

## **Assoc. Prof. RAHMİYE ZERRİN YARBAY**

### **Personal Information**

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### **International Researcher IDs**

ORCID: 0000-0002-4926-044X

Publons / Web Of Science ResearcherID: AAR-9164-2020

ScopusID: 55884355100

Yoksis Researcher ID: 46009

### **Education Information**

Associate Degree, Ataturk University, Açıköğretim Fakültesi, Çocuk Bakımı Ve Gençlik Hizmetleri Bölümü, Turkey 2017 - 2020

Doctorate, Bilecik Seyh Edebali University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr) (Anadolu Üniv. Ortak), Turkey 2011 - 2017

Postgraduate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Kimya Mühendisliği (YI) (Tezli), Turkey 2008 - 2010

Undergraduate, Kocaeli University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Turkey 2003 - 2007

### **Foreign Languages**

English, B2 Upper Intermediate

### **Dissertations**

Doctorate, Perovskit ve perovskit/SBA-15 tipi katalizörlerin farklı yöntemlerle sentezi, karakterizasyonu ve katalitik pirolizde kullanılması, Bilecik Seyh Edebali University, FEN BİLİMLERİ ENSTİTÜSÜ, Kimya Mühendisliği (Dr) (Anadolu Üniv. Ortak), 2017

Postgraduate, Muhtelif yakıtlardan hidrojen üretimi amacıyla katalitik yakıt işlemci için katalizör geliştirilmesi, Yıldız Technical University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli), 2010

### **Research Areas**

Engineering and Technology

### **Academic Titles / Tasks**

Associate Professor, Bilecik Seyh Edebali University, Meslek Yüksekokulu, Kimya Ve Kimyasal İşleme Teknolojileri, 2022 - Continues

## Courses

KSM408 KİMYA MÜHENDİSLİĞİ LABORATUVARI II, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020  
KSM407 KİMYA MÜHENDİSLİĞİ LABORATUVARI I, Undergraduate, 2021 - 2022, 2020 - 2021, 2018 - 2019  
BYT5034 BİYOENERJİ TEKNOLOJİLERİ VE BİYOKÖMÜR, Postgraduate, 2021 - 2022  
KMH5000 TEZ ÇALIŞMASI, Postgraduate, 2021 - 2022, 2020 - 2021  
KMH7000 UZMANLIK ALAN, Postgraduate, 2021 - 2022, 2020 - 2021  
ESM5027 HİDROJEN ENERJİSİ TEKNOLOJİLERİ, Postgraduate, 2021 - 2022, 2020 - 2021  
ESM5000 TEZ ÇALIŞMASI, Postgraduate, 2021 - 2022  
KIM204 ORGANİK KİMYA, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020  
KMH6021 YAKIT HÜCRELERİ, Doctorate, 2021 - 2022, 2020 - 2021  
KSM303 ISI TRANSFERİ, Undergraduate, 2021 - 2022, 2020 - 2021  
KMH5026 KATALİZÖR SENTEZİ VE REAKSİYONLARI, Postgraduate, 2021 - 2022  
KSM333 YAKIT PİLLERİ VE HİDROJEN ENERJİSİ, Undergraduate, 2020 - 2021, 2018 - 2019  
KSM410 LİSANS ARAŞTIRMA PROJESİ, Undergraduate, 2020 - 2021  
KSM409 BİTİRME ÖDEVİ, Undergraduate, 2020 - 2021, 2018 - 2019  
KSM417 KATALİZ VE KATALİTİK PROSESLER, Undergraduate, 2019 - 2020, 2017 - 2018  
KMH559 KATALİZÖR SENTEZİ VE REAKSİYONLARI, Postgraduate, 2019 - 2020  
ESM524 BİYOYAKIT TEKNOLOJİSİ, Postgraduate, 2019 - 2020  
KIM206 ORGANİK KİMYA LABORATUVARI, Undergraduate, 2019 - 2020  
KIM303 ALETLİ ANALİZ VE LABORATUVARI, Undergraduate, 2018 - 2019  
KMH510 YEŞİL KİMYA TEKNOLOJİLERİ, Postgraduate, 2018 - 2019  
TOS114 ARAŞTIRMA YÖNTEMLERİ, Undergraduate, 2017 - 2018  
TOS111 BİLİM TARİHİ, Undergraduate, 2017 - 2018

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

- I. **Investigation of CO<sub>2</sub> sequestration performance and statistical analysis of dye removal efficiency of liquefied hornbeam based carbon foams: Effects of biomass/solvent weight ratio, tar contribution, and chemical activation**  
Yargıcı A. Ş., Gunduz Meric G., Yarbay R. Z., Özbay N.  
Materials Today Sustainability, vol.24, 2023 (SCI-Expanded)
- II. **Treatment of textile dye via economic fungi/MCM-41 bio-based adsorbent: Application of neural network approach**  
ŞİMŞEK V., YARBAY R. Z., MARTTİN V., GÜL Ü. D.  
Journal of Cleaner Production, vol.421, 2023 (SCI-Expanded)
- III. **Hydrothermal vs. dilute acid pre-treatments: comparison of the biomass properties, distribution of pyrolysis products, and bio-oil characteristics**  
ÖZBAY N., YAMAN E., YARGIÇ A. Ş., YARBAY R. Z.  
Biomass Conversion and Biorefinery, vol.13, no.2, pp.739-753, 2023 (SCI-Expanded)
- IV. **Production of Si-doped biomass-derived materials: effect of support type, activation and doping conditions**  
ÖZBAY N., YARGIÇ A. Ş., YAMAN E., YARBAY R. Z., Dermenci K. B., Turan S.  
Biomass Conversion and Biorefinery, 2023 (SCI-Expanded)
- V. **Effect of preparation method and B-side metal type on the physicochemical properties of LaB03 perovskite catalyst and its catalytic behaviour in the biomass pyrolysis**  
ÖZBAY N., YARBAY R. Z.  
Biomass Conversion and Biorefinery, vol.12, no.10, pp.4759-4772, 2022 (SCI-Expanded)
- VI. **A comparative study on dark adsorption of dyes using mesoporous MCM-41 catalyst**  
YARBAY R. Z.  
Research on Chemical Intermediates, vol.48, no.2, pp.541-553, 2022 (SCI-Expanded)

- VII. **Essential role of B metal species in perovskite type catalyst structure and activity on toluene oxidation**  
 YARBAY R. Z., Duplančić M., Tomašić V., Badia i Córcoles J., Kurajica S.  
*International Journal of Environmental Science and Technology*, vol.19, no.1, pp.553-564, 2022 (SCI-Expanded)
- VIII. **Perspective on Catalytic Biomass Pyrolysis Bio-oils: Essential Role of Synergistic Effect of Metal Species Co-substitution in Perovskite Type Catalyst**  
 YARBAY R. Z., ÖZBAY N.  
*Catalysis Letters*, vol.151, no.5, pp.1406-1417, 2021 (SCI-Expanded)
- IX. **Valorization of banana peel waste via in-situ catalytic pyrolysis using Al-Modified SBA-15**  
 ÖZBAY N., YARGIÇ A. Ş., YARBAY R. Z., YAMAN E.  
*Renewable Energy*, vol.140, pp.633-646, 2019 (SCI-Expanded)
- X. **Tailoring Cu/Al<sub>2</sub>O<sub>3</sub> catalysts for the catalytic pyrolysis of tomato waste**  
 ÖZBAY N., YARGIÇ A. Ş., YARBAY R. Z.  
*Journal of the Energy Institute*, vol.91, no.3, pp.424-433, 2018 (SCI-Expanded)
- XI. **Production and characterization of chars from cherry pulp via pyrolysis**  
 PEHLİVAN E., ÖZBAY N., YARGIÇ A. Ş., YARBAY R. Z.  
*Journal of Environmental Management*, vol.203, pp.1017-1025, 2017 (SCI-Expanded)
- XII. **Assessment of toxic copper(II) biosorption from aqueous solution by chemically-treated tomato waste**  
 YARGIÇ A. Ş., YARBAY R. Z., ÖZBAY N., Önal E.  
*Journal of Cleaner Production*, vol.88, pp.152-159, 2015 (SCI-Expanded)
- XIII. **Full factorial experimental design analysis of reactive dye removal by carbon adsorption**  
 ÖZBAY N., YARGIÇ A. Ş., YARBAY R. Z., Önal E.  
*Journal of Chemistry*, 2013 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Tuning LSAF Perovskite Morphology by Synthesis Method**  
 YARBAY ŞAHİN R. Z.  
*Bilecik Şeyh Edebali Üniversitesi Fen Bilimleri Dergisi*, vol.2, pp.893-900, 2021 (Peer-Reviewed Journal)
- II. **Understanding the Effect of Calcination Process on the Mesoporous MCM-41 Material Morphology**  
 YARBAY ŞAHİN R. Z.  
*Journal of the Turkish Chemical Society Section B: Chemical Engineering*, vol.4, no.2, pp.27-34, 2021 (Peer-Reviewed Journal)
- III. **Experimental Study of Thermal Pyrolysis of Avocado Seed for Liquid Fuel Production**  
 YARBAY ŞAHİN R. Z., ÖRENAY O., DOLAŞ Y., YARGIÇ A. Ş., ÖZBAY N.  
*Uluslararası tarım araştırmalarında yenilikçi yaklaşımlar dergisi (Online)*, vol.4, no.4, pp.447-452, 2020 (Peer-Reviewed Journal)
- IV. **Effect of Calcination Temperature on the Perovskite Characteristics Prepared by Modified Pechini Method**  
 ŞAHİN R. Z. Y.  
*Avrupa Bilim ve Teknoloji Dergisi*, vol.0, no.17, pp.750-754, 2019 (Peer-Reviewed Journal)
- V. **Removal of phenol from aqueous solution using sugar beet pulp activated carbon**  
 YARBAY R. Z., YARGIÇ A. Ş., ÖZBAY N., Önal E.  
*Chemical Engineering Transactions*, vol.42, pp.169-174, 2014 (Scopus)
- VI. **Removal of Phenol From Aqueous Solution Using Sugar Beet Pulp Activated Carbon**  
 YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., ÖZBAY N., PEHLİVAN E.  
*Chemical Engineering Transactions*, vol.42, no.42, pp.169-174, 2014 (Scopus)
- VII. **Use Of Fenton Reagent İn The Degradation of Reactive Turquoise İn Aqueous Medium**  
 PEHLİVAN E., YARGIÇ A. Ş., ÖZBAY N., YARBAY ŞAHİN R. Z., Kara Y.

- Journal of Selcuk University Natural and Applied Science, pp.838-848, 2014 (Peer-Reviewed Journal)
- VIII. **Biosorption of zinc II from aqueous solution by impregnated with hydrochloric acid sunflower pulp**  
 ÖNAL E., YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., ÖZBAY N., GÖK Ö.  
 Journal of Selcuk University Natural and Applied Science, pp.606-64, 2013 (Peer-Reviewed Journal)
- IX. **The Effect of Different Operating Conditions on Removal of Reactive Dye by Green Carbon Adsorption**  
 YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., ÖZBAY N., ÖNAL E.  
 Journal of Selcuk University Natural and Applied Science, pp.498-510, 2013 (Peer-Reviewed Journal)
- X. **Biosorption Of Zinc II From Aqueous Solution By Impregnated With Hydrochloric Acid Sunflower Pulp**  
 PEHLİVAN E., YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., ÖZBAY N., GÖK Ö.  
 Journal of Selcuk University Natural and Applied Science, vol.594, no.605, 2013 (Peer-Reviewed Journal)
- XI. **Removal Of Co II By Adsorption Using Activated Carbon Prepared From Tomato Waste Effect Of Carbonization Temperature**  
 YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., ÖZBAY N., PEHLİVAN E.  
 Journal of Selcuk University Natural and Applied Science, pp.594-605, 2013 (Peer-Reviewed Journal)
- XII. **Removal of Co II by adsorption using activated carbon prepared from tomato waste Effect of carbonization temperature**  
 YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., ÖNAL E., ÖZBAY N.  
 Journal of Selcuk University Natural and Applied Science, pp.594-605, 2013 (Peer-Reviewed Journal)
- XIII. **Türkiye de Yenilenebilir Enerji Kaynakları Potansiyeli ve Geleceği**  
 PEHLİVAN E., YARBAY ŞAHİN R. Z.  
 İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, vol.18, pp.77-96, 2010 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Solid Oxide Fuel Cells: Towards a Sustainable Energy Future**  
 YARBAY ŞAHİN R. Z., ATILGAN TÜRKMEN B.  
 in: Scientific Developments for Natural and Engineering Sciences, Doç. Dr. Selmin Ener Rüsen, Editor, Duvar Kitabevi, pp.233-246, 2021
- II. **Solid Oxide Fuel Cells: Towards a Sustainable Energy Future**  
 YARBAY ŞAHİN R. Z., ATILGAN TÜRKMEN B.  
 in: Scientific Developments for Natural and Engineering Sciences, Doç. Dr. Selmin Ener Rüsen, Editor, Duvar Publishing, İzmir, pp.235-245, 2021
- III. **INFLUENCE OF CITRIC ACID AS PORE MODULATING AGENT ON PEROVSKITE A-SITE CO-SUBSTITUTION**  
 YARBAY ŞAHİN R. Z.  
 in: Academic Studies in Engineering Sciences, Özdemir, Yavuz, Editor, Duvar Publishing, İzmir, pp.169-184, 2021
- IV. **Research on the Pyrolysis Characteristics of Tomato Waste With Fe-Al<sub>2</sub>O<sub>3</sub> Catalyst**  
 ÖZBAY N., YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., YAMAN E.  
 in: Exergetic, Energetic and Environmental Dimensions, Ibrahim Dincer Can Ozgur Colpan Onder Kizilkan, Editor, Academic Press , pp.815-828, 2018
- V. **Performance Evaluation of the Bio-char Heavy Metal Removal Produced from Tomato Factory Waste**  
 PEHLİVAN E., ÖZBAY N., YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., GÖK Ö.  
 in: Progress in Exergy, Energy and the Environment, Dinçer İbrahim, Midilli Adnan, Küçük Haydar, Editor, Springer International Publishing, pp.733-740, 2014
- VI. **Book part:III, Chapter:70, Performance Evaluation of the Bio-char Heavy Metal Removal Produced from Tomato Factory Waste**  
 ÖNAL E., ÖZBAY N., YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., GÖK Ö.  
 in: Progress in Exergy Energy and the Environment, Dincer Ibrahim, Midilli Adnan, Kucuk Haydar, Editor, Springer

## Refereed Congress / Symposium Publications in Proceedings

- I. **Modeling of Remazol Red 120 Dye Removal Performance Using Artificial Neural Networks**  
MARTTİN V., YARBAY R. Z.  
III. INTERNATIONAL ARTIFICIAL INTELLIGENCE AND DATA SCIENCE CONGRESS(ICADA2023), İzmir, Turkey, 28 July 2023, pp.15
- II. **Seramik Sektöründe Yalın Üretim Teknikleri**  
ORDU O., YARBAY R. Z.  
4th International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 10 - 13 November 2022, pp.929-935
- III. **The Effect of Acid Pre-Treatments on Biomass Pyrolysis**  
Pehlivan E., Fetullayev E.  
International Symposium Energy Management and Sustainability 2022 (ISEMAS 2022), 2 - 08 April 2022
- IV. **EVALUATION OF COFFEE WASTES AS RENEWABLE ENERGY SOURCE**  
YARBAY ŞAHİN R. Z.  
Uluslararası Anadolu Kahve ve Kakao Kongresi, Malatya, Turkey, 3 - 05 December 2021
- V. **Sentez Yönteminin SrFeO<sub>3</sub> Perovskit Oksit Üzerindeki Etkisi**  
YARBAY ŞAHİN R. Z.  
33. Ulusal Kimya Kongresi, Tekirdağ, Turkey, 7 - 09 October 2021
- VI. **ALTI SIGMA UYGULAMALARI**  
Metin M., YARBAY ŞAHİN R. Z.  
5. Geleceğin Mühendisleri Uluslararası Öğrenci Sempozyumu, Zonguldak, Turkey, 09 July 2021
- VII. **TÜRKİYE'DE HİDROJEN ENERJİSİ VE GELECEĞİ**  
Önder F., YARBAY ŞAHİN R. Z.  
5. Geleceğin Mühendisleri Uluslararası Öğrenci Sempozyumu, Zonguldak, Turkey, 09 July 2021
- VIII. **An overview of the application of artificial intelligence-based approaches in biomass-related areas**  
YARBAY ŞAHİN R. Z.  
Bilim Günleri 7, İstanbul, Turkey, 05 May 2021
- IX. **Sustainability Aspects of Solid Oxide Fuel Cells**  
YARBAY ŞAHİN R. Z., ATILGAN TÜRKmen B.  
II. INTERNATIONAL AGRICULTURAL, BIOLOGICAL & LIFE SCIENCE CONFERENCE - AGBIOL, Turkey, 01 September 2020
- X. **Pyrolysis of avocado seed as an approach for bio-waste utilising**  
YARBAY ŞAHİN R. Z., ÖRENAY O., DOLAŞ Y., YARGIÇ A. Ş., ÖZBAY N.  
II. INTERNATIONAL AGRICULTURAL, BIOLOGICAL & LIFE SCIENCE CONFERENCE (E-AGBIOL 2020), Edirne, Turkey, 1 - 03 September 2020
- XI. **AN OVERVIEW OF PYROLYSIS CAPABILITIES OF MESOPOROUS CATALYSTS**  
YARBAY ŞAHİN R. Z.  
3. ULUSLARARASI BİLİM, TEKNOLOJİ VE SOSYAL BİLİMLERDE GÜNCEL GELİŞMELER SEMPOZYUMU, 19 - 20 June 2020
- XII. **Synthesis Method and Calcination Temperature Effects on LaAlO<sub>3</sub> Perovskite Type Catalyst**  
YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., ÖZBAY N.  
Bilge Kagan 2. International Science Congress, Barcelona, Spain, 5 - 07 November 2019
- XIII. **Bio-oil as an alternative solvent for biomass liquefaction: influence of solvent ratio**  
YARGIÇ A. Ş., ÖZBAY N., YARBAY ŞAHİN R. Z.  
FIRST INTERNATIONAL BALKAN CHEMISTRY CONGRESS, 17 - 19 September 2018
- XIV. **Domates Küspesinden Katalitik Piroliz Yöntemi ile Fenolik Hidrokarbonlarca Zengin Değerli Kimyasalların Üretilmesi**

- ÖZBAY N., YAMAN E., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z.  
2. Ulusal Karbon Konferansı, Turkey, 16 - 17 March 2018
- XV. **IMPROVING THE QUALITY OF BIOMASS FOR RENEWABLE SOLID FUEL**  
ÖZBAY N., YAMAN E., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z.  
Uluslararası Sağlık ve Çevre Kongresi (USCEK-2017), 23 - 25 October 2017
- XVI. **PRODUCTION OF CARBON SUPPORTED CATALYST FROM RENEWABLE BIOMASS**  
YAMAN E., ÖZBAY N., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z.  
Uluslararası Sağlık ve Çevre Kongresi (USCEK-2017), 23 - 25 October 2017
- XVII. **Production of Carbon Supported Catalyst From Renewable Biomass Resource**  
YAMAN E., ÖZBAY N., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z.  
International Congress of Health and Environment, 23 - 25 October 2017
- XVIII. **Application of factorial design to optimize the process variables for tomato waste pyrolysis**  
ÖZBAY N., YARBAY ŞAHİN R. Z., YARGIÇ A.Ş., YAMAN E., PEHLİVAN E.  
The 12th Conference on Sustainable Development of Energy, Water and Environment Systems – 12thSDEWES, 4 - 08 August 2017
- XIX. **Process optimization studies of Pr Red Hegxl dye biosorption onto daphne seed using factorial design**  
YARGIÇ A.Ş., YARBAY ŞAHİN R. Z., YAMAN E., ÖZBAY N.  
The 12th Conference on Sustainable Development of Energy, Water and Environment Systems – 12thSDEWES, 4 - 08 August 2017
- XX. **Synthesis of cobalt loaded biochar from spruce sawdust as catalyst in the hydrothermal liquefaction process of peapod**  
YAMAN E., ÖZBAY N., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z., BAŞOĞLU M.  
The 12th Conference on Sustainable Development of Energy, Water and Environment Systems – 12thSDEWES, Dubrovnik, Croatia, 4 - 08 August 2017
- XXI. **Preparation and characterization of LaMnO<sub>3</sub> and LaNiO<sub>3</sub> perovskite type oxides by the hydrothermal synthesis method**  
ÖZBAY N., YARBAY R. Z.  
6th International Advances in Applied Physics and Materials Science Congress and Exhibition, APMAS 2016, İstanbul, Turkey, 1 - 03 June 2016, vol.1809
- XXII. **Characteristics of Pyrolysis Bio Chars Derived From Cherry Pulp**  
PEHLİVAN E., YARGIÇ A.Ş., ÖZBAY N., YARBAY ŞAHİN R. Z.  
2nd South East Europe Conference on Sustainable Development of Energy Water and Environment Systems (SDEWES) (2nd SEE SDEWES), Piran, Slovenia, 15 - 18 June 2016
- XXIII. **Production of upgraded bio oils by biomass catalytic pyrolysis using low cost food industry waste**  
ÖZBAY N., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z., YAMAN E.  
8th International Exergy, Energy and Environment Symposium (IEEES-8), Antalya, Turkey, 1 - 04 May 2016
- XXIV. **Characterization of bio oil obtained from a food industry waste pyrolysis**  
ÖZBAY N., YAMAN E., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z.  
8th International Exergy, Energy and Environment Symposium (IEEES-8), Antalya, Turkey, 1 - 04 May 2016
- XXV. **Synthesis and Characterization of Perovskite Catalystand Its Catalytic Activity in Pyrolysis**  
ÖZBAY N., YARBAY ŞAHİN R. Z.  
NCC6 - 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016
- XXVI. **Synthesis and Characterization of Activated Carbons from Tomato Waste Solanum Lycopersicum by Chemical Activation with K<sub>2</sub>CO<sub>3</sub> and KOH**  
ÖZBAY N., YARGIÇ A.Ş., YARBAY ŞAHİN R. Z.  
The Annual World Conference on Carbon-CARBON 2015, Dresden, Germany, 12 - 17 July 2015
- XXVII. **Kinetic and Thermodynamic Studies for the Biosorption of Lead II by HCl Modified Sunflower Pulp**  
YARGIÇ A.Ş., YARBAY ŞAHİN R. Z., ÖNAL E., ÖZBAY N., Baştar F., ÖZDEMİR H.  
2nd International Conference on Environmental Science and Technology-2014 (ICOEST'2014-Side), 14 - 17 May 2014

- XXVIII. **Use of Fenton Reagent in the Degradation of Reactive Turquoise in Aqueous Medium**  
ÖZBAY N., YARGIÇ A. Ş., ÖNAL E., YARBAY ŞAHİN R. Z., KARA Y.  
the 2nd International Conference on Environmental Science and Technology-2014 (ICOEST'2014-Side), Antalya, Turkey, 14 - 17 May 2014, pp.838-848
- XXIX. **Equilibrium Kinetic and Thermodynamic Studies for the Biosorption of Lead(II) by HCl Modified Sunflower Pulp**  
YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., ÖNAL E., ÖZBAY N.  
the 2nd International Conference on Environmental Science and Technology-2014 (ICOEST'2014-Side), Antalya, Turkey, 14 - 17 May 2014
- XXX. **Influence of Preparation Method on Structure of Cu Al<sub>2</sub>O<sub>3</sub> Catalyst for Biomass Pyrolysis**  
ÖZBAY N., YARBAY ŞAHİN R. Z., ÖNAL E., YARGIÇ A. Ş., ÇELİK İ.  
National Catalysis Conference-5 (NCC-5), Turkey, 23 - 26 April 2014
- XXXI. **Decolorization of the Reactive Dye Remazol Yellow by Fenton and Photo Fenton Oxidation Processes**  
ÖZBAY N., YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., GÖZÜKİZİL M. F.  
National Catalysis Conference-5 (NCC-5), Turkey, 23 - 26 April 2014
- XXXII. **Assessment of Toxic Cu(II) Biosorption from Aqueous Solution by Chemically-Treated Tomato Waste (*Solanum Lycopersicum*)**  
YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., ÖZBAY N., PEHLİVAN E.  
The 8th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference-2013, Dubrovnik, Croatia, 22 September 2013
- XXXIII. **Sugar Beet Pulp Activated Carbon: Synthesis, Characterization, and Application for the Removal of Phenol from Aqueous Solution**  
YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., ÖZBAY N., PEHLİVAN E.  
The 8th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference-2013, Dubrovnik, Croatia, 22 - 27 September 2013
- XXXIV. **Production Chemically Activated Carbon From Industrial Waste Material and Its Adsorption Behavior In The Dye Removal**  
PEHLİVAN E., ÖZBAY N., YARBAY ŞAHİN R. Z., YARGIÇ A. Ş.  
1st International Porous and Powder Materials Symposium and Exhibition, PPM 2013, İzmir, Turkey, 3 - 06 September 2013
- XXXV. **Preparation and Characterization of Activated Carbons Derived From Tomato Waste**  
YARBAY ŞAHİN R. Z., ÖZBAY N., PEHLİVAN E., YARGIÇ A. Ş.  
1st International Porous and Powder Materials Symposium and Exhibition, PPM 2013, İzmir, Turkey, 3 - 06 September 2013
- XXXVI. **The Synthesis and Characterization of Ni/SiO<sub>2</sub> Catalysts by Sol-Gel Method Effect of Metal Loading**  
YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., ÖZBAY N., PEHLİVAN E.  
1st International Porous and Powder Materials Symposium and Exhibition, PPM 2013, İzmir, Turkey, 3 - 06 September 2013
- XXXVII. **Performance Evaluation of the Bio-Char Heavy Metal Removal Produced from Tomato Factory Waste**  
PEHLİVAN E., ÖZBAY N., YARGIÇ A. Ş., YARBAY ŞAHİN R. Z., GÖK Ö.  
The Sixth International Exergy, Energy and Environment Symposium (IEEES6), Rize, Turkey, 1 - 04 July 2013
- XXXVIII. **Biosorption of Zinc(II) from Aqueous Solution by Impregnated with Hydrochloric Acid Sunflower Pulp**  
PEHLİVAN E., YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., ÖZBAY N., GÖK Ö.  
International Conference on Environmental Science and Technology-2013 (ICOEST'2013-Cappadocia), Nevşehir, Turkey, 18 - 21 June 2013
- XXXIX. **Removal of Co (II) by Adsorption Using Activated Carbon Prepared from Tomato Waste: Effect of Carbonization Temperature**  
YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., PEHLİVAN E., ÖZBAY N.  
International Conference on Environmental Science and Technology-2013 (ICOEST'2013-Cappadocia), Nevşehir, Turkey, 18 - 21 June 2013

- XL. **The Effect of Different Operating Conditions on Removal of Reactive Dye by Green Carbon Adsorption**  
**YARGIÇ A. Ş., ÖZBAY N., YARBAY ŞAHİN R. Z., PEHLİVAN E.**  
International Conference on Environmental Science and Technology-2013 (ICOEST'2013-Cappadocia), Nevşehir, Turkey, 18 - 21 June 2013
- XLI. **Fabrika Domates Atığından Üretilen Aktif Karbon İle Sulu Çözeltilerden Cu(II) Metalinin Adsorpsiyonu**  
**PEHLİVAN E., ÖZBAY N., YARBAY ŞAHİN R. Z., YARGIÇ A. Ş.**  
26. Ulusal Kimya Kongresi, Turkey, 1 - 06 October 2012
- XLII. **Şeker Pancarı Küspesinden Düşük Sıcaklıkta Elde Edilen Katı Ürün Kullanılarak Fenol Gideriminin Araştırılması**  
**ÖZBAY N., PEHLİVAN E., YARGIÇ A. Ş., YARBAY ŞAHİN R. Z.**  
26. Ulusal Kimya Kongresi, Fethiye, Turkey, 1 - 06 October 2012
- XLIII. **Three main thermochemical processes to produce fuel from cotton: A review**  
**ÖZBAY N., YARGIÇ A. Ş., PEHLİVAN E., YARBAY ŞAHİN R. Z.**  
EWRES - European Workshop on Renewable Energy Systems, Antalya, Turkey, 17 - 28 September 2012
- XLIV. **Almond shell as a biomass material**  
**PEHLİVAN E., YARBAY ŞAHİN R. Z., ÖZBAY N., YARGIÇ A. Ş.**  
EWRES - European Workshop on Renewable Energy Systems, Antalya, Turkey, 17 - 28 September 2012
- XLV. **Synthesis and Characterization of LaxMe<sub>1-x</sub>Co<sub>0.3</sub> Catalyst Prepared by Sol Gel Method**  
**YARBAY ŞAHİN R. Z., FİGEN H. E., BAYKARA Z. S.**  
4th National Catalysis Conference (NCC-4), Turkey, 21 - 24 March 2012
- XLVI. **Partial Substitution of Lanthanum with Silver and Strontium in the LaNiO<sub>3</sub> Perovskite Effect of the Preparation Method**  
**YARBAY ŞAHİN R. Z., BAYKARA Z. S.**  
Energy Challenges for Advanced Materials and Processes: Harvesting, Storage and Efficient Utilization" (EnCAMP 2011), Turkey, 25 - 29 May 2011
- XLVII. **Renewable energy sources and policies in Turkey**  
**YARBAY ŞAHİN R. Z., YARGIÇ A. Ş., YAMAN E.**  
6TH INTERNATIONAL ADVANCED TECHNOLOGIES SYMPOSIUM (IATS'11), 16 - 18 May 2011, pp.185-190
- XLVIII. **Biomass Energy in Turkey**  
**PEHLİVAN E., YARBAY ŞAHİN R. Z.**  
10th International Conference on Clean Energy (ICCE-2010), Turkey, 15 - 17 September 2010

## Supported Projects

- ATALAY GENGEÇ N., YARBAY R. Z., Dış Uyaranlara Duyarlı Grafen ve Grafen Bazlı Kaygan Sıvı Emdirilmiş Gözenekli Yüzyelerin (Slips) Üretimi ve Akıllı Malzeme Performanslarının Belirlenmesi, 2021 - Continues
- YARBAY R. Z., KURAJİCA S., TOMAŞİC V., KOSAR V., DUPLANCİC M., ZELİC I. E., Project Supported by Higher Education Institutions, Görünür Işık Altında Gelişmiş Verimliliğe Sahip Mezogözenekli Fotokatalizörlerin Geliştirilmesi, 2022 - 2023
- Gündüz Meriç G., Yargıç A. Ş., Yarbay R. Z., Project Supported by Higher Education Institutions, Kobalt Katkısının Nikel İçerikli KIT-6 Katalizörleri Üzerindeki Etkisinin Araştırılması, 2022 - 2023
- YARBAY R. Z., Project Supported by Higher Education Institutions, LaAl(1-x)Fe<sub>x</sub>O<sub>3</sub> (x= 0,25, 0,5, 0,75) perovskit tipi malzemelerin yükseltgenme ve indirgeme davranışlarının araştırılması, 2021 - 2022
- Yargıç A. Ş., Gündüz Meriç G., Yarbay R. Z., Özbay N., Project Supported by Higher Education Institutions, Biyo-Esaslı Karbon Köpüklerin Gaz ve Sıvı Sistemlerinde Adsorban Olarak Değerlendirilmesi, 2020 - 2021
- Özbay N., Yargıç A. Ş., Yaman E., Yarbay R. Z., Project Supported by Higher Education Institutions, Biyoçarın Lityum-İyon Pillerde Anot Malzemesi Olarak İncelenmesi, 2019 - 2021
- YARGIÇ A. Ş., YARBAY R. Z., ÖZBAY N., Project Supported by Higher Education Institutions, Biyokütle Pirolizi İçin Aluminyum ve Demir Esaslı Katalizörlerin Sentezi ve Karakterizasyonu, 2018 - 2021

YARGIÇ A. Ş., YARBAY R. Z., ÖZBAY N., Project Supported by Higher Education Institutions, Solvolitik Sıvılaştırma Reaksiyonu ile Biyokütleden Karbon Köpük Üretimeinin Araştırılması, 2018 - 2020

YARBAY R. Z., Biofuels Research Infrastructure for Sharing Knowledge II, 2018 - 2018

YAMAN E., YARBAY R. Z., YARGIÇ A. Ş., ÖZBAY N., Project Supported by Higher Education Institutions, Lignoselülozik biyokütlemin iyileştirilmesi için ön işlemlerin geliştirilmesi, 2017 - 2018

Özbay N., Yargıcı A. Ş., Yarbay R. Z., Pehlivan E., Project Supported by Higher Education Institutions, Alümina Destekli Metal Katalizörlerin Sentezi ve Katalitik Pirolizde Uygulanabilirliğinin Araştırılması, 2015 - 2017

Özbay N., Yargıcı A. Ş., Yarbay R. Z., Project Supported by Higher Education Institutions, Al SBA 15 Tipi Katalizörlerin Sentezi Karakterizasyonu ve Katalitik Pirolizde Kullanılması, 2014 - 2016

YARGIÇ A. Ş., ÖZBAY N., YARBAY R. Z., Project Supported by Higher Education Institutions, Biyokütleden hızlı piroliz yöntemiyle sentetik yakıt eldesi ve piroliz parametrelerinin etkisi 2013, 2012 - 2014

YARGIÇ A. Ş., ÖZBAY N., YARBAY R. Z., Project Supported by Higher Education Institutions, Gıda fabrikası atıklarından yavaş piroliz yöntemi ile sentetik yakıt üretiminin araştırılması ve ürünlerin karakterizasyonu, 2012 - 2014

TÜRKYILMAZ T., TÜRKYILMAZ S., KARAKURT C., DANDIL S., YARGIÇ A. Ş., YARBAY R. Z., URAL N., KAZAK ÇERÇEVİK N., YALÇIN N., YAMIK H., et al., TUBITAK Project, Mühendislik Bilim Okulu, 2012 - 2013

YARBAY R. Z., Project Supported by Higher Education Institutions, Muhtelif Yakıtlı Düşük Emisyonlu Yakıt İşlemci Geliştirilmesi ve Seyir Hali Koşullarında Denenmesi YTU BAPK Projesi, 2007 - 2012