis of ammonia borane**  
Rakap M.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.649, pp.1025-1030, 2015 (SCI-Expanded)
- XIV. **Poly(N-vinyl-2-pyrrolidone)-stabilized palladium-platinum nanoparticles-catalyzed hydrolysis of ammonia borane for hydrogen generation**  
Rakap M.  
JOURNAL OF POWER SOURCES, vol.276, pp.320-327, 2015 (SCI-Expanded)
- XV. **The highest catalytic activity in the hydrolysis of ammonia borane by poly(N-vinyl-2-pyrrolidone)-protected palladium-rhodium nanoparticles for hydrogen generation**  
Rakap M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.163, pp.129-134, 2015 (SCI-Expanded)
- XVI. **Hydrolysis of Sodium Borohydride and Ammonia Borane for Hydrogen Generation Using Highly Efficient Poly(N-Vinyl-2-Pyrrolidone)-Stabilized Ru-Pd Nanoparticles as Catalysts**  
Rakap M.  
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.12, no.12, pp.1288-1300, 2015 (SCI-Expanded)
- XVII. **Hydrogen generation from the hydrolytic dehydrogenation of ammonia borane using electrolessly deposited cobalt-phosphorus as reusable and cost-effective catalyst**  
Rakap M.  
JOURNAL OF POWER SOURCES, vol.265, pp.50-56, 2014 (SCI-Expanded)
- XVIII. **Hydrogen generation from hydrolysis of ammonia borane in the presence of highly efficient poly(N-vinyl-2-pyrrolidone)-protected platinum-ruthenium nanoparticles**  
Rakap M.

- APPLIED CATALYSIS A-GENERAL, vol.478, pp.15-20, 2014 (SCI-Expanded)
- XIX. Hydrogen generation from hydrolysis of ammonia-borane using Pd-PVB-TiO<sub>2</sub> and Co-Ni-P/Pd-TiO<sub>2</sub> under stirred conditions**  
Rakap M., KALU E. E., ÖZKAR S.  
JOURNAL OF POWER SOURCES, vol.210, pp.184-190, 2012 (SCI-Expanded)
- XX. Hydroxyapatite-supported cobalt(0) nanoclusters as efficient and cost-effective catalyst for hydrogen generation from the hydrolysis of both sodium borohydride and ammonia-borane**  
Rakap M., ÖZKAR S.  
CATALYSIS TODAY, vol.183, no.1, pp.17-25, 2012 (SCI-Expanded)
- XXI. Cobalt-nickel-phosphorus supported on Pd-activated TiO<sub>2</sub> (Co-Ni-P/Pd-TiO<sub>2</sub>) as cost-effective and reusable catalyst for hydrogen generation from hydrolysis of alkaline sodium borohydride solution**  
Rakap M., KALU E. E., ÖZKAR S.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.509, no.25, pp.7016-7021, 2011 (SCI-Expanded)
- XXII. Hydroxyapatite-supported palladium(0) nanoclusters as effective and reusable catalyst for hydrogen generation from the hydrolysis of ammonia-borane**  
Rakap M., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.36, no.12, pp.7019-7027, 2011 (SCI-Expanded)
- XXIII. Polymer-immobilized palladium supported on TiO<sub>2</sub> (Pd-PVB-TiO<sub>2</sub>) as highly active and reusable catalyst for hydrogen generation from the hydrolysis of unstirred ammonia-borane solution**  
Rakap M., KALU E. E., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.36, no.2, pp.1448-1455, 2011 (SCI-Expanded)
- XXIV. Hydrogen generation from the hydrolysis of ammonia borane using cobalt-nickel-phosphorus (Co-Ni-P) catalyst supported on Pd-activated TiO<sub>2</sub> by electroless deposition**  
Rakap M., KALU E. E., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.36, no.1, pp.254-261, 2011 (SCI-Expanded)
- XXV. Room temperature aerobic Suzuki cross-coupling reactions in DMF/water mixture using zeolite confined palladium(0) nanoclusters as efficient and recyclable catalyst**  
Durap F., Rakap M., Aydemir M., ÖZKAR S.  
APPLIED CATALYSIS A-GENERAL, vol.382, no.2, pp.339-344, 2010 (SCI-Expanded)
- XXVI. Hydrogen generation from the hydrolysis of ammonia-borane using intrazeolite cobalt(0) nanoclusters catalyst**  
Rakap M., Özkar S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.8, pp.3341-3346, 2010 (SCI-Expanded)
- XXVII. Zeolite confined palladium(0) nanoclusters as effective and reusable catalyst for hydrogen generation from the hydrolysis of ammonia-borane**  
Rakap M., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.3, pp.1305-1312, 2010 (SCI-Expanded)
- XXVIII. Intrazeolite cobalt(0) nanoclusters as low-cost and reusable catalyst for hydrogen generation from the hydrolysis of sodium borohydride**  
Rakap M., ÖZKAR S.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.91, pp.21-29, 2009 (SCI-Expanded)
- XXIX. Synthesis and characterization of new metal-free and phthalocyanine nickel(II) complex containing macrocyclic moieties**  
KANTEKIN H., Rakap M., GOK Y., SAHINBAS H. Z.  
DYES AND PIGMENTS, vol.74, no.1, pp.21-25, 2007 (SCI-Expanded)
- XXX. The synthesis and characterization of new metal-free and metallo phthalocyanines substituted with four dithiatetraoxa macrocyclic moieties**  
KANTEKIN H., Rakap M., MISIR M. N., GOEK H. Z., ACAR I.  
JOURNAL OF COORDINATION CHEMISTRY, vol.60, no.18, pp.1965-1972, 2007 (SCI-Expanded)

## Books & Book Chapters

### I. Okul Öncesi Dönemde Kimyaya İlişkin Farkındalık

Rakap A., Rakap M.

in: Erken Çocuklukta Fen Eğitimi, Rakap A. P., Editor, Eğiten Kitap, Ankara, pp.89-115, 2018

## Refereed Congress / Symposium Publications in Proceedings

- I. **Hydrogen Generation from Hydrolysis of Hydrazine Borane by Poly(N-vinyl-2-pyrrolidone)-stabilized CoRu Nanoparticles**  
Rakap M., TUNÇ N.  
3.International Academic Studies Conference, Antalya, Turkey, 14 - 16 October 2019, pp.168-169
- II. **CoRh Nanoparticles as Efficient Catalysts for Hydrogen Generation from Hydrolysis of Ammonia Borane**  
Rakap M., ABAY B.  
3.International Academic Studies Conference, Antalya, Turkey, 14 - 16 October 2019, pp.158-159
- III. **Rodyum-Nikel Nanokümelerinin Sentezi, Tanımlanması ve Hidrazin Boranın Hidrolizinde Katalizör Olarak Kullanımı**  
Rakap M., TUNÇ N.  
7. Ulusal Anorganik Kimya Kongresi, Çorum, Turkey, 19 - 22 June 2019, pp.49
- IV. **Amonyak Boranın Hidrolizinde Etkin Katalizörler Olarak Nikel-Rutenyum Nanokümleri**  
Rakap M., ABAY B.  
7. Ulusal Anorganik Kimya Kongresi, Çorum, Turkey, 19 - 22 June 2019, pp.51
- V. **Hydrolysis of Hydrazine Borane by PVP-Stabilized CoNiRh Nanoparticles for Hydrogen Generation**  
Rakap M., ABAY B.  
5th International Renewable Energy and Environment Conference (IREEC-2016), Madrid, Spain, 11 - 13 July 2016, pp.54
- VI. **Hydrolysis of Ammonia Borane Catalyzed by PVP-Stabilized Cobalt-Palladium Nanoparticles for Hydrogen Generation**  
Rakap M., TUNC N.  
2nd International Conference on Engineering and Natural Science (ICENS 2016), Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2016, pp.1
- VII. **PVP-Stabilized Cobalt-Palladium Nanoparticles-Catalyzed Hydrolysis of Hydrazine Borane for Hydrogen Release**  
Rakap M., ABAY B.  
2nd International Conference on Engineering and Natural Science (ICENS 2016), Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2016, pp.1
- VIII. **CoRh Nanoparticles: Synthesis, Characterization, Their Use as Catalyst in the Hydrolysis of Hydrazine Borane**  
ABAY B., TUNC N., Rakap M.  
NCC6-The 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016, pp.104
- IX. **Hydrogen Generation from Ammonia Borane Hydrolysis Catalyzed by CoPd Nanoparticles**  
TUNC N., ABAY B., Rakap M.  
NCC6-The 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016, pp.116
- X. **Hydrogen Generation from Ammonia Borane by PVP-Protected Ruthenium-Rhodium Nanoparticles**  
Rakap M.  
International Conference on Engineering and Natural Science (ICENS 2015), Skopje, Macedonia, 15 - 19 May 2015, pp.1
- XI. **Amonyak Boranın Hidrolizinde Bilinen En Etkin Katalizör: PVP ile Kararlılaştırılmış Palladyum-Rodyum Nanokümleri**

- Rakap M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.1
- XII. **Karboksümetil Selüloz ile Kararlılaştırılmış Nikel-Rodyum Nanokümelerinin Sentezi, Tanımlanması ve Amonyak Boranın Hidrolizinde Katalizör Olarak Kullanılması**  
ABAY B., Rakap M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.1
- XIII. **PVP ile Kararlılaştırılmış Rodyum Nanokümelerinin Sentezi, Tanımlanması ve Hidrazin Boranın Hidrolizinde Katalizör Olarak Kullanılması**  
TUNC N., Rakap M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.1
- XIV. **Electroless Deposition of Low-Cost Reusable Transition Metal Active Catalyst on Oxide Supports for Hydrogen Generation from Hydrides**  
Anderson S., Deravil L., Rakap M., Kalu E. E., Onyeozili E.  
2014 ECS and SMEQ Joint International Meeting (ECS 226th Meeting), Cancun, Mexico, 5 - 09 October 2014, pp.1
- XV. **Hydroxyapatite-Supported Palladium(0) Nanoclusters as Active and Reusable Catalyst for Hydrogen Generation from the Hydrolysis of Ammonia-Borane**  
Rakap M., ÖZKAR S.  
Energy Challenges for Advanced Materials and Processes: Harvesting, Storage, and Efficient Utilization (EnCAMP-2011), Nevşehir, Turkey, 25 - 29 May 2011, pp.1
- XVI. **Hidroksiapatit Üzerine Tutturulmuş Palladyum(0) Nanokümelerinin Hazırlanması, Tanımlanması ve Amonyak Boranın Hidrolizindeki Katalitik Etkinliğinin İncelenmesi**  
Rakap M., ÖZKAR S.  
III. Ulusal Anorganik Kimya Kongresi, Çanakkale, Turkey, 19 - 22 May 2011, pp.1
- XVII. **İntrazeolit Paladyum(0) Nanokümelerinin Suzuki Tepkimelerindeki Katalitik Etkinliği**  
DURAP F., Rakap M., AYDEMİR M., BAYSAL A., ÖZKAR S.  
24. Ulusal Kimya Kongresi, Zonguldak, Turkey, 29 June - 02 July 2010, pp.1
- XVIII. **İntrazeolit Kobalt(0) Nanokümleri: Hazırlanması, Tanımlanması ve Sodyum Borhidrürün Hidrolizindeki Katalitik Etkinliğinin İncelenmesi**  
Rakap M., ÖZKAR S.  
II. Ulusal Anorganik Kimya Kongresi, Elazığ, Turkey, 16 - 19 May 2009, pp.1

## Supported Projects

Rakap M., Project Supported by Higher Education Institutions, Nanoceria Destekli Rutenyum Tabanlı Bimetalik Nanokümelerin Sentezi Tanımlanması ve Etan 1,2-Diaminboranın Hidrolizindeki Katalitik Etkinliklerinin İncelenmesi, 2020 - 2021

Rakap M., Project Supported by Higher Education Institutions, Nikel Bazlı Alaşım Tipi Bimetalik Nanokümelerin Sentezi Tanımlanması ve Katalitik Etkinliklerinin İncelenmesi, 2019 - 2020

Zahmakıran M., Kanberoğlu G. S., YURDERİ M., BULUT A., Çelebi M., Rakap M., BAĞUÇ İ. B., Project Supported by Higher Education Institutions, Amin-Boranların Katalitik Dehidroketlenme Tepkimeleri; Yakıt Hücresi Uygulamaları ve Yüksek Moleküler Ağırlıklı [BNH<sub>x</sub>]y Endüstriyel Polimerlerin Geliştirilmesi, 2019 - 2020

Rakap M., Project Supported by Higher Education Institutions, Alaşım Tipi Nikel-Palladyum Bimetalik Nanokümelerinin Sentezi, Tanımlanması ve Amonyak Boranın Hidrolizindeki Katalitik Etkinliğinin İncelenmesi, 2019 - 2019

Rakap M., TUNÇ N., Project Supported by Higher Education Institutions, Karboksümetil Selüloz ile Kararlılaştırılmış Nikel-Rodyum Nanokümelerinin Sentezi Tanımlanması ve Hidrazin Boranın Hidrolizinde Katalizör Olarak Kullanılması, 2018 - 2019

Rakap M., ABAY B., Project Supported by Higher Education Institutions, Poli(N-Vinil-2-Pirrolidon) ile Kararlılaştırılmış Nikel-Rutenyum Nanokümelerinin Sentezi Tanımlanması ve Amonyak Boranın Hidrolizinde Katalizör Olarak Kullanılması, 2018 - 2019

Rakap M., Project Supported by Higher Education Institutions, Amonyak Boran ve Hidrazin Boranın Metanolizi İçin Etkin

Katalizörlerin Geliştirilmesi, 2017 - 2019

Rakap M., Project Supported by Higher Education Institutions, Rutenyum-Platin Nanokümelerinin Sentezi, Tanımlanması ve Amonyak Boranın Metanolizinde Katalizör Olarak Kullanılması, 2018 - 2018

Rakap M., Project Supported by Higher Education Institutions, CoRh Nanokümeleri Katalizörlüğünde Amonyak Boranın Hidrolizinde Hidrojen Eldesi, 2017 - 2018

Rakap M., Project Supported by Higher Education Institutions, NiRh Nanokümelerinin Sentezi ve Amonyak Boranın Hidrolizinde Katalizör Olarak Kullanılması, 2016 - 2017

Rakap M., Project Supported by Higher Education Institutions, Hidrazin Boranın Hidrolizini Katalizleyecek PVP ile Kararlılaştırılmış Co-M (M=Palladyum, Rutenyum, Rodyum) Nanokümelerinin Sentezi, Tanımlanması ve Katalitik Etkinliklerinin İncelenmesi, 2014 - 2016

Rakap M., Project Supported by Higher Education Institutions, PVP ile Kararlılaştırılmış Rodyum ve Alaşım Tipi Rodyum-M (M: Rutenyum, Palladyum, Platin) Nanokümelerinin Sentezi, Tanımlanması ve Amonyak Boranın Hidrolizinde Katalizör Olarak Kullanılması, 2013 - 2014

## Memberships / Tasks in Scientific Organizations

Türkiye Kimya Derneği, Member, 2015 - Continues

American Chemical Society, Member, 2015 - 2015

Materials Research Society, Member, 2015 - 2015

## Scientific Refereeing

JOURNAL OF POWER SOURCES, SCI Journal, February 2021

RENEWABLE ENERGY, SCI Journal, February 2021

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, January 2021

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, January 2021

RENEWABLE ENERGY, SCI Journal, January 2021

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, January 2021

TUBITAK Project, 2209-B - Sanayiye Yönelik Lisans Araştırma Projeleri Destekleme Programı, Van Yüzüncü Yil University, Turkey, January 2021

TUBITAK Project, 2209-B - Sanayiye Yönelik Lisans Araştırma Projeleri Destekleme Programı, Van Yüzüncü Yil University, Turkey, January 2021

TUBITAK Project, 2209-B - Sanayiye Yönelik Lisans Araştırma Projeleri Destekleme Programı, Van Yüzüncü Yil University, Turkey, January 2021

TUBITAK Project, 2209-B - Sanayiye Yönelik Lisans Araştırma Projeleri Destekleme Programı, Van Yüzüncü Yil University, Turkey, January 2021

International Journal Of Hydrogen Energy, SCI Journal, December 2020

Project Supported by Higher Education Institutions, BAP MSc, Van Yüzüncü Yil University, Turkey, December 2020

Project Supported by Higher Education Institutions, BAP Research Project, Van Yüzüncü Yil University, Turkey, December 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Van Yüzüncü Yil University, Turkey, December 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Van Yüzüncü Yil University, Turkey, September 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Van Yüzüncü Yil University, Turkey, September 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Van Yüzüncü Yil University, Turkey, September 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Van Yüzüncü Yil



University, Turkey, September 2020  
International Journal Of Hydrogen Energy, SCI Journal, April 2020  
International Journal of Hydrogen Energy, SCI Journal, April 2020  
International Journal of Hydrogen Energy, SCI Journal, March 2020  
Project Supported by Higher Education Institutions, November 2019  
Project Supported by Higher Education Institutions, October 2019  
Applied Catalysis B:Environmental, SCI Journal, July 2019  
Journal of Physics and Chemistry of Solids, SCI Journal, July 2019  
International Journal of Hydrogen Energy, SCI Journal, June 2019  
Scientific Reports, SCI Journal, June 2019  
ACS Applied Energy Materials , SCI Journal, June 2019  
Journal of the Taiwan Institute of Chemical Engineers, SCI Journal, March 2019  
International Journal of Hydrogen Energy, SCI Journal, December 2018  
International Journal of Hydrogen Energy, SCI Journal, December 2018  
Project Supported by Higher Education Institutions, BAP Research Project, Van Yüzüncü Yil University, Turkey, December 2018  
International Journal of Hydrogen Energy, SCI Journal, November 2018  
International Journal of Hydrogen Energy, SCI Journal, November 2018  
Brazilian Journal of Chemical Engineering, SCI Journal, November 2018  
Project Supported by Higher Education Institutions, October 2018  
International Journal of Hydrogen Energy, SCI Journal, September 2018  
Project Supported by Higher Education Institutions, September 2018  
International Journal of Hydrogen Energy, SCI Journal, August 2018  
Brazilian Journal of Chemical Engineering, SCI Journal, July 2018  
Project Supported by Higher Education Institutions, June 2018  
International Journal of Hydrogen Energy, SCI Journal, May 2018  
Current Organic Chemistry, SCI Journal, May 2018  
International Journal of Hydrogen Energy, SCI Journal, April 2018  
Applied Catalysis B:Environmental, SCI Journal, April 2018  
International Journal of Hydrogen Energy, SCI Journal, February 2018  
Journal of Power Sources, SCI Journal, January 2018  
Turkish Journal of Chemistry, SCI Journal, January 2018  
International Journal of Hydrogen Energy, SCI Journal, January 2018  
Journal of Alloys and Compounds, SCI Journal, January 2018  
Journal of Alloys and Compounds, SCI Journal, December 2017  
CrystEngComm, SCI Journal, November 2017  
International Journal of Hydrogen Energy, SCI Journal, October 2017  
International Journal of Hydrogen Energy, SCI Journal, September 2017  
Sustainable Energy & Fuels, Other journals, August 2017  
International Journal of Hydrogen Energy, SCI Journal, July 2017  
Journal of Alloys and Compounds, SCI Journal, July 2017  
Journal of Catalysis, SCI Journal, June 2017  
Journal of Power Sources, SCI Journal, June 2017  
International Journal of Hydrogen Energy, SCI Journal, April 2017  
Journal of Materials Science, SCI Journal, March 2017  
Applied Catalysis B:Environmental, SCI Journal, January 2017  
International Journal of Hydrogen Energy, SCI Journal, August 2016  
Project Supported by Higher Education Institutions, BAP Research Project, Istanbul University, Turkey, August 2016  
International Journal of Hydrogen Energy, SCI Journal, July 2016  
International Journal of Hydrogen Energy, SCI Journal, June 2016  
Angewandte Chemie Int. Ed., SCI Journal, April 2016

International Journal of Hydrogen Energy, SCI Journal, March 2016  
Journal of Materials Chemistry A, SCI Journal, March 2016  
International Journal of Hydrogen Energy, SCI Journal, March 2016  
International Journal of Hydrogen Energy, SCI Journal, March 2016  
Nano Energy, SCI Journal, February 2016  
International Journal of Hydrogen Energy, SCI Journal, January 2016  
Chemical Engineering Journal, SCI Journal, December 2015  
Current Nanomaterials, Other Indexed Journal, December 2015  
Journal of Power Sources, SCI Journal, December 2015  
International Journal of Hydrogen Energy, SCI Journal, October 2015  
International Journal of Hydrogen Energy, SCI Journal, September 2015  
Journal of Power Sources, SCI Journal, July 2015  
International Journal of Hydrogen Energy, SCI Journal, October 2014  
International Journal of Hydrogen Energy, SCI Journal, September 2014  
International Journal of Hydrogen Energy, SCI Journal, September 2014  
International Journal of Hydrogen Energy, SCI Journal, August 2014  
International Journal of Hydrogen Energy, SCI Journal, August 2014  
Journal of Molecular Catalysis A: Chemical, SCI Journal, August 2013  
Turkish Journal of Chemistry, SCI Journal, May 2013  
International Journal of Hydrogen Energy, SCI Journal, March 2013  
International Journal of Hydrogen Energy, SCI Journal, March 2013  
International Journal of Hydrogen Energy, SCI Journal, February 2013  
International Journal of Hydrogen Energy, SCI Journal, January 2013  
Materials Letters, SCI Journal, August 2012  
Materials Letters, SCI Journal, August 2011

## Metrics

Publication: 49  
Citation (WoS): 1152  
Citation (Scopus): 1185  
H-Index (WoS): 17  
H-Index (Scopus): 17

## Congress and Symposium Activities

3rd International Academic Studies Conference, Attendee, Antalya, Turkey, 2019  
VII. Ulusal Anorganik Kimya Kongresi, Attendee, Çorum, Turkey, 2019  
5th International Renewable Energy and Environment Conference (IREEC-2016), Attendee, Madrid, Spain, 2016  
2nd International Conference on Engineering and Natural Science (ICENS 2016), Attendee, Sarajevo, Bosnia And Herzegovina, 2016  
International Conference on Engineering and Natural Science (ICENS 2015), Attendee, Skopje, Macedonia, 2015  
V. Ulusal Anorganik Kimya Kongresi, Attendee, Mersin, Turkey, 2015  
2014 ECS and SMEQ Joint International Meeting (ECS 226th Meeting), Attendee, Cancún, Mexico, 2014  
III. Ulusal Anorganik Kimya Kongresi, Attendee, Çanakkale, Turkey, 2011  
Energy Challenges for Advanced Materials and Processes: Harvesting, Storage, and Efficient Utilization (EnCAMP-2011), Attendee, Nevşehir, Turkey, 2011  
24. Ulusal Kimya Kongresi, Attendee, Zonguldak, Turkey, 2010  
II. Ulusal Anorganik Kimya Kongresi, Attendee, Elazığ, Turkey, 2009

## **Scholarships**

2219-Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TUBITAK, 2021 - 2022

2211-Yurt İçi Doktora Bursu, TUBITAK, 2006 - 2010

2210-Yurt İçi Yüksek Lisans Bursu, TUBITAK, 2000 - 2002