

**Asst. Prof. İFFET İŞİL GÜRTEN
İNAL**



Personal Information

Office Phone: [+90 203 344 8](tel:+902033448)

Email: igurten@eng.ankara.edu.tr

Web: <https://avesis.ankara.edu.tr/igurten>

International Researcher IDs

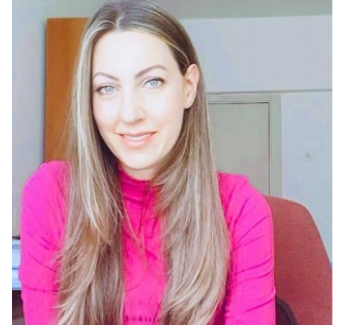
ScholarID: 5IWbuWIAAAAJ

ORCID: 0000-0001-5144-2800

Publons / Web Of Science ResearcherID: AAH-3363-2020

ScopusID: 57215380436

Yoksis Researcher ID: 112900



Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), Turkey
2008 - 2016

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli),
Turkey 2005 - 2008

Undergraduate, Ankara University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü,
Turkey 2001 - 2005

Dissertations

Doctorate, USE OF BIOMASS-BASED ACTIVE CARBONS AS ELECTRODE MATERIALS IN ELECTROCHEMICAL DOUBLE-LAYER CAPACITORS, Ankara University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), 2016

Postgraduate, PRODUCTION OF ADSORBENT FROM WASTE TEA AND INVESTIGATION OF ADSORPTION PROPERTIES OF THE ADSORBENT PRODUCED, Ankara University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli), 2008

Research Areas

Chemical Engineering and Technology, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Ankara University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2021 - Continues

Research Assistant, Ankara University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2005 - 2021

Researcher, The University of Manchester, National Graphene Institute, 2018 - 2018

Researcher, The University of Manchester, School of Chemistry and Analytical Sciences, Department of Chemical Engineering, 2014 - 2015

Academic and Administrative Experience

Adaptation/Exemption Committee Member, Ankara University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2022 - Continues
Fakülte Kurulu Üyesi, Ankara University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2022 - Continues
Anabilim Dalı Akademik Kurul Üyesi, Ankara University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2021 - Continues
Staj Koordinatörü, Ankara University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2021 - Continues

Courses

Chemical Reaction Engineering, Undergraduate, 2022 - 2023
Chemical Engineering Laboratory I, Undergraduate, 2022 - 2023, 2021 - 2022
Chemical Engineering Thermodynamics, Undergraduate, 2023 - 2024
Mass and Energy Balances, Undergraduate, 2023 - 2024, 2022 - 2023
Carbon Materials for Energy Storage and Conversion Systems, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022
Thermodynamics, Undergraduate, 2022 - 2023
Chemical Engineering Laboratory III, Undergraduate, 2021 - 2022
Graduation Thesis, Undergraduate, 2021 - 2022
Mathematical Modelling, Undergraduate, 2021 - 2022

Advising Theses

Gürten İnal İ. I., Development of Modified Carbon Fibers for Potential Applications in Multifunctional, Structural Supercapacitors, Postgraduate, Ş.Nur(Student), Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Improving the rate capability of microporous activated carbon-based supercapacitor electrodes using non-porous graphene oxide**
GÜRTEN İNAL İ. I., Koyuncu F., Perez-Page M.
JOURNAL OF POROUS MATERIALS, vol.30, no.5, pp.1775-1787, 2023 (SCI-Expanded)
- II. **Investigating the surface properties of red pepper industrial waste-based activated carbons for use as reversible supercapacitor electrodes**
Gürten İnal İ. I., Koyuncu F., Güzel F.
DIAMOND AND RELATED MATERIALS, vol.138, pp.110202-110210, 2023 (SCI-Expanded)
- III. **High surface area mesoporous carbon from black cumin (Nigella sativa) processing industry solid residues via single-stage K₂CO₃ assisted carbonization method: Production optimization, characterization and its some water pollutants removal and supercapacitor performance**
Teymur Y. A., Güzel F., GÜRTEN İNAL İ. I.
Diamond and Related Materials, vol.135, 2023 (SCI-Expanded)
- IV. **High surface area and supermicroporous activated carbon from capsicum (Capsicum annuum L.) industrial processing pulp via single-step KOH-catalyzed pyrolysis: Production optimization, characterization and its some water pollutants removal and supercapacitor performance**
Koyuncu F., GÜZEL F., GÜRTEN İNAL İ. I.
DIAMOND AND RELATED MATERIALS, vol.124, 2022 (SCI-Expanded)
- V. **Microcystis aeruginosa supported-Mn catalyst as a new promising supercapacitor electrode: A dual functional material**
GÜRTEN İNAL İ. I., Akdemir M., KAYA M.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.46, no.41, pp.21534-21541, 2021 (SCI-Expanded)

- VI. **Scalable activated carbon/graphene based supercapacitors with improved capacitance retention at high current densities**
GÜRTEN İNAL İ. I.
TURKISH JOURNAL OF CHEMISTRY, vol.45, no.3, pp.927-941, 2021 (SCI-Expanded)
- VII. **Enhancing the performance of activated carbon based scalable supercapacitors by heat treatment**
GÜRTEN İNAL İ. I., AKTAŞ Z.
APPLIED SURFACE SCIENCE, vol.514, 2020 (SCI-Expanded)
- VIII. **Investigation of supercapacitor performance of the biomass based activated carbon modified with nitric acid**
GÜRTEN İNAL İ. I., GÖKÇE Y., YAĞMUR E., AKTAŞ Z.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.35, no.3, pp.1243-1255, 2020 (SCI-Expanded)
- IX. **Examination of gas and solid products during the preparation of activated carbon using phosphoric acid**
YAĞMUR E., GÜRTEN İNAL İ. I., GÖKÇE Y., Ghobadi T. G. U., Aktar T., AKTAŞ Z.
JOURNAL OF ENVIRONMENTAL MANAGEMENT, vol.228, pp.328-335, 2018 (SCI-Expanded)
- X. **The supercapacitor performance of hierarchical porous activated carbon electrodes synthesised from demineralised (waste) cumin plant by microwave pretreatment**
GÜRTEN İNAL İ. I., Holmes S. M., YAĞMUR E., Ermumcu N., Banford A., AKTAŞ Z.
JOURNAL OF INDUSTRIAL AND ENGINEERING CHEMISTRY, vol.61, pp.124-132, 2018 (SCI-Expanded)
- XI. **Enhanced performance based on a hybrid cathode backing layer using a biomass derived activated carbon framework for methanol fuel cells**
Balakrishnan P., GÜRTEN İNAL İ. I., Cooksey E., Banford A., AKTAŞ Z., Holmes S. M.
ELECTROCHIMICA ACTA, vol.251, pp.51-59, 2017 (SCI-Expanded)
- XII. **The performance of supercapacitor electrodes developed from chemically activated carbon produced from waste tea**
GÜRTEN İNAL İ. I., Holmes S. M., Banford A., AKTAŞ Z.
APPLIED SURFACE SCIENCE, vol.357, pp.696-703, 2015 (SCI-Expanded)
- XIII. **Preparation and characterisation of activated carbon from waste tea using K₂CO₃**
Gurten İ. I., Ozmak M., YAĞMUR E., AKTAŞ Z.
BIOMASS & BIOENERGY, vol.37, pp.73-81, 2012 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **GRAPHENE-ENHANCED RATE CAPABILITY OF MICROPOROUS CARBON-BASED SUPERCAPACITORS**
GÜRTEN İNAL İ. I.
International Conference on Studies in Engineering, Science, and Technology (ICSEST), 10 November 2022
- II. **High Performance Electrochemical Double Layer Capacitors Derived from Red Pepper Pulp-Based Microporous Activated Carbons**
GÜRTEN İNAL İ. I., KOYUNCU F.
2nd International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 10 March 2022
- III. **Mikroalg Destekli Pd-Co Katalizörünün Süperkapasitör Elektrot Malzemesi Olarak Kullanılabilirliğinin İncelenmesi**
GÜRTEN İNAL İ. I.
14. Ulusal Kimya Mühendisliği Kongresi, Turkey, 10 June 2021
- IV. **Tailored activated carbons derived from chemically activated waste tea for supercapacitors in both aqueous and organic electrolytes**
Gürten İnal İ. I., Aktaş Z.
International Electrochemistry Congress , İstanbul, Turkey, 30 September - 02 October 2019, pp.1
- V. **Graphene enhanced electrical double layer capacitor developed from a biomass based activated**

carbon

Gürten İnal İ. I.

RSC Functional Organic Materials Symposium, London, England, 24 - 25 September 2019, pp.1

- VI. **Supercapacitive performance of biomass-based activated carbon materials prepared by two step activation procedure**
Gürten İnal İ. I., Aktaş Z.
5th RSC Early Career Symposium, Liverpool, England, 30 - 31 August 2018, pp.1
- VII. **Synthesis, Characterization and Investigation of Electrochemical Behavior of Activated Carbon-Iron Nanoparticle Composite**
Çabuk N., Gökçe Y., Gürten İnal İ. I., Yağmur E., Aktaş Z.
2. Ulusal Karbon Konferansı, İstanbul, Turkey, 16 March 2018
- VIII. **Supercapacitor performance of the activated carbons produced from waste tea and lignite mixtures**
GÜRTEN İNAL İ. I., GÖKÇE Y., YAĞMUR E., AKTAŞ Z.
3rd International Conference Porous and Powder Materials Symposium and Exhibition, 12 - 15 September 2017
- IX. **Waste tea derived activated carbon/polyaniline composites as supercapacitor electrodes**
GÜRTEN İNAL İ. I., GÖKÇE Y., AKTAŞ Z.
5th IEEE International Conference on Renewable Energy Research and Applications (ICRERA), Birmingham, United Kingdom, 20 - 23 November 2016, pp.458-462
- X. **Graphene activated carbon hybrid materials as a catalyst support for low temperature polymer electrolyte fuel cells**
Özdinçer B., Kranthi K M., GÜRTEN İNAL İ. I., AKTAŞ Z., HOLMES S.
Advanced Materials World Congress 2015, 23 - 26 August 2015
- XI. **Activated Carbon prepared from waste tea as anode gas diffusion layer in Direct Methanol fuel cells DMFCs**
Balakrishnan P., GÜRTEN İNAL İ. I., AKTAŞ Z., HOLMES S.
12th International Conference on Materials Chemistry, 20 - 23 July 2015
- XII. **Nitric acid modified activated carbons as electrode materials for supercapacitors**
GÖKÇE Y., GÜRTEN İNAL İ. I., YAĞMUR E., AKTAŞ Z.
12th International Conference on Materials Chemistry (MC12), 20 - 23 July 2015
- XIII. **Evaluation of the use of tomato plant and waste tea based activated carbons as electrode materials for supercapacitors**
GÜRTEN İNAL İ. I., Balakrishnan P., BANFORD A., HOLMES S., AKTAŞ Z.
12th International Conference on Materials Chemistry, 20 July 2016 - 23 July 2015
- XIV. **A Biomass based Activated Carbon as the Cathode Gas Diffusion Layer in Low Temperature Polymer Electrolyte Fuel Cells**
Kranthi Kumar M., Prabhuraj B., GÜRTEN İNAL İ. I., AKTAŞ Z., HOLMES S. M.
Fuel Cell and Hydrogen Technical Conference, 19 - 21 May 2015
- XV. **The usage of the activated carbons developed from waste tea as electrode materials in EDLCs**
Gürten İnal İ. I., Yiğit D., Güllü M., Aktaş Z.
International Participated Electrochemistry Workshop, Muğla, Turkey, 23 - 28 June 2013, pp.1
- XVI. **Preparation and characterisation of activated carbon from dogwood stone with microwave pre-treatment,**
Gürten İnal İ. I., Yağmur E., Aktaş Z.
9th International Symposium on Characterisation of Porous Solids , Dresden, Germany, 5 - 08 June 2011, pp.1
- XVII. **Examination of Adsorptive Behaviour of Activated Carbon from Waste Tea by Chemical Activation with Microwave Energy**
Gürten İnal İ. I., Yağmur E., Aktaş Z.
6th Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean Countries (EMCC-6), Antalya, Turkey, 7 - 13 March 2010, pp.1
- XVIII. **Adsorption of methylene blue from aqueous solution on activated carbon produced from waste tea**
Gürten İnal İ. I., Yağmur E., Aktaş Z.

15th International Symposium on Environmental Pollution and its impact on Life in the Mediterranean Region, MESAEP, Bari, Italy, 7 - 11 November 2009, pp.1

XIX. Microwave pre-treatment in activated carbon production from biomass

Gürten İnâl İ. I., Yağmur E., Aktaş Z.

15th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region, MESAEP, Bari, Italy, 7 - 11 November 2009, pp.1

XX. Preparation and characterization of activated carbon from waste tea by chemical activation with K₂CO₃

Gürten İnâl İ. I., Aktaş Z., Yağmur E.

18th International Congress of Chemical and Process Engineering, Praha, Czech Republic, 24 - 28 August 2008, pp.1

Other Publications

I. Laser-Scribed Planar Microsupercapacitor Developed from a Biomass-Derived Activated Carbon

Gürten İnâl İ. I.

Presentation, pp.82, 2023

II. Development of waste biomass-based activated carbon-coated carbon fibers for potential applications in multifunctional structural supercapacitors

Karademir Ş. N., Gürten İnâl İ. I.

Presentation, pp.220, 2023

Supported Projects

Gürten İnâl İ. I., Project Supported by Higher Education Institutions, Development of Modified Carbon Fibers for Potential Applications in Multifunctional, Structural Supercapacitors, 2023 - 2024

Gürten İnâl İ. I., Ingeç I., Çakır A., TUBITAK Project, Development of Modified Carbon Fibers for Potential Applications in Multifunctional Structural Supercapacitors, 2023 - 2024

Yıldız E., Gürten İnâl İ. I., TUBITAK Project, Production of Nitrogen, Sulfur, Phosphorus-Doped Activated Carbon from Hemp Biomass and Investigation of Its Performance as a Supercapacitor Electrode Material, 2023 - 2024

Gürten İnâl İ. I., Turna L. N., Karcı D., Tümtürk K., TUBITAK Project, Development of Activated Carbon/Graphene Composites for High-Rate Supercapacitors and Characterization of Composite Surfaces with Nano-FTIR, 2023 - 2024

Gürten İnâl İ. I., TUBITAK Project, Scalable, low-cost graphene-enhanced activated carbon based supercapacitors, 2019 - 2020

Yağmur E., Gürten İnâl İ. I., Gökçe Y., Aktaş Z., Project Supported by Higher Education Institutions, The Use of Biomass-Based Activated Carbons as Electrode Materials in Electrochemical Double-Layer Capacitors, 2014 - 2016

Gürten İnâl İ. I., Aktaş Z., TUBITAK Project, Preparation, Characterization, and Adsorption Capacities of Low-Cost, High-Porosity Activated Carbons from Agricultural By-Products, 2010 - 2011

Gürten İnâl İ. I., Aktaş Z., TUBITAK Project, The Effect of Microwave Energy on the Production of Activated Carbon from Tea Factory Waste, 2007 - 2009

Scientific Refereeing

IONICS, SCI Journal, January 2024

FUEL, SCI Journal, September 2023

SCIENTIFIC REPORTS, SCI Journal, May 2023

CERAMICS INTERNATIONAL, SCI Journal, January 2022

Metrics

Publication: 35

Citation (WoS): 526

Citation (Scopus): 599

H-Index (WoS): 10

H-Index (Scopus): 11

Scholarships

SUPPORT FOR INTERNATIONAL SCIENTIFIC EVENTS, University, 2018 - 2018

2214-A - International Research Fellowship Programme for PhD Students, TUBITAK, 2014 - 2015