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### Education Information

Post Doctorate, Ontario Tech University, Clean Energy Research Laboratory, Faculty of Engineering and Applied Science, Canada 2024 - Continues

Doctorate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Kimya/Analitik Kimya, Turkey 2013 - 2018

Postgraduate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Kimya/Analitik Kimya, Turkey 2011 - 2013

Associate Degree, Anadolu University, Open Education Faculty, Department Of Foreign Trade, Turkey 2009 - 2012

Undergraduate, Anadolu University, Fen Edebiyat Fakültesi, Kimya, Turkey 2005 - 2010

### Dissertations

Doctorate, Elektrokimyasal Grafen Elektrot Sentezi ve Vanadyum Redoks Akışkan Batarya Sistemlerinde Kullanımının Araştırılması, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Kimya/Analitik Kimya, 2018

Postgraduate, L- Tirozin' in Magnezyum ve Alüminyum Komplekslerinin Sentezi, Karakterizasyonu ve Potansiyometrik Oluşum Sabitlerinin Tayini, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Kimya/Analitik Kimya, 2013

### Research Areas

Energy storage technologies, Chemical and Electrochemical Properties, Material Characterization, Nanomaterials, Analytical Chemistry, Electromagnetic Methods, Electrochemistry, nanocomposites

### Academic Titles / Tasks

Lecturer PhD, Yıldız Technical University, Rectorate, Rectorate, 2017 - Continues

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

- I. **A new approach to prepare N-/S-doped free-standing graphene oxides for vanadium redox flow battery**  
Ersozoglu M. G., Gürsu H., Gençten M., Sarac A. S., Şahin Y.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.14, pp.19992-20003, 2022 (SCI-Expanded)
- II. **Supercapacitor Applications of Novel Phosphorus Doped Graphene-Based Electrodes**  
Arvas M. B., Gürsu H., Gençten M., Şahin Y.  
JOURNAL OF ENERGY STORAGE, vol.55, pp.105766, 2022 (SCI-Expanded)
- III. **Preparation of sulfur-doped graphenes by Yucel's method and their corresponding polylactide-based nanocomposites**  
Kahraman Y., Gürsu H., Arvas M. B., Ersozoglu M. G., Nofar M., Sarac A. S., Şahin Y.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.139, no.36, 2022 (SCI-Expanded)
- IV. **Single Step Electrochemical Semi-Exfoliated S-Doped Graphene-Like Structures from Commercial Carbon Fiber as Efficient Metal-Free Catalyst for Hydrogen Evolution Reaction**  
Ersozoglu M. G., Gürsu H., Gumrukcu S., Sarac A., Şahin Y.  
CHEMELECTROCHEM, vol.9, no.2, pp.1-11, 2022 (SCI-Expanded)
- V. **New Approach Synthesis of S, N Co-Doped Graphenes for High-Performance Supercapacitors**  
Arvas M. B., Gürsu H., Gençten M., Şahin Y.  
CHEMISTRYSELECT, vol.7, no.21, 2022 (SCI-Expanded)
- VI. **Polypyrrole doped graphene nanocomposites as advanced positive electrodes for vanadium redox flow battery**  
Gürsu H., Ersozoglu M. G., Sarac A. S., Şahin Y.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.33, no.18, pp.14754-14771, 2022 (SCI-Expanded)
- VII. **Production of chlorine-containing functional group doped graphene powders using Yucel's method as anode materials for Li-ion batteries**  
GÜRSU H., Guner Y., ARVAS M. B., Dermenci K. B., Savaci U., GENÇTEN M., Turan S., ŞAHİN Y.  
RSC ADVANCES, vol.11, no.63, pp.40059-40071, 2021 (SCI-Expanded)
- VIII. **Manipulating cell behavior on a bacterial macro-polymer poly (3-hydroxybutyrate-co-3-hydroxyhexanoate) via tuning the S-doped graphene ratio**  
Yildirim M. A., DEMİRBİLEK M., GÜRSU H., ŞAHİN Y., TÜRKOĞLU N.  
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.182, pp.2076-2086, 2021 (SCI-Expanded)
- IX. **Synthesis of Phosphorus Doped Graphenes via the Yucel's Method as the Positive Electrode of a Vanadium Redox Flow Battery**  
Gürsu H., Gençten M., Şahin Y.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.168, no.6, 2021 (SCI-Expanded)
- X. **Preparation of different heteroatom doped graphene oxide based electrodes by electrochemical method and their supercapacitor applications**  
ARVAS M. B., GÜRSU H., GENÇTEN M., ŞAHİN Y.  
Journal of Energy Storage, vol.35, 2021 (SCI-Expanded)
- XI. **A green approach to fabricate binder-free S-doped graphene oxide electrodes for vanadium redox battery**  
Ersozoglu M. G., Gürsu H., Gençten M., Sarac A. S., Şahin Y.  
International Journal of Energy Research, vol.45, no.2, pp.2126-2137, 2021 (SCI-Expanded)
- XII. **A novel green and one-step electrochemical method for production of sulfur-doped graphene powders and their performance as an anode in Li-ion battery**  
GÜRSU H., Guner Y., Dermenci K. B., GENÇTEN M., Savaci U., Turan S., ŞAHİN Y.  
IONICS, vol.26, no.10, pp.4909-4919, 2020 (SCI-Expanded)
- XIII. **Preparation of N-doped graphene powders by cyclic voltammetry and a potential application of them: Anode materials of Li-ion batteries**  
GÜRSU H., Güner Y., Dermenci K. B., GENÇTEN M., Buluç A. F., Savaci U., Turan S., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.43, no.10, pp.5346-5354, 2019 (SCI-Expanded)

- XIV. **Cyclic voltammetric preparation of graphene-coated electrodes for positive electrode materials of vanadium redox flow battery**  
GÜRSU H., GENÇTEN M., ŞAHİN Y.  
IONICS, vol.24, no.11, pp.3641-3654, 2018 (SCI-Expanded)
- XV. **Preparation of N-doped graphene-based electrode via electrochemical method and its application in vanadium redox flow battery**  
Gursu H., GENÇTEN M., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.42, no.12, pp.3851-3860, 2018 (SCI-Expanded)
- XVI. **Electrochemical formation of molybdenum phosphate on a pencil graphite electrode and its potential application for the detection of phosphate ions**  
ARVAS M. B., GÜRSU H., GENÇTEN M., ŞAHİN Y.  
ANALYTICAL METHODS, vol.10, no.35, pp.4282-4291, 2018 (SCI-Expanded)
- XVII. **Novel chlorine doped graphene electrodes for positive electrodes of a vanadium redox flow battery**  
GÜRSU H., GENÇTEN M., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.42, no.10, pp.3303-3314, 2018 (SCI-Expanded)
- XVIII. **Preparation of Sulphur-Doped Graphene-Based Electrodes by Cyclic Voltammetry: A Potential Application for Vanadium Redox Flow Battery**  
GÜRSU H., Gencten M., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF ELECTROCHEMICAL SCIENCE, vol.13, no.1, pp.875-885, 2018 (SCI-Expanded)
- XIX. **Anti-precipitation effects of TiO<sub>2</sub> and TiOSO<sub>4</sub> on positive electrolyte of vanadium redox battery**  
Gencten M., GÜRSU H., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.40, pp.25608-25618, 2017 (SCI-Expanded)
- XX. **Effect of alpha- and gamma-alumina on the precipitation of positive electrolyte in vanadium redox battery**  
Gencten M., GÜRSU H., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.40, pp.25598-25607, 2017 (SCI-Expanded)
- XXI. **One-step electrochemical preparation of graphene-coated pencil graphite electrodes by cyclic voltammetry and their application in vanadium redox batteries**  
Gürsu H., Gencten M., Sahin Y.  
ELECTROCHIMICA ACTA, vol.243, pp.239-249, 2017 (SCI-Expanded)
- XXII. **Highly Sensitive Electrochemical Determination of Dopamine with an Overoxidized Polypyrrole Nanofiber Pencil Graphite Electrode**  
Koyun O., GÜRSU H., GÖRDÜK S., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF ELECTROCHEMICAL SCIENCE, vol.12, no.7, pp.6428-6444, 2017 (SCI-Expanded)
- XXIII. **Electrochemical investigation of the effects of V(V) and sulfuric acid concentrations on positive electrolyte for vanadium redox flow battery**  
Gencten M., GÜRSU H., ŞAHİN Y.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.23, pp.9868-9875, 2016 (SCI-Expanded)

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

- I. **SYNTHESIS OF COBALT-BASED ELECTROCATALYSTS VIA ELECTROCHEMICAL METHODS AND INVESTIGATION OF THEIR EFFECTS ON HYDROGEN EVOLUTION REACTION**  
Gürsu H.  
12th Global Conference on Global Warming (GCGW-2024), Şanlıurfa, Turkey, 16 - 19 May 2024, pp.620-622
- II. **Electroplated Copper-Based Electrodes: A Performance Investigation**  
Kuyumcu Z., Gürsu H., Aydın M. İ., Dincer İ.  
IHTEC 2024: The 8th International Hydrogen Technologies Congress, Diyarbakır, Turkey, 12 - 15 May 2024, pp.656-657
- III. **ECO-FRIENDLY PRODUCTION OF GRAPHENE FIBER AS METAL-FREE ELECTROCATALYST FOR**

## HYDROGEN EVOLUTION REACTION

Ersozoglul M. G., Grsu H., Gumrukcu S., Sarac A. S., Őahin Y.

5th International Hydrogen Technologies Congress, NiĐde, Turkey, 26 - 28 May 2021, pp.212-214

- IV. **Preparation of S-doped graphene oxide based electrodes and supercapacitor applications**  
Arvas M. B., Grsu H., GenĐten M., Őahin Y.  
3. ULUSAL KARBON KONFERANSI, İstanbul, Turkey, 11 - 12 March 2021, pp.1
- V. **A New, Environmentally Friendly, Fast and Highly Efficient Electrochemical Method to Produce Heteroatom-Doped Graphene Electrode and Powder At Room Temperature**  
Őahin Y., Grsu H., GenĐten M.  
3. ULUSAL KARBON KONFERANSI, İstanbul, Turkey, 11 - 12 March 2021, pp.1
- VI. **A Novel Electrochemical Approach for the Preparation of Nitrogen Doped Graphene**  
Grsu H., GenĐten M., Őahin Y.  
INTERNATIONAL MATERIALS TECHNOLOGIES AND METALLURGY CONFERENCE 2019, İstanbul, Turkey, 31 October - 01 November 2019, pp.280
- VII. **Electrochemical Preparation of Sulphur-Doped Graphene Oxide Electrodes and Their Vanadium Redox Battery Application**  
ErszoĐlu M. G., Grsu H., GenĐten M., Őahin Y.  
World Energy Strategies Congress and Exhibition 2019 (WESCE'19), İstanbul, Turkey, 26 - 28 August 2019, pp.1
- VIII. **Boehmite as Inorganic Additive for Positive Electrolyte of Vanadium Redox Battery**  
GENĐTEN M., GRSU H., ŐAHİN Y.  
8TH BLACK SEA BASIN CONFERENCE ON ANALYTICAL CHEMISTRY (8th BBCAC), İstanbul, Turkey, 09 May 2018, pp.1
- IX. **Organic Based Additives for Vanadium Redox Battery Systems**  
GENĐTEN M., GRSU H., ŐAHİN Y.  
8TH BLACK SEA BASIN CONFERENCE ON ANALYTICAL CHEMISTRY (8th BBCAC), İstanbul, Turkey, 09 May 2018, pp.1
- X. **Synthesis of polypyrrole modified graphite based electrodes for vanadium redox battery**  
GRSU H., GENĐTEN M., ŐAHİN Y.  
2nd International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2017), NevŐehir, Turkey, 26 - 28 September 2017
- XI. **Electrochemical investigation the effects of an organic solvent on a VRB**  
GENĐTEN M., GRSU H., ŐAHİN Y.  
2nd International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2017), 26 - 28 September 2017
- XII. **Investigation of over oxidized graphite based electrodes for vanadium redox battery**  
GRSU H., GENĐTEN M., ŐAHİN Y.  
2nd International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2017), NevŐehir, Turkey, 26 - 28 September 2017
- XIII. **A novel inorganic additive for vanadium redox flow battery**  
GENĐTEN M., GRSU H., ŐAHİN Y.  
2nd International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2017), NevŐehir, Turkey, 26 - 28 September 2017
- XIV. **The effects of boroxide on the electrochemical behaviors of a VRB**  
GENĐTEN M., GRSU H., ŐAHİN Y.  
2nd International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2017), NevŐehir, Turkey, 26 - 28 September 2017
- XV. **Electrochemically modified graphite based electrodes at constant potential for positive electrolyte of vanadium redox battery**  
GRSU H., GENĐTEN M., ŐAHİN Y.  
2nd International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2017), NevŐehir, Turkey, 26 - 28 September 2017

- XVI. **THE EFFECT OF ALUMINA ON THE POSITIVE ELECTROLYTE FOR VANADIUM REDOX FLOW BATTERY**  
GENÇTEN M., GÜRSU H., ŞAHİN Y.  
9th International Conference on Sustainable Energy & Environmental Protection (SEEP-2016), Kayseri, Turkey, 22 - 25 September 2016, pp.61-65
- XVII. **THE EFFECTS OF TITANIUM IV OXIDE ON THE ELECTROCHEMICAL BEHAVIORS OF POSITIVE ELECTROLYTE FOR VANADIUM REDOX FLOW BATTERY**  
GENÇTEN M., GÜRSU H., ŞAHİN Y.  
9th International Conference on Sustainable Energy & Environmental Protection (SEEP-2016), Kayseri, Turkey, 22 September - 25 October 2016, pp.66-70
- XVIII. **A Novel Organic Additive Threonine For Positive Electrolyte Of Vanadium Redox Flow Battery**  
GENÇTEN M., GÜRSU H., ŞAHİN Y.  
12th Nanoscience and Nanotechnology Conference (NanoTR-12), Kocaeli, Turkey, 3 - 05 June 2016
- XIX. **Electrochemical Investigation The Effect Of L Lysine for Positive Electrolytes of Vanadium Redox Flow Batteries**  
GÜRSU H., GENÇTEN M., ŞAHİN Y.  
12th Nanoscience and Nanotechnology Conference (NanoTR-12), 3 - 05 June 2016
- XX. **Investigation of the concentration effect of V V ion on vanadium redox battery system by cyclic voltammetric and electrochemical impedimetric methods**  
Gençten M., Gürsu H., Şahin Y.  
Int. Symposium on Materials for Energy Storage and Conversion, mESC-IS 2015, Ankara, Turkey, 7 - 09 September 2015, pp.1
- XXI. **Effect Of The Amino Acid Additives On The Electrochemical Performance Of The Positive Electrolyte For Vanadium Redox Batteries**  
GÜRSU H., GENÇTEN M., ŞAHİN Y.  
ALL IN ONE CONFERENCES, Dubai, United Arab Emirates, 24 March 2015, pp.79
- XXII. **Preparation of Zinc-phthalocyanine Modified Polypyrrole Nanofiber Elektrode**  
GÖRDÜK Ö., GÖRDÜK S., KESKİN B., ŞAHİN Y., GÜRSU H.  
INTERNATIONAL SYMPOSIUM ON MOLECULAR SHEMISTRY (MOLCHEM2014), İstanbul, Turkey, 18 - 19 December 2014, pp.134
- XXIII. **Determination of Dopamine by Overoxidized Nanofiber Structure Polypyrrole Modified Pencil Graphite Electrode**  
GÜRSU H., ŞAHİN Y.  
INTERNATIONAL SYMPOSIUM ON MOLECULAR CHEMISTRY, İstanbul, Turkey, 18 December 2014, pp.57
- XXIV. **L-Tirozin'in Magnezyum Kompleksinin Fotofiziksel Özellikleri**  
GÜRSU H., CANLICA M., KOYUNCU İ., AYTAN KILIÇARSLAN F.  
YTÜ II. Ulusal Nanoteknoloji Kongresi, İstanbul, Turkey, 27 September 2012, pp.1

## Supported Projects

GÜRSU H., YABAN M., ŞAHİN Y., AYDIN M. İ., SORGULU F., Project Supported by Higher Education Institutions, Geçiş Metali Esaslı Yeni Nesil Elektrokatalizörlerin Geliştirilmesi ve Hidrojen Üretim Verimliliği Üzerine Etkisinin Araştırılması, 2024 - Continues

DİNCER İ., JAVANI N., GENÇELİ H., KANTÜRK FİGEN A., SORGULU F., ÖZTÜRK M., AKGÜN İ., ERDEMİR D., AYDIN M. İ., GÜRSU H., Project Supported by Higher Education Institutions, Yeşil Hidrojen Üretim Sisteminin Geliştirilmesi ve Kurulması, 2024 - Continues

ŞAHİN Y., Yüksel Ş., GÜRSU H., Project Supported by Higher Education Institutions, METAL KATKILI KARBON ESASLI MALZEMELERİN SENTEZİ VE ELEKTROKİMYASAL ENERJİ DEPOLAMA SİSTEMLERİNDE PERFORMANSLARININ ARAŞTIRILMASI, 2023 - Continues

GÜRSU H., ŞAHİN Y., CEYLAN ERDOĞAN D., ERSÖZOĞLU M. G., KAHRAMAN Y., Project Supported by Higher Education Institutions, Yenilikçi Karbon Fiber Boyutlandırma Prosesi Tasarımı ve Uygulaması, 2023 - Continues

TUBITAK Project, Development of Innovative Reversible Electrolyzer and Fuel Cell System for Green Hydrogen with Novel Electrocatalysts, 2024 - 2025

Esentürk Güzel İ., Büyükkayhan D., Şahin Y., Döşler S., Gürsu H., Project Supported by Higher Education Institutions, Yenidoğan Göbek Çevresi Enfeksiyonlarına Yönelik Antimikrobiyal İlaç İçeren Topikal Nanolif Formülasyonlarının Geliştirilmesi, 2022 - 2024

GÜRSU H., ŞAHİN Y., ERSÖZOĞLU M. G., Project Supported by Higher Education Institutions, VRFB UYGULAMALARINA YÖNELİK -N VE -S HETEROATOM KATKILI KONTROL EDİLEBİLİR FONKSİYONEL GRUPLAR İÇEREN GRAFEN OKSİT ESASLI ELEKTROT MALZEMELERİNİN GELİŞTİRİLMESİ, 2021 - 2022

GÜRSU H., ŞAHİN Y., Project Supported by Higher Education Institutions, Elektrokimyasal İletken Polimer-Grafen Elektrot Sentezi Karakterizasyonu ve Enerji Uygulamaları, 2020 - 2021

Gürsu H., Gençten M., Şahin Y., Technopark, EMNİYET SUBAPLI KURŞUN ASİT AKÜLER İÇİN JEL KATKI MADDELERİNİN ARAŞTIRILMASI, 2019 - 2020

Gürsu H., Gençten M., Şahin Y., Project Supported by Other Private Institutions, Vanadyum Redoks Akişkan Batarya Sistemleri için Grafen Esaslı Elektrot Malzemelerinin Geliştirilmesi, 2018 - 2019

Gürsu H., Gençten M., Şahin Y., Technopark, Biyolojik Öneme Sahip Bazı Maddelerin Modifiye Edilmiş Grafit Esaslı Elektrot ile Elektrokimyasal Tayini, 2016 - 2017

Şahin Y., Gençten M., Gürsu H., TUBITAK Project, Vanadyum Redoks Bataryaların Performanslarının Arttırılması, 2015 - 2017

Gürsu H., Gençten M., Şahin Y., Industrial Thesis Project, Yenilenebilir Enerji Kaynakları için Vanadyum Redoks Batarya Sistemleri, 2015 - 2016

Şahin Y., Gürsu H., TUBITAK Project, Aşırı Yükseltgenmiş Nanofiber Yapılı Polipirol Modifiye Edilmiş Kalem Grafit Elektrot ile Dopamin Tayini, 2014 - 2015

## Patent

Şahin Y., Gürsu H., Gençten M., ONE-STEP BORON-DOPPED GRAPHENE ELECTRODE PREPARATION METHOD, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2019 08164 , Standard Registration, 2024

Şahin Y., Gürsu H., Gençten M., ONE-STEP METHOD FOR PREPARING SILICON PHOSPHORUS DOPOED GRAPHENE ELECTRODE, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2019 11568 , Standard Registration, 2024

Şahin Y., Gürsu H., Gençten M., TEK BASAMAKTA KLOR KATKILI GRAFEN ELEKTROT ÜRETİMİ İÇİN BİR YÖNTEM, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2019 11558 , Standard Registration, 2024

Şahin Y., Gürsu H., Gördük Ö., Gördük S., A METHOD FOR PRODUCING PHTHALOCYANINE GRAPHENE HYBRID MATERIALS, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: WO/2022/225488 , Standard Registration, 2024

Şahin Y., Gürsu H., Gençten M., TEK BASAMAKTA FOSFOR KATKILI GRAFEN ELEKTROT HAZIRLAMA METODU, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2019 11561 , Standard Registration, 2024

Şahin Y., Gürsu H., Gençten M., A Method for One-Step Production of S-Doped Graphene Electrodes, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 201722931 , Standard Registration, 2024

Şahin Y., Gürsu H., Gençten M., ONE-STEP SILICON-DOPPED GRAPHENE ELECTRODE PREPARATION METHOD, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 201914453 , Standard Registration, 2023

Şahin Y., Yalman V., Gürsu H., Türkoğlu N., GRAFEN KATKILI SELÜLOZ TEMELLİ DAMAR GREFTLERİNİ HAZIRLAMA YÖNTEMİ, Patent, CHAPTER A Human Needs, The Invention Registration Number: 2021 006165 , Standard Registration, 2023

Şahin Y., Gürsu H., BOR BİLEŞİKLERİNDEN DOĞRUDAN HİDROJEN ÜRETİMİ İÇİN ELEKTROKİMYASAL BİR YÖNTEM, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2023/008903 , Standard Registration, 2023

Şahin Y., Gürsu H., Gençten M., ONE-STEP FLUOREADOTED GRAPHENE ELECTRODE PREPARATION METHOD, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 201911564 , Standard Registration, 2023

Şahin Y., Büyükkayhan D., Türkoğlu N., Gürsu H., Esentürk İ., BACTERIAL CELLULOSE BASED UMBILICAL CORD RING, Patent, CHAPTER A Human Needs, The Invention Registration Number: WO 2022/119545 A2 , 2022

Şahin Y., Gürsu H., BOR KARBÜR ÜRETİMİ İÇİN ELEKTROKİMYASAL YÖNTEM, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2022/001420 , Standard Registration, 2022

Şahin Y., Gürsu H., Ersözoğlu M. G., KARBON FİBERLERİN İLERİ MALZEME OLARAK KULLANIMINA YÖNELİK OLARAK ELEKTROKİMYASAL YEŞİL BİR YÜZEY İŞLEME YÖNTEMİ, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2022/011520 , Standard Registration, 2022

Şahin Y., Gürsu H., BOR NİTRÜR ÜRETİMİ İÇİN ELEKTROKİMYASAL YÖNTEM, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2022/001414 , Standard Registration, 2022

Şahin Y., Gençten M., Gürsu H., A METHOD TO PRODUCE GRAPHENE-BASED ELECTRODE, Patent, CHAPTER H Electricity, The Invention Registration Number: 2016 03935 , Standard Registration, 2022

Şahin Y., Gürsu H., Gördük Ö., Gördük S., FTALOSİYANİN GRAFEN HİBRİT MALZEMELERİN ÜRETİMİ İÇİN BİR YÖNTEM, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2021 006873 , Standard Registration, 2022

Gençten M., Şahin Y., Gürsu H., ONE-STEP METHOD FOR PREPARATION OF BORON AND FLUINE DODUCED GRAPHENE ELECTRODE, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: TR 2019 11563 B , Standard Registration, 2020

Şahin Y., Türkoğlu N., Gürsu H., PRODUCTION OF A BIODEGRADABLE WOUND DRESSING COMPRISING GRAPHENE-BASED 2,3 DIALDEHYDE BACTERIAL CELLULOSE, Patent, CHAPTER A Human Needs, The Invention Recourse Number: PCT/TR2020/051079 , Standard Registration, 2020

Şahin Y., Türkoğlu N., Gürsu H., BİYOBOZUNUR, GRAFEN ESASLI 2,3 DİALDEHİT BAKTERİYEL SELÜLOZ İÇEREN YARA ÖRTÜSÜ ÜRETİMİ, Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2020/13979 , Standard Registration, 2020

Şahin Y., Gürsu H., Gençten M., TEK BASAMAKTA KLOR KATKILI GRAFEN ELEKTROT HAZIRLAMA METODU, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2019/11558 , Standard Registration, 2019

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## **Entrepreneurship Activities**

Limited, HMY Kimya Enerji Danışmanlık Sanayi Ve Ticaret Limited Şirketi, 25 May 2015, Co-Founder