

## Prof. Mehmet Zahmakıran

### Personal Information

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### Education Information

Doctorate, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2005 - 2010

Post Graduate, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2003 - 2005

Under Graduate, Abant İzzet Baysal Üniversitesi, Fen Edebiyat Fakültesi, Kimya, Turkey 1997 - 2002

### Foreign Languages

English, C1 Advanced

### Certificates, Courses and Trainings

Other, SEM Use and Operation, Massachusetts Institute of Technology, 2011

Other, XRD Use and Operation, Massachusetts Institute of Technology, 2011

Other, TEM Use and Operation, Massachusetts Institute of Technology, 2011

Other, NMR Use and Operation, Laboratoire de Chimie de Coordination, 2009

### Dissertations

Doctorate, The Preparation and Characterization of Zeolite Confined Ruthenium(0) Nanoclusters and Investigation of Their Catalytic Activity in the Dehydrogenation of Sodium Borohydride and the Hydrogenation of Olefins/Arenes, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya, 2010

Post Graduate, The Preparation and Characterization of Water Soluble Ruthenium(0) Nanoclusters and Their Catalytic Activity in the Hydrolysis of Sodium Borohydride, Middle East Technical University, Fen Bilimleri Enstitüsü, Kimya, 2005

### Research Areas

Chemistry, Physical Chemistry, Chemical Kinetics, nanocomposites, Inorganic Chemistry, Inorganic Reaction Mechanisms and Kinetics, Catalysis, nanoclusters, Organic Chemistry, Chemistry of Macromolecules, Natural Sciences

### Academic Titles / Tasks

Professor, Van Yüzüncü Yıl University, Fen Fakültesi, Kimya, 2018 - Continues

Associate Professor, Van Yüzüncü Yıl University, Fen Fakültesi, Kimya, 2013 - 2018

Assistant Professor, Van Yüzüncü Yil University, Fen Fakültesi, Kimya, 2012 - 2013  
Research Assistant PhD, Van Yüzüncü Yil University, Fen Fakültesi, Kimya, 2010 - 2012  
Research Assistant, Middle East Technical University, Fen Fakültesi, Kimya, 2003 - 2010

## Professional Experience

BAP Coordinator, Van Yüzüncü Yil University, 2019 - Continues

## Advising Theses

Zahmakıran M., MIL-101 Metal Organik Kafes Yapısı Kararlı Paladyum (0) Nanokümelere: Sentezi, Tanımlanması ve Amonyak-Boranın Metanoliz Tepkimesindeki Katalitik Performanslarının İncelenmesi, Post Graduate, N.Caner(Student), 2018

Zahmakıran M., NANOİDROTALSİT KARARLI RUTENYUM NANOKÜMELERİ: SENTEZİ, TANIMLANMASI VE LİGNİN MODEL BİLEŞİKLERİNİN OKSİDASYON TEPKİMELERİNDEKİ KATALİTİK PERFORMANSI, Post Graduate, İ.Burak(Student), 2017

Zahmakıran M., Metal Organik Kafes Yapısında Kararlaştırılmış Geçiş Metal Nanokümelere ve Fenol Hidrojenlenmesindeki Katalitik Performansları, Doctorate, İ.Efecan(Student), 2017

Zahmakıran M., Amin Grubu Fonksiyonellenmiş Silika Üzerine Tutturulmuş Metal Nanokümelere Sentezi, Tanımlanması ve Formik Asitin (HCOOH) Dehidrojenlenme Tepkimesindeki Katalitik Performanslarının İncelenmesi, Post Graduate, A.Bulut(Student), 2016

Zahmakıran M., Karbon Destekli Metal Nanokümelere Sentezi, Tanımlanması ve Formik Asitin (HCOOH) Dehidrojenlenme Tepkimesindeki Katalitik Performanslarının İncelenmesi, Post Graduate, M.Yurderi(Student), 2016

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

- I. **Ruthenium Nanoparticles Supported on Reduced Graphene Oxide: Efficient Catalyst for the Catalytic Reduction of Cr(VI) in the Presence of Amine-Boranes**  
Yurderi M., Bulut A., Kanberoğlu G. S. , Kaya M., KANBUR Y., Zahmakıran M.  
CHEMISTRYSELECT, vol.5, pp.6961-6970, 2020 (Journal Indexed in SCI)
- II. **Silica supported ternary NiRuPt alloy nanoparticles: Highly efficient heterogeneous catalyst for H<sub>2</sub> generation via selective decomposition of hydrous hydrazine in alkaline solution**  
Karataş Y., Gülcan M., Zahmakıran M.  
International Journal of Hydrogen Energy, 2020 (Journal Indexed in SCI Expanded)
- III. **Complete Dehydrogenation of Hydrazine Borane on Manganese Oxide Nanorod-Supported Ni@Ir Core-Shell Nanoparticles**  
Yurderi M., Top T., Bulut A., Kanberoğlu G. S. , Kaya M., Zahmakıran M.  
Inorganic Chemistry, 2020 (Journal Indexed in SCI Expanded)
- IV. **Cobalt nanoparticles supported on alumina nanofibers (Co/Al<sub>2</sub>O<sub>3</sub>): Cost effective catalytic system for the hydrolysis of methylamine borane**  
Bağuç I. B. , Yurderi M., Bulut A., Çelebi M., Kanberoğlu G. S. , Zahmakıran M., Kaya M., Aydemir M., Durap F., Baysal A.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.44, pp.28441-28450, 2019 (Journal Indexed in SCI)
- V. **Palladium nanoparticles decorated on amine functionalized graphene nanosheets as excellent nanocatalyst for the hydrogenation of nitrophenols to aminophenol counterparts**  
SOĞUKÖMEROĞULLARI H. G. , Karataş Y., Çelebi M., Gülcan M., SÖNMEZ M., Zahmakıran M.  
JOURNAL OF HAZARDOUS MATERIALS, vol.369, pp.96-107, 2019 (Journal Indexed in SCI)
- VI. **Palladium Nanoparticles Decorated on Amine Functionalized Graphene Nanosheets as Excellent**

**Nanocatalyst for the Hydrogenation of Nitrophenols to Aminophenol Counterparts**

Soğukömeroğulları H. G. , Karataş Y., Çelebi M., Gülcan M., Sönmez M., Zahmakıran M.

JOURNAL OF HAZARDOUS MATERIALS, vol.369, pp.96-107, 2019 (Journal Indexed in SCI)

- VII. **Palladium Nanoparticles Decorated on Amine Functionalized Graphene Nanosheets as Excellent Nanocatalyst for the Hydrogenation of Nitrophenols to Aminophenol Counterparts**  
Soğukömeroğulları H. G. , Karataş Y., Çelebi M., Gülcan M., Sönmez M., Zahmakıran M.  
JOURNAL OF HAZARDOUS MATERIALS, vol.369, pp.96-107, 2019 (Journal Indexed in SCI)
- VIII. **Nanocrystalline metal organic framework (MIL-101) stabilized copper Nanoparticles: Highly efficient nanocatalyst for the hydrolytic dehydrogenation of methylamine borane**  
Bağuç I. B. , ERTAS I. E. , Yurderi M., BULUT A., Zahmakıran M., Kaya M.  
INORGANICA CHIMICA ACTA, vol.483, pp.431-439, 2018 (Journal Indexed in SCI)
- IX. **Amine-functionalized graphene nanosheet-supported PdAuNi alloy nanoparticles: efficient nanocatalyst for formic acid dehydrogenation**  
Bulut A., Yurderi M., Kaya M., Aydemir M., Baysal A., Durap F., Zahmakıran M.  
NEW JOURNAL OF CHEMISTRY, vol.42, pp.16103-16114, 2018 (Journal Indexed in SCI)
- X. **Atomic Layer Deposition of Ruthenium Nanoparticles on Electrospun Carbon Nanofibers: A Highly Efficient Nanocatalyst for the Hydrolytic Dehydrogenation of Methylamine Borane**  
Khalily M. A. , Yurderi M., Haider A., BULUT A., Patil B., Zahmakıran M., Uyar T.  
ACS APPLIED MATERIALS & INTERFACES, vol.10, pp.26162-26169, 2018 (Journal Indexed in SCI)
- XI. **Synthesis, characterization, and enhanced formic acid electrooxidation activity of carbon supported MnO<sub>x</sub> promoted Pd nanoparticles**  
BULUT A., YURDERI M., ALAL O., Kivrak H., Kaya M., Zahmakıran M.  
ADVANCED POWDER TECHNOLOGY, vol.29, pp.1409-1416, 2018 (Journal Indexed in SCI)
- XII. **Electrochemical sensing of hydrogen peroxide using Pd@Ag bimetallic nanoparticles decorated functionalized reduced graphene oxide**  
Güler M., Türkoğlu V., BULUT A., Zahmakıran M.  
ELECTROCHIMICA ACTA, vol.263, pp.118-126, 2018 (Journal Indexed in SCI)
- XIII. **Palladium Nanoparticles Supported on Hydroxyapatite Nanospheres: Highly Active, Reusable and Green Catalyst for Suzuki - Miyaura Cross Coupling Reactions under Aerobic Conditions**  
BULUT A., Aydemir M., Durap F., Gülcan M., Zahmakıran M.  
CHEMISTRYSELECT, vol.3, pp.1569-1576, 2018 (Journal Indexed in SCI)
- XIV. **Nanohydroxalite Supported Ruthenium Nanoparticles: Highly Efficient Heterogeneous Catalyst for the Oxidative Valorization of Lignin Model Compounds**  
Baguc I. B. , Çelebi M., Karakas K., Ertas I. E. , Keles M. N. , KAYA M., Zahmakıran M.  
CHEMISTRYSELECT, vol.2, pp.10191-10198, 2017 (Journal Indexed in SCI)
- XV. **Pd(0) Nanoparticles Decorated on Graphene Nanosheets (GNS): Synthesis, Definition and Testing of the Catalytic Performance in the Methanolysis of Ammonia Borane at Room Conditions**  
Karataş Y., Gülcan M., Çelebi M., Zahmakıran M.  
CHEMISTRYSELECT, vol.2, pp.9628-9635, 2017 (Journal Indexed in SCI)
- XVI. **Methylene blue photocatalytic degradation under visible light irradiation on copper phthalocyanine-sensitized TiO<sub>2</sub> nanopowders**  
Cabir B., YURDERI M., CANER N., Ağırtaş M. S. , Zahmakıran M., Kaya M.  
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.224, pp.9-17, 2017 (Journal Indexed in SCI)
- XVII. **Palladium Nanoparticles Decorated Graphene Oxide: Active and Reusable Nanocatalyst for the Catalytic Reduction of Hexavalent Chromium(VI)**  
Çelebi M., Karakas K., Ertas I. E. , KAYA M., Zahmakıran M.  
CHEMISTRYSELECT, vol.2, pp.8312-8319, 2017 (Journal Indexed in SCI)
- XVIII. **Atomic layer deposition-SiO<sub>2</sub> layers protected PdCoNi nanoparticles supported on TiO<sub>2</sub> nanopowders: Exceptionally stable nanocatalyst for the dehydrogenation of formic acid**  
Caner N., Bulut A., Yurderi M., Ertas I. E. , Demir Kivrak H., KAYA M., Zahmakıran M.

- APPLIED CATALYSIS B-ENVIRONMENTAL, vol.210, pp.470-483, 2017 (Journal Indexed in SCI)
- XIX. **Nickel nanoparticles decorated on electrospun polycaprolactone/chitosan nanofibers as flexible, highly active and reusable nanocatalyst in the reduction of nitrophenols under mild conditions**  
KARAKAS K., Celebioglu A., Çelebi M., Uyar T., Zahmakran M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.203, pp.549-562, 2017 (Journal Indexed in SCI)
- XX. **Keggin Type-Polyoxometalate Decorated Ruthenium Nanoparticles: Highly Active and Selective Nanocatalyst for the Oxidation of Veratryl Alcohol as a Lignin Model Compound**  
Baguc I. B. , Saglam S., Ertas I. E. , Keles M. N. , Çelebi M., KAYA M., Zahmakran M.  
CHEMISTRYSELECT, vol.2, pp.2487-2494, 2017 (Journal Indexed in SCI)
- XXI. **Metal-organic framework (MIL-101) stabilized ruthenium nanoparticles: Highly efficient catalytic material in the phenol hydrogenation**  
ERTAS I. E. , Gülcan M., BULUT A., YURDERI M., Zahmakran M.  
Microporous and Mesoporous Materials, vol.226, pp.94-103, 2016 (Journal Indexed in SCI)
- XXII. **Carbon dispersed copper-cobalt alloy nanoparticles: A cost-effective heterogeneous catalyst with exceptional performance in the hydrolytic dehydrogenation of ammonia-borane**  
BULUT A., YURDERI M., ERTAS I. E. , Çelebi M., Kaya M., Zahmakran M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.180, pp.121-129, 2016 (Journal Indexed in SCI)
- XXIII. **PdAu-MnO<sub>x</sub> nanoparticles supported on amine-functionalized SiO<sub>2</sub> for the room temperature dehydrogenation of formic acid in the absence of additives**  
Karataş Y., BULUT A., YURDERI M., ERTAS I. E. , ALAL O., Gülcan M., Çelebi M., KIVRAK H., Kaya M., Zahmakran M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.180, pp.586-595, 2016 (Journal Indexed in SCI)
- XXIV. **Palladium nanoparticles supported on amine-functionalized SiO<sub>2</sub> for the catalytic hexavalent chromium reduction**  
Çelebi M., Yurderi M., Bulut A., Kaya M., Zahmakran M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.180, pp.53-64, 2016 (Journal Indexed in SCI)
- XXV. **Rhodium nanoparticles stabilized by sulfonic acid functionalized metal-organic framework for the selective hydrogenation of phenol to cyclohexanone**  
ERTAS I. E. , Gülcan M., BULUT A., YURDERI M., Zahmakran M.  
JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL, vol.410, pp.209-220, 2015 (Journal Indexed in SCI)
- XXVI. **MnO<sub>x</sub>-Promoted PdAg Alloy Nanoparticles for the Additive-Free Dehydrogenation of Formic Acid at Room Temperature**  
BULUT A., YURDERI M., Karataş Y., Say Z., KIVRAK H., Kaya M., Gülcan M., Ozensoy E., Zahmakran M.  
ACS CATALYSIS, vol.5, pp.6099-6110, 2015 (Journal Indexed in SCI)
- XXVII. **Dihydrogen Phosphate Stabilized Ruthenium(0) Nanoparticles: Efficient Nanocatalyst for The Hydrolysis of Ammonia-Borane at Room Temperature**  
Durap F., Caliskan S., ÖZKAR S., Karakas K., Zahmakran M.  
MATERIALS, vol.8, pp.4226-4238, 2015 (Journal Indexed in SCI)
- XXVIII. **Supported copper-copper oxide nanoparticles as active, stable and low-cost catalyst in the methanolysis of ammonia-borane for chemical hydrogen storage**  
YURDERI M., BULUT A., ERTAS I. E. , Zahmakran M., Kaya M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.165, pp.169-175, 2015 (Journal Indexed in SCI)
- XXIX. **Pd-MnO<sub>x</sub> nanoparticles dispersed on amine-grafted silica: Highly efficient nanocatalyst for hydrogen production from additive-free dehydrogenation of formic acid under mild conditions**  
BULUT A., YURDERI M., Karataş Y., Zahmakran M., KIVRAK H., Gülcan M., Kaya M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.164, pp.324-333, 2015 (Journal Indexed in SCI)
- XXX. **Amine grafted silica supported CrAuPd alloy nanoparticles: superb heterogeneous catalysts for the room temperature dehydrogenation of formic acid**  
YURDERI M., BULUT A., CANER N., Çelebi M., Kaya M., Zahmakran M.  
CHEMICAL COMMUNICATIONS, vol.51, pp.11417-11420, 2015 (Journal Indexed in SCI)
- XXXI. **Carbon supported trimetallic PdNiAg nanoparticles as highly active, selective and reusable catalyst in the formic acid decomposition**

- YURDERI M., BULUT A., Zahmakran M., Kaya M.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.160, pp.514-524, 2014 (Journal Indexed in SCI)
- XXXII. **Ruthenium(0) nanoparticles stabilized by metal-organic framework (ZIF-8): Highly efficient catalyst for the dehydrogenation of dimethylamine-borane and transfer hydrogenation of unsaturated hydrocarbons using dimethylamine-borane as hydrogen source**  
YURDERI M., BULUT A., Zahmakran M., Gülcan M., ÖZKAR S.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.160, pp.534-541, 2014 (Journal Indexed in SCI)
- XXXIII. **Palladium(0) nanoparticles supported on hydroxyapatite nanospheres: active, long-lived, and reusable nanocatalyst for hydrogen generation from the dehydrogenation of aqueous ammonia-borane solution**  
Karataş Y., YURDERI M., Gülcan M., Zahmakran M., Kaya M.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.16, 2014 (Journal Indexed in SCI)
- XXXIV. **Iridium(0) nanoparticles dispersed in zeolite framework: A highly active and long-lived green nanocatalyst for the hydrogenation of neat aromatics at room temperature**  
Tonbul Y., Zahmakran M., ÖZKAR S.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.148, pp.466-472, 2014 (Journal Indexed in SCI)
- XXXV. **Palladium(0) nanoparticles supported on metal organic framework as highly active and reusable nanocatalyst in dehydrogenation of dimethylamine-borane**  
Gülcan M., Zahmakran M., ÖZKAR S.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.147, pp.394-401, 2014 (Journal Indexed in SCI)
- XXXVI. **Amylamine stabilized platinum(0) nanoparticles: active and reusable nanocatalyst in the room temperature dehydrogenation of dimethylamine-borane**  
Sen F., Karataş Y., Gülcan M., Zahmakran M.  
RSC ADVANCES, vol.4, pp.1526-1531, 2014 (Journal Indexed in SCI)
- XXXVII. **Hydroxyapatite-nanosphere supported ruthenium(0) nanoparticle catalyst for hydrogen generation from ammonia-borane solution: kinetic studies for nanoparticle formation and hydrogen evolution**  
DURAK H., Gülcan M., Zahmakran M., ÖZKAR S., Kaya M.  
RSC ADVANCES, vol.4, pp.28947-28955, 2014 (Journal Indexed in SCI)
- XXXVIII. **Preparation of metal nanoparticles stabilized by the framework of porous materials**  
Zahmakran M., ÖZKAR S.  
RSC Green Chemistry, pp.34-66, 2013 (Journal Indexed in SCI)
- XXXIX. **Transition Metal Nanoparticles in Catalysis for the Hydrogen Generation from the Hydrolysis of Ammonia-Borane**  
Zahmakran M., ÖZKAR S.  
TOPICS IN CATALYSIS, vol.56, pp.1171-1183, 2013 (Journal Indexed in SCI)
- XL. **Effect of silver encapsulation on the local structure of titanosilicate ETS-10**  
Galioglu S., Zahmakran M., KALAY Y. E., ÖZKAR S., Akata B.  
MICROPOROUS AND MESOPOROUS MATERIALS, vol.159, pp.1-8, 2012 (Journal Indexed in SCI)
- XLI. **Copper(0) Nanoparticles Supported on Silica-Coated Cobalt Ferrite Magnetic Particles: Cost Effective Catalyst in the Hydrolysis of Ammonia-Borane with an Exceptional Reusability Performance**  
Kaya M., Zahmakran M., ÖZKAR S., Volkan M.  
ACS APPLIED MATERIALS & INTERFACES, vol.4, pp.3866-3873, 2012 (Journal Indexed in SCI)
- XLII. **Preparation and characterization of LTA-type zeolite framework dispersed ruthenium nanoparticles and their catalytic application in the hydrolytic dehydrogenation of ammonia-borane for efficient hydrogen generation**  
Zahmakran M.  
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.177, pp.606-613, 2012 (Journal Indexed in SCI)
- XLIII. **In Situ Formed Catalytically Active Ruthenium Nanocatalyst in Room Temperature Dehydrogenation/Dehydrocoupling of Ammonia-Borane from Ru(cod)(cot) Precatalyst**  
Zahmakran M., AYVALI T., PHILIPPOT K.

LANGMUIR, vol.28, pp.4908-4914, 2012 (Journal Indexed in SCI)

- XLIV. **Hydrogen generation from the hydrolysis of hydrazine-borane catalyzed by rhodium(0) nanoparticles supported on hydroxyapatite**  
Celik D., Karahan S., Zahmakiran M., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.37, pp.5143-5151, 2012 (Journal Indexed in SCI)
- XLV. **Rhodium(0) nanoparticles supported on nanocrystalline hydroxyapatite: Highly effective catalytic system for the solvent-free hydrogenation of aromatics at room temperature**  
Zahmakiran M., ROMÁN-LESHKOV Y., ZHANG Y.  
Langmuir, vol.28, pp.60-64, 2012 (Journal Indexed in SCI)
- XLVI. **Size-controllable APTS stabilized ruthenium(0) nanoparticles catalyst for the dehydrogenation of dimethylamine-borane at room temperature**  
Zahmakiran M., PHILIPPOT K., OZKAR S., CHAUDRET B.  
DALTON TRANSACTIONS, vol.41, pp.590-598, 2012 (Journal Indexed in SCI)
- XLVII. **Hydrogen liberation from the hydrolytic dehydrogenation of dimethylamine-borane at room temperature by using a novel ruthenium nanocatalyst**  
Caliskan S., Zahmakiran M., Durap F., ÖZKAR S.  
DALTON TRANSACTIONS, vol.41, pp.4976-4984, 2012 (Journal Indexed in SCI)
- XLVIII. **Iridium nanoparticles stabilized by metal organic frameworks (IrNPs@ZIF-8): synthesis, structural properties and catalytic performance**  
Zahmakiran M.  
DALTON TRANSACTIONS, vol.41, pp.12690-12696, 2012 (Journal Indexed in SCI)
- XLIX. **A facile one-step synthesis of polymer supported rhodium nanoparticles in organic medium and their catalytic performance in the dehydrogenation of ammonia-borane**  
Karahan S., Zahmakiran M., ÖZKAR S.  
CHEMICAL COMMUNICATIONS, vol.48, pp.1180-1182, 2012 (Journal Indexed in SCI)
- L. **Catalytic methanolysis of hydrazine borane: a new and efficient hydrogen generation system under mild conditions**  
Karahan S., Zahmakiran M., ÖZKAR S.  
DALTON TRANSACTIONS, vol.41, pp.4912-4918, 2012 (Journal Indexed in SCI)
- LI. **Zeolite framework stabilized nickel(0) nanoparticles: Active and long-lived catalyst for hydrogen generation from the hydrolysis of ammonia-borane and sodium borohydride**  
Zahmakiran M., Ayvali T., Akbayrak S., Caliskan S., Celik D., ÖZKAR S.  
CATALYSIS TODAY, vol.170, pp.76-84, 2011 (Journal Indexed in SCI)
- LII. **Catalytic hydrolysis of hydrazine borane for chemical hydrogen storage: Highly efficient and fast hydrogen generation system at room temperature**  
Karahan S., Zahmakiran M., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.36, pp.4958-4966, 2011 (Journal Indexed in SCI)
- LIII. **One-pot synthesis of colloiddally robust rhodium(0) nanoparticles and their catalytic activity in the dehydrogenation of ammonia-borane for chemical hydrogen storage**  
Ayvali T., Zahmakiran M., ÖZKAR S.  
DALTON TRANSACTIONS, vol.40, pp.3584-3591, 2011 (Journal Indexed in SCI)
- LIV. **Metal nanoparticles in liquid phase catalysis; from recent advances to future goals**  
Zahmakiran M., ÖZKAR S.  
NANOSCALE, vol.3, pp.3462-3481, 2011 (Journal Indexed in SCI)
- LV. **Osmium(0) nanoclusters stabilized by zeolite framework; highly active catalyst in the aerobic oxidation of alcohols under mild conditions**  
Zahmakiran M., Akbayrak S., KODAIRA T., ÖZKAR S.  
DALTON TRANSACTIONS, vol.39, pp.7521-7527, 2010 (Journal Indexed in SCI)
- LVI. **In Situ Formed "Weakly Ligated/Labile Ligand" Iridium(0) Nanoparticles and Aggregates as Catalysts for the Complete Hydrogenation of Neat Benzene at Room Temperature and Mild Pressures**

- Bayram E., Zahmakiran M., ÖZKAR S., Finke R. G.  
LANGMUIR, vol.26, pp.12455-12464, 2010 (Journal Indexed in SCI)
- LVII. **Ruthenium(0) nanoclusters stabilized by zeolite framework as superb catalyst for the hydrogenation of neat benzene under mild conditions: Additional studies including cation site occupancy, catalytic activity, lifetime, reusability and poisoning**  
Zahmakiran M., KODAIRA T., ÖZKAR S.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.96, pp.533-540, 2010 (Journal Indexed in SCI)
- LVIII. **The preparation and characterization of gold(0) nanoclusters stabilized by zeolite framework: Highly active, selective and reusable catalyst in aerobic oxidation of benzyl alcohol**  
Zahmakiran M., Oezkar S.  
MATERIALS CHEMISTRY AND PHYSICS, vol.121, pp.359-363, 2010 (Journal Indexed in SCI)
- LIX. **Ruthenium(0) Nanoclusters Stabilized by a Nanozeolite Framework: Isolable, Reusable, and Green Catalyst for the Hydrogenation of Neat Aromatics under Mild Conditions with the Unprecedented Catalytic Activity and Lifetime**  
Zahmakiran M., Tonbul Y., ÖZKAR S.  
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.132, pp.6541-6549, 2010 (Journal Indexed in SCI)
- LX. **Zeolite confined rhodium(0) nanoclusters as highly active, reusable, and long-lived catalyst in the methanolysis of ammonia-borane**  
Caliskan S., Zahmakiran M., ÖZKAR S.  
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.93, pp.387-394, 2010 (Journal Indexed in SCI)
- LXI. **Aminopropyltriethoxysilane stabilized ruthenium(0) nanoclusters as an isolable and reusable heterogeneous catalyst for the dehydrogenation of dimethylamine-borane**  
Zahmakiran M., TRISTANY M., PHILIPPOT K., FAJERWERG K., ÖZKAR S., CHAUDRET B.  
CHEMICAL COMMUNICATIONS, vol.46, pp.2938-2940, 2010 (Journal Indexed in SCI)
- LXII. **Ruthenium(0) nanoclusters supported on hydroxyapatite: highly active, reusable and green catalyst in the hydrogenation of aromatics under mild conditions with an unprecedented catalytic lifetime**  
Zahmakiran M., Tonbul Y., ÖZKAR S.  
CHEMICAL COMMUNICATIONS, vol.46, pp.4788-4790, 2010 (Journal Indexed in SCI)
- LXIII. **Zeolite confined copper(0) nanoclusters as cost-effective and reusable catalyst in hydrogen generation from the hydrolysis of ammonia-borane**  
Zahmakiran M., Durap F., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, pp.187-197, 2010 (Journal Indexed in SCI)
- LXIV. **Water soluble laurate-stabilized rhodium(0) nanoclusters catalyst with unprecedented catalytic lifetime in the hydrolytic dehydrogenation of ammonia-borane**  
Durap F., Zahmakiran M., ÖZKAR S.  
APPLIED CATALYSIS A-GENERAL, vol.369, pp.53-59, 2009 (Journal Indexed in SCI)
- LXV. **Dimethylammonium Hexanoate Stabilized Rhodium(0) Nanoclusters Identified as True Heterogeneous Catalysts with the Highest Observed Activity in the Dehydrogenation of Dimethylamine-Borane**  
Zahmakiran M., ÖZKAR S.  
INORGANIC CHEMISTRY, vol.48, pp.8955-8964, 2009 (Journal Indexed in SCI)
- LXVI. **Water soluble laurate-stabilized ruthenium(0) nanoclusters catalyst for hydrogen generation from the hydrolysis of ammonia-borane: High activity and long lifetime**  
Durap F., Zahmakiran M., ÖZKAR S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.34, pp.7223-7230, 2009 (Journal Indexed in SCI)
- LXVII. **Zeolite framework stabilized rhodium(0) nanoclusters catalyst for the hydrolysis of ammonia-borane in air: Outstanding catalytic activity, reusability and lifetime**  
Zahmakiran M., ÖZKAR S.  
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- LXVIII. **Preparation and characterization of zeolite framework stabilized cuprous oxide nanoparticles**  
Zahmakiran M., Oezkar S.

- MATERIALS LETTERS, vol.63, pp.1033-1036, 2009 (Journal Indexed in SCI)
- LXIX. **Zeolite-Confined Ruthenium(0) Nanoclusters Catalyst: Record Catalytic Activity, Reusability, and Lifetime in Hydrogen Generation from the Hydrolysis of Sodium Borohydride**  
Zahmakiran M., ÖZKAR S.  
LANGMUIR, vol.25, pp.2667-2678, 2009 (Journal Indexed in SCI)
- LXX. **A novel, simple, organic free preparation and characterization of water dispersible photoluminescent Cu<sub>2</sub>O nanocubes**  
Zahmakiran M., ÖZKAR S., KODAIRA T., SHIOMI T.  
MATERIALS LETTERS, vol.63, pp.400-402, 2009 (Journal Indexed in SCI)
- LXXI. **Zeolite confined nanostructured dinuclear ruthenium clusters: preparation, characterization and catalytic properties in the aerobic oxidation of alcohols under mild conditions**  
Zahmakiran M., Orzkar S.  
JOURNAL OF MATERIALS CHEMISTRY, vol.19, pp.7112-7118, 2009 (Journal Indexed in SCI)
- LXXII. **Intrazeolite ruthenium(0) nanoclusters: A superb catalyst for the hydrogenation of benzene and the hydrolysis of sodium borohydride**  
Zahmakiran M., Oezkar S.  
LANGMUIR, vol.24, pp.7065-7067, 2008 (Journal Indexed in SCI)
- LXXIII. **Water dispersible acetate stabilized ruthenium(0) nanoclusters as catalyst for hydrogen generation from the hydrolysis of sodium borohydride**  
Zahmakiran M., OZKAR S.  
JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL, vol.258, pp.95-103, 2006 (Journal Indexed in SCI)
- LXXIV. **Hydrogen generation from hydrolysis of sodium borohydride using Ru(0) nanoclusters as catalyst**  
OZKAR S., Zahmakiran M.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.404, pp.728-731, 2005 (Journal Indexed in SCI)

## **Books & Book Chapters**

- I. **Liquid Phase Chemical Hydrogen Storage From Recent Developments to Future Objectives**  
Bulut A., ERTAS I. E. , Yurderi M., Ağırtaş M. S. , Zahmakiran M.  
in: Emerging Materials for Energy Conversion and Storage, uan Yew Cheong Giuliana Impellizzeri Mariana Amorim Fraga, Editor, Elsevier Science, Oxford/Amsterdam , Amsterdam, pp.363-384, 2018

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **MIL-101 Metal-Organic Framework Stabilized Iridium Nanoclusters; Synthesis, Characterization and Catalytic Performances in the Phenol Hydrogenation**  
Zahmakiran M.  
International Engineering and Science Symposium, Siirt, Turkey, 20 - 22 June 2019, pp.850-863
- II. **Development, Characterization and Photocatalytic Activities of Graphene Oxide Supported ZnO Nanoclusters**  
Kanberoğlu G. S. , Zahmakiran M.  
International Engineering and Science Symposium, Siirt, Turkey, 20 - 22 June 2019, pp.568-580
- III. **Colloidally Stabilized Bimetallic (Core@Shell) Cr@Ru, Cr@Ir, Mn@Ru, Mn@Ir Nanoclusters; Synthesis and Characterization by Advanced Visualization Techniques**  
Bulut A., Zahmakiran M.  
International Engineering and Science Symposium, Siirt, Turkey, 20 - 22 June 2019, pp.751-759
- IV. **The Development of Nanosized-Hydroxalcite Stabilized Ruthenium Nanoclusters and Investigation of Their Catalytic Performances in the Catalytic Oxidation of Lignin Model Compounds**  
Bulut A., Zahmakiran M.



International Engineering and Science Symposium, Siirt, Turkey, 20 - 22 June 2019, pp.888-901

- V. **The Preparation of Reduced Graphene Oxide Decorated Ruthenium Nanoclusters and Their Photocatalytic Performances in Cr(VI) Reduction**  
Yurderi M., Zahmakran M.  
International Engineering and Science Symposium, Siirt, Turkey, 20 - 22 June 2019, pp.620-635
- VI. **Solid Supported Rhodium Nanoclusters Catalyzed Ammonia-Borane Hydrolysis**  
Yurderi M., Zahmakran M.  
International Engineering and Science Symposium, Siirt, Turkey, 20 - 22 June 2019, pp.717-726
- VII. **The Application of Al<sub>2</sub>O<sub>3</sub> Nanofiber Supported Copper Nanoclusters in Fluid Solutions**  
Zahmakran M.  
International Engineering and Science Symposium, Siirt, Turkey, 20 June - 22 August 2019, pp.51-64
- VIII. **The Catalytic Performance of Metal-Organic Framework Supported Nickel Nanoclusters in the Methanolysis of Ammonia-Borane**  
Kanberoğlu G. S. , Zahmakran M.  
International Engineering and Science Symposium, Siirt, Turkey, 20 June - 22 August 2019, pp.838-849
- IX. **Catalytic Application of MIL-101 Metal-Organic Framework Stabilized Palladium Nanoclusters Catalyst in the Methanolysis of Ammonia-Borane**  
Zahmakran M., Bağuç İ. B. , Yurderi M.  
International Engineering and Natural Sciences Conference, Diyarbakır, Turkey, 14 - 17 November 2018, pp.442-455
- X. **Dehydrogenation of Formic Acid under Visible Light Irradiation on PdAu Alloy Nanoparticles Decorated g-C<sub>3</sub>N<sub>4</sub>/SiO<sub>2</sub>**  
Zahmakran M., Çalıklı M. H.  
International Engineering and Natural Sciences Conference, Diyarbakır, Turkey, 14 - 17 November 2018, pp.389-406
- XI. **Graphene Oxide Supported Palladium Nanoparticles Catalyst for the Catalytic Hexavalent Chromium Reduction**  
Zahmakran M., Çelebi M., Bağuç İ. B. , Bulut A.  
International Engineering and Natural Sciences Conference, Diyarbakır, Turkey, 14 - 17 November 2018, pp.456-466
- XII. **MIL-101 METAL ORGANİK KAFES YAPISI KARARLI PALADYUM NANOPARÇACIKLARININ AMONYAK-BORAN METANOLİZİNDEKİ KATALİTİK UYGULAMASI**  
Zahmakran M., Yurderi M., CANER N.  
INESEC INTERNATIONAL ENGINEERING AND NATURAL SCIENCES CONFERENCE, Diyarbakır, Turkey, 14 - 17 November 2018, vol.01, no.1, pp.443-455
- XIII. **Sulfonic Acid Functionalized Nanocrystalline MIL-101 Metal-Organic Framework Stabilized Ag(0) Nanoparticles: Synthesis, Characterization and Antibacterial Properties**  
Zahmakran M., Özdemir S., Yalçın S., Kanberoğlu G. S.  
International Engineering and Natural Sciences Conference, Diyarbakır, Turkey, 14 - 17 November 2018, pp.408-416
- XIV. **Ruthenium Nanoparticles Supported on Nanohydroxalcite: Efficient Heterogeneous Catalyst for the Oxidation of Lignin Model Compounds**  
BAGUC I. B. , ERTAS I. E. , KARAKAS K., Çelebi M., Zahmakran M.  
3rd General Meeting and Workshop on SEC's in Industry, Prak, Czech Republic, 25 - 27 October 2017, pp.1-4
- XV. **The Preparation of Cu@Al<sub>2</sub>O<sub>3</sub> Nanofiber by Organometallic Technique and its Application in the Nanofluid Systems**  
BULUT A., YURDERI M., ERTAS I. E. , Zahmakran M.  
1st European Symposium on Nanofluids, Lizbon, Portugal, 8 - 10 October 2017, pp.249-253
- XVI. **APTS Stabilized Colloidal Pd Nanoparticles Catalyst for the Dehydrocoupling of Hydrazine Borane**  
Zahmakran M., Yurderi M., BULUT A.  
4th Anatolian School of Catalysis, İzmir, Turkey, 11 - 14 September 2017, pp.132

- XVII. **ALD preparation of SiO<sub>2</sub> protected Pd-MnO<sub>x</sub> nanoparticles supported on TiO<sub>2</sub>: Highly efficient nanocatalyst for the dehydrogenation of formic acid**  
Caner N., Yurderi M., Bulut A., Zahmakıran M.  
254th National Meeting and Exposition of the American-Chemical-Society (ACS) on Chemistry's Impact on the Global Economy, Washington, Kiribati, 20 - 24 August 2017, vol.254
- XVIII. **Polyoxometalate stabilized ruthenium nanoparticles supported on nanohydroxalcalite: Highly efficient nanocatalyst for the oxidation of lignin model compounds**  
Zahmakıran M., Baguc B., Çelebi M.  
254th National Meeting and Exposition of the American-Chemical-Society (ACS) on Chemistry's Impact on the Global Economy, Washington, Kiribati, 20 - 24 August 2017, vol.254
- XIX. **The Development of The Heterocyclic Ligand Stabilized Metal Nanocatalysts that Provide Reversible Hydrogen Production from the Methanolysis of Ammonia-Borane\***  
Karataş Y., Gülcan M., Zahmakıran M.  
3rd International Conference on Computational and Experimental Science and Engineering, Antalya, Turkey, 19 - 24 October 2016, pp.471
- XX. **İndirgenmiş Grafen Oksit (r-GO) Destekli Pd(0) Nanoküpleri: Hazırlanması, Tanımlanması ve Amonyak-Boranın Metanoliz Tepkimesindeki Katalitik Performansı**  
Gülcan M., Zahmakıran M., Çelebi M., Karataş Y.  
12. Ulusal Kimya Mühendisliği Kongresi, İzmir, Turkey, 23 - 26 August 2016, pp.402
- XXI. **Development of Sintering and Clumping Resistant Supported Metal Nanoparticles for Catalytic Applications by Atomic Layer Deposition**  
YURDERI M., CANER N., BULUT A., Zahmakıran M.  
ISSON, Atina, Greece, 2 July - 09 February 2016, pp.27
- XXII. **Sulfonic Acid Functionalized MIL-101 Metal Organic Framework Confined Palladium(0) Nanoparticles Catalyst for the Methanolysis of Ammonia-Borane under Mild Conditions**  
CANER N., BULUT A., YURDERI M., Zahmakıran M.  
6th Catalysis Conference, Bursa, Turkey, 27 May - 30 April 2016, pp.141
- XXIII. **ALD-SiO<sub>2</sub> Layers Protected PdCoNi Alloy Nanoparticles Supported on TiO<sub>2</sub> Nanopowders for the Dehydrogenation of Aqueous Formic Acid Solution**  
YURDERI M., CANER N., Zahmakıran M.  
4th Annual Seminar of Finnish Centre of Excellence in Atomic Layer Deposition, Helsinki, Finland, 23 - 24 May 2016, pp.39
- XXIV. **ALD Preparation of SiO<sub>2</sub> Layers Protected Physical Mixture of Pd-MnO<sub>x</sub> Bimetallic Nanoparticles on TiO<sub>2</sub> for the Decomposition of Formic Acid**  
YURDERI M., CANER N., BULUT A., Zahmakıran M.  
4th Annual Seminar of Finnish Centre of Excellence in Atomic Layer Deposition, Helsinki, Finland, 23 - 24 May 2016, pp.40
- XXV. **Palladium(0) Nanoparticles Supported on Amine-Functionalized Silica for the Catalytic Hexavalent Chromium Reduction**  
Çelebi M., YURDERI M., BULUT A., KAYA M., Zahmakıran M.  
6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016, pp.132
- XXVI. **Ruthenium Nanoparticles Stabilized Hidrotalcite Catalyst for the Methanolysis of Ammonia-Borane under Mild Conditions**  
Karataş Y., BULUT A., Yurderi M., Gülcan M., Zahmakıran M.  
The 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016, pp.139
- XXVII. **Metal Organic Framework (MIL-101) Stabilized Ruthenium(0) Nanoparticles: Highly Efficient Catalytic Material for the Selective Hydrogenation of Phenol to Cyclohexanone**  
BULUT A., ERTAS I. E. , Gülcan M., Yurderi M., Zahmakıran M.  
6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016, pp.150
- XXVIII. **Synthesis, Characterization and Photocatalytic Performance of Ag/ZnO in the Photodegradation of Methylene Blue under UV Irradiation**

- KARAKAS K., Çelebi M., Zahmakıran M.  
The 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016, pp.162
- XXIX. **Trimetallic PdAuNi Alloy Nanoparticles Supported on Amine Functionalized Reduced Graphene Oxide for the Dehydrogenation of Formic Acid Under Mild Conditions**  
BULUT A., Yurderi M., Çelebi M., Zahmakıran M.  
The 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016, pp.151
- XXX. **CoxPty Nanoclusters Supported on Magnesia Surface; Preparation, Characterization and the Investigation of the Catalytic Performance in the Dehydrogenation of Aqueous Hydrazine Borane**  
Sağlam Ş., Yeğiner G., Gülcan M., Zahmakıran M.  
International Turkic World Conference on Chemical Sciences and Technologies (ITWCCST-2015), Saraybosna, Bosnia And Herzegovina, 27 October - 01 November 2015, pp.115
- XXXI. **Going Heterogeneous in the Additive-Free Hydrogen Production from Formic Acid at Room Temperature**  
BULUT A., YURDERI M., SAY Z., Kıvrak H., Gülcan M., KAYA M., OZENSOY E., Zahmakıran M.  
XII European Congress On Catalysis, Kazan, Russia, 30 August - 01 September 2015, pp.262
- XXXII. **Karbon Destekli CoCu Alaşım Nanokümlerinin Sentezi, Tanımlanması ve Amonyak-Borandan Hidrojen Üretimindeki Katalitik Performanslarının İncelenmesi**  
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V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.260
- XXXIII. **Lycopodium Clavatum Biyolojik Sporları Esaslı TiO<sub>2</sub> Nano Kürelerinde Desteklenmiş Rutenyum(0) Nanokümlerinin Hazırlanması, Tanımlanması ve Amonyak-Boran Hidrolizindeki Katalitik Performanslarının Belirlenmesi**  
Zahmakıran M., OZENSOY E., KARAKAS K., Tunç M., Erdoğan D. A.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.283
- XXXIV. **Sülfonik Asit Fonksiyonelli MIL-101 Metal-Organik Kafes Yapısında Kararlaştırılmış Rodyum(0) Nanokümlerinin Sentezi, Tanımlanması ve Fenolün Seçici Olarak Siklohekzanona İndirgenmesindeki Katalitik Uygulamaları**  
ERTAS I. E. , BULUT A., YURDERI M., Gülcan M., Zahmakıran M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.247
- XXXV. **Sülfonik Asit Fonksiyonelli MIL-101 Metal-Organik Kafes Yapısında Kararlaştırılmış Rh(0) Nanokümlerinin Amonyak-Boran Dehidrojenlenme Tepkimesindeki Katalitik Performansı**  
ERTAS I. E. , Gülcan M., Zahmakıran M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.255
- XXXVI. **Karbon Destekli Bakır-Bakır(I) Oksit Nanokümleri: Hazırlanması, Tanımlanması ve Amonyak-Boranın Metanoliz Tepkimesindeki Katalitik Performanslarının İncelenmesi**  
YURDERI M., BULUT A., ERTAS I. E. , Zahmakıran M., KAYA M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.239
- XXXVII. **APTS Fonksiyonelli SiO<sub>2</sub> Destekli PdAu Alaşım MnOx Fiziksel Karışım Nanokümlerinin Sentezi, Tanımlanması ve Formik Asitin Dehidrojenlenme Tepkimesindeki Katalitik Performanslarının İncelenmesi**  
Karatay Y., BULUT A., YURDERI M., ERTAS I. E. , Gülcan M., Zahmakıran M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.256
- XXXVIII. **Silika Destekli NiCoPt Nanokümlerinin Hazırlanması, Tanımlanması ve Hidrazin Hidratın Dehidrojenlenme Tepkimesindeki Katalitik Performansının İncelenmesi**  
Sayçiçek S., Yeğiner G., Sağlam Ş., Karatay Y., Gülcan M., Zahmakıran M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.406
- XXXIX. **APTS Fonksiyonelli SiO<sub>2</sub> Destekli PdAuCr Alaşım Nanokümlerinin Sentezi, Tanımlanması ve Formik Asitin Katalitik Bozunma Tepkimesindeki Katalitik Performanslarının İncelenmesi**  
BULUT A., YURDERI M., ERTAS I. E. , Zahmakıran M.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 - 25 April 2015, pp.241
- XL. **Nanohidroxyapatite-supported nickel(0) nanoparticles as effective and reusable catalyst for**

## **hydrogen generation from the hydrolysis of ammonia-borane**

Sunbat H., Gülcan M., Zahmakıran M.

International Environmental Symposium of Van (IESSV'14), Van, Turkey, 4 - 07 July 2014, pp.225

- XLII. **In-situ formed ruthenium(0) nanoparticles supported on nano-Al<sub>2</sub>O<sub>3</sub> catalyzed hydrogen generation from aqueous ammonia-borane solution at room temperature under air**  
Karataş Y., Gülcan M., Zahmakıran M.  
International Environmental Symposium of Van (IESSV'14), Van, Turkey, 4 - 07 July 2014, pp.236
- XLIII. **Hydrogen Generation from the Hydrolysis of Hydrazine Borane Catalyzed by Zeolite Framework Stabilized Nickel(0) Nanoparticles**  
Ceylan N., Gülcan M., Zahmakıran M.  
International Environmental Symposium of Van (IESSV'14), Van, Turkey, 4 - 07 July 2014, pp.231
- XLIV. **Amylamine stabilized platinum(0) nanoparticles: active and reusable nanocatalyst in the room temperature dehydrogenation of dimethylamineborane**  
Karataş Y., SEN F., Gülcan M., Zahmakıran M.  
V. National Catalysis Conference, Adana, Turkey, 23 - 26 April 2014, pp.376
- XLV. **NixPtyRuz Nanoclusters; Synthesis, Characterization and the Investigation of the Catalytic Performance in the Dehydrogenation of Hydrazine**  
Karataş Y., YURDERİ M., BULUT A., Gülcan M., Zahmakıran M.  
V. National Catalysis Conference, Adana, Turkey, 23 - 26 April 2014, pp.172
- XLVI. **In-Situ Formed Palladium Nanoparticles Supported on Hydroxyapatite Nanospheres: Highly Active, Reusable and Green Catalyst for the Ligand Free Suzuki-Miyaura Cross Coupling Reactions under Aerobic Conditions**  
BULUT A., Durap F., Aydemir M., Gülcan M., Zahmakıran M.  
V. National Catalysis Conference, Adana, Turkey, 23 - 26 April 2014, pp.284
- XLVII. **Characterization and Catalytic Application of Ruthenium(0) Nanoparticles Stabilized by Metal Organic Frameworks (RuNPs@ZIF-8)**  
YURDERİ M., Gülcan M., Zahmakıran M.  
V. National Catalysis Conference, Adana, Turkey, 23 - 26 April 2014, pp.234
- XLVIII. **PdMnOx Nanoclusters Supported on Aminopropyl Functionalized Silica Surface; Synthesis, Characterization and the Investigation of the Catalytic Performance in the Dehydrogenation of Formic Acid**  
BULUT A., YURDERİ M., Karataş Y., Gülcan M., Zahmakıran M.  
V. National Catalysis Conference, Adana, Turkey, 23 - 26 April 2014, pp.83
- XLIX. **Nanohidroksiapatit Üzerine Tutturulmuş Rutenyum(0) Nanokümelerinin Hazırlanması, Tanımlanması ve Amonyak-Boranın Hidrolizindeki Katalitik Performansının İncelenmesi**  
Durak H., Zahmakıran M.  
1. Ulusal Kataliz Yaz Okulu (3. Anadolu Kataliz Yaz Okulu), Malatya, Turkey, 24 - 28 August 2013, pp.5
- L. **Catalytic dehydrocoupling/dehydrogenation of dimethylamine-borane with metal organic framework stabilized Pd nanoparticles**  
Durak H., Zahmakıran M.  
44th World Chemistry Congress, İstanbul, Turkey, 11 - 16 August 2013, pp.850
- LI. **Pd(0) Nanoparticles Dispersed in Nanocrystalline Hydroxyapatite Framework: Fabrication, Characterization and Catalytic Application in the Hydrolysis of Ammonia-Borane for the Chemical Hydrogen Storage**  
Gülcan M., Karataş Y., Zahmakıran M.  
International Symposium on Metal Complexes, Burgos, Spain, 16 - 20 June 2013, pp.142-143
- LII. **Titanyum(IV) oksit üzerine tutturulmuş Rutenyum (0) nanokümelerinin sentezi, tanımlanması ve amonyak boranın hidrolizindeki katalitik etkinliğinin incelenmesi**  
KONUŞ N., Karataş Y., Gülcan M., Zahmakıran M.  
IV. Ulusal Anorganik Kimya Kongresi, Tokat, Turkey, 30 May - 02 June 2013, pp.318
- LIII. **Sodyum Bor Hidrürden Demir Katalizörü Kullanılarak Hidrojen Gazı Elde Edilmesi**

Durak H., Zahmakıran M.

26. Ulusal Kimya Kongresi, Muğla, Turkey, 1 - 06 October 2012, pp.183

## Supported Projects

Zahmakıran M., Yüksek N., TUBITAK Project, Antimikrobiyal Malzeme Olarak MOF Yapısında Gümüş Nanoparçacıklarının Geliştirilmesi, 2017 - 2019

Çelebi M., Zahmakıran M., TUBITAK Project, Cr(VI) İyonunun Katalitik/Fotokatalitik İndirgenme Tepkimeleri İçin Parçacık Boyut Kontrollü Pd@r-GO ile ZnO@r-GO Nano Kompozit Malzemelerinin Geliştirilmesi, 2016 - 2019

Zahmakıran M., Project Supported by Other Official Institutions, Nano Gübre Çözeltilerinin Geliştirilmesi, 2016 - 2018

Zahmakıran M., TUBITAK Project, Formik Asit'ten Ultra-Yüksek Saflıkta H<sub>2</sub>(g) Üretimi için Mevcut Homojen Katalitik Teknolojilere Yeni Bir Alternatif: MNO<sub>x</sub> Nanoparçacık Destekli, Yüksek Karbon Monoksit (CO) Dirençli, Pd-Temelli Nanokümler, 2015 - 2018

Zahmakıran M., Gülcan M., TUBITAK Project, Fenolün Seçici Olarak Sikloheksanon'a İndirgenmesi için Lewis Asidik Karakter Gösteren Mikro Gözenekli Metal-Organik Kafes Yapısı (Mil-101) İçerisinde Kararlaştırılmış Metal Nanokatalizörlerinin Sentezi, Tanımlanması ve Katalitik Performanslarının İncelenmesi, 2013 - 2016

Zahmakıran M., TUBITAK Project, Intrazeolit Rutenyum (o) Nanokümlerinin Sentezi, Tanımlanması ve Katalizör Olarak Kullanımı, 2006 - 2008

Zahmakıran M., TUBITAK Project, Sodyum Borhidrürün Hidrolizini Katalizleyen Ru(0) Nanokümlerinin Sentezi ve Karakterizasyonu, 2006 - 2008

## Activities in Scientific Journals

PeerJ The Journal of Life and Environmental Sciences, Committee Member, 2018 - Continues

Turkish Journal of Chemistry, Committee Member, 2016 - Continues

## Memberships / Tasks in Scientific Organizations

American Association for the Advancement of Science, Member, 2011 - Continues

Material Research Society, Member, 2011 - Continues

Royal Chemical Society, Member, 2009 - Continues

American Chemical Society (ACS), Member, 2006 - Continues

## Scientific Refereeing

Advanced Functional Materials, SCI Journal, July 2019

Advanced Energy Materials, SCI Journal, July 2019

Inorganic Chemistry Frontiers, SCI Journal, May 2019

ChemCatChem, SCI Journal, May 2019

ACS Applied Materials and Interfaces, SCI Journal, March 2019

Applied Organometallic Chemistry, SCI Journal, March 2019

ACS Catalysis, SCI Journal, May 2018

International Journal of Hydrogen Energy, SCI Journal, April 2018

Green Chemistry, SCI Journal, March 2018

ACS Catalysis, SCI Journal, January 2018

Applied Catalysis B: Environmental, SCI Journal, November 2017

Catalysis Science and Technology, SCI Journal, September 2017

Applied Organometallic Chemistry, SCI Journal, June 2017

Green Chemistry, SCI Journal, April 2017  
Journal of Materials Chemistry A, SCI Journal, April 2017  
Applied Catalysis B: Environmental, SCI Journal, March 2017  
Applied Catalysis B: Environmental, SCI Journal, February 2017  
Green Chemistry, SCI Journal, February 2017  
ACS Applied Materials and Interfaces, SCI Journal, January 2017  
ACS Sustainable Chemistry Engineering, SCI Journal, January 2017  
Applied Organometallic Chemistry, SCI Journal, January 2017  
Catalysis Communications, SCI Journal, October 2015  
Catalysis Communications, SCI Journal, October 2015  
Green Chemistry, SCI Journal, September 2015  
Applied Materials & Interfaces, SCI Journal, September 2015  
Catalysis Science and Technology, SCI Journal, September 2015  
ACS Catalysis, SCI Journal, August 2015  
Chemosphere, SCI Journal, July 2015  
RSC Advances , SCI Journal, June 2015  
Advanced Energy Materials, SCI Journal, June 2015  
Journal of Power Sources, SCI Journal, June 2015  
Applied Catalysis B: Environmental , SCI Journal, May 2015  
Applied Catalysis B: Environmental, SCI Journal, April 2015  
Dalton Transactions, SCI Journal, April 2015  
Applied Catalysis B: Environmental, SCI Journal, March 2015  
Chemical Communications, SCI Journal, February 2015  
Applied Catalysis B: Environmental, SCI Journal, February 2015  
Turkish Journal of Chemistry, SCI Journal, January 2015  
Applied Catalysis B: Environmental, SCI Journal, January 2015  
Turkish Journal of Chemistry, SCI Journal, January 2015  
Applied Catalysis B: Environmental, SCI Journal, January 2015

## **Scientific Consultations**

TÜBİTAK, Project Consultancy, Van Yüzüncü Yil University, Fen Fakültesi, Kimya, Turkey, 2019 - Continues

## **Scientific Research / Working Group Memberships**

Nanomalzemeler ve Kataliz Araştırma Grubu, YÜZÜNCÜ YIL ÜNİVERSİTESİ, Turkey, [www.nanomatcat.com](http://www.nanomatcat.com), 2013 - Continues

## **Invited Congress and Symposium Activities**

MOF, Invited Speaker, Muğla, Turkey, 2019  
V. Ulusal Kataliz Kongresi, Attendee, Adana, Turkey, 2014  
COST MP 1402 Action Annual Meeting, Attendee, Brussel, Belgium, 2014  
I. Ulusal Kataliz Yaz Okulu, Invited Speaker, Adana, Turkey, 2013  
I. Ulusal Kataliz Yaz Okulu, Attendee, Malatya, Turkey, 2013  
IV. Ulusal Anorganik Kimya Kongresi, Invited Speaker, Tokat, Turkey, 2013  
IV. Ulusal Anorganik Kimya Kongresi, Attendee, Tokat, Turkey, 2013  
North American Catalysis Conference, Attendee, Delaware, United States Of America, 2011

North American Catalysis Conference, Invited Speaker, Delaware, United States Of America, 2011  
International Heterogeneous Catalysis Conference, Attendee, Brighton, United Kingdom, 2009  
Ulusal Kataliz Konferansı, Attendee, Ankara, Turkey, 2007  
Ulusal Kimya Kongresi, Attendee, Aydın, Turkey, 2005  
Metal Hydrogen Systems Conference, Attendee, Kraków, Poland, 2005

## Citations

Total Citations (WOS):3630  
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## Scholarships

EU-2008 Framework Nanotech-Project (CNRS) Young Scientist Support Program, European Commission, 2008 - Continues  
Yurt Dışı Doktora Sırası Araştırma Bursu, TÜBİTAK, 2006 - Continues  
Yurt İçi Lisansüstü Bursu, TÜBİTAK, 2003 - Continues

## Awards

Zahmakran M., Mühendislik, Doğa ve Sağlık Bilimleri Kategorisi İlim Yayma Ödülü, İlim Yayma Vakfı, December 2019  
Zahmakran M., TÜBİTAK Bilim Teşvik Ödülü, TÜBİTAK, December 2018  
Zahmakran M., Georg Forster Research Fellowship, Alexander Von Humboldt Vakfı, December 2015  
Zahmakran M., Üstün Başarılı Genç Bilim İnsanı Ödülü, Bilim Akademisi, March 2014  
Zahmakran M., Seçkin Genç Bilim İnsanı Ödülü, Türkiye Bilimler Akademisi, September 2013  
Zahmakran M., FABED Eser Tümen Araştırma Ödülü, İTÜ-Eser Tümen Araştırma Vakfı, August 2013