

Prof. AYŞE EREN PÜTÜN

Personal Information

Email: aeputun@anadolu.edu.tr

Web: <https://avesis.anadolu.edu.tr/aeputun>

Education

Undergraduate, Yildiz Technical University, Kimya-Metalurji Fakültesi, Kimya Mühendisliği Bölümü, Turkey 1968 - 1973

Foreign Languages

English, B2 Upper Intermediate

Academic Positions

Professor, Anadolu University, MÜHENDİSLİK FAKÜLTESİ, KİMYA MÜHENDİSLİĞİ BÖLÜMÜ, 2001 - Continues

Assistant Professor, Anadolu University, FEN FAKÜLTESİ, KİMYA BÖLÜMÜ, 1987 - 1996

Lecturer, Anadolu University, FEN FAKÜLTESİ, KİMYA BÖLÜMÜ, 1984 - 1987

Research Assistant, Anadolu University, ECZACILIK FAKÜLTESİ, TEMEL ECZACILIK BİLİMLERİ BÖLÜMÜ, 1981 - 1984

Supervised Theses

AYŞE EREN P., Pamuk çiğidi pres küspesinin pirolizi ve sıvı ürünlerinin karakterizasyonu, Doctorate, N.ÖZBAY(Student), 1998

Journal articles indexed in SCI, SSCI, and AHCI

- I. **A combined phenomenological artificial neural network approach for determination of pyrolysis and combustion kinetics of polyvinyl chloride**
ÖZSİN G., Takan M. A., Takan A., PÜTÜN A. E.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.12, pp.16959-16978, 2022 (SCI-Expanded)
- II. **An investigation on pyrolysis of textile wastes: Kinetics, thermodynamics, in-situ monitoring of evolved gasses and analysis of the char residue**
ÖZSİN G., PÜTÜN A. E.
JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING, vol.10, no.3, 2022 (SCI-Expanded)
- III. **Pyrolysis of petroleum sludge under non-isothermal conditions: Thermal decomposition behavior, kinetics, thermodynamics, and evolved gas analysis**
ÖZSİN G., Apaydin-Varol E., Kilic M., PÜTÜN A. E., Putun E.
FUEL, vol.300, 2021 (SCI-Expanded)
- IV. **A thermo-kinetic study on co-pyrolysis of oil shale and polyethylene terephthalate using TGA/FT-IR**
ÖZSİN G., Kilic M., Apaydin-Varol E., PÜTÜN A. E., Putun E.
KOREAN JOURNAL OF CHEMICAL ENGINEERING, vol.37, no.11, pp.1888-1898, 2020 (SCI-Expanded)

- V. **Environmental-friendly production of carbon fiber from isotropic hybrid pitches synthesized from waste biomass and polystyrene with ethylene bottom oil**
ÖZSİN G., PÜTÜN A. E., Nakabayashi K., Miyawaki J., Yoon S.
JOURNAL OF CLEANER PRODUCTION, vol.239, 2019 (SCI-Expanded)
- VI. **Investigating the interactions between lignocellulosic biomass and synthetic polymers during co-pyrolysis by simultaneous thermal and spectroscopic methods**
ÖZSİN G., PÜTÜN A. E., Putun E.
BIOMASS CONVERSION AND BIOREFINERY, vol.9, no.3, pp.593-608, 2019 (SCI-Expanded)
- VII. **Chemically activated carbon production from agricultural waste of chickpea and its application for heavy metal adsorption: equilibrium, kinetic, and thermodynamic studies**
ÖZSİN G., KILIÇ M., Apaydin-Varol E., PÜTÜN A. E.
APPLIED WATER SCIENCE, vol.9, no.3, 2019 (SCI-Expanded)
- VIII. **TGA/MS/FT-IR study for kinetic evaluation and evolved gas analysis of a biomass/PVC co-pyrolysis process**
ÖZSİN G., PÜTÜN A. E.
ENERGY CONVERSION AND MANAGEMENT, vol.182, pp.143-153, 2019 (SCI-Expanded)
- IX. **A comparative study on co-pyrolysis of lignocellulosic biomass with polyethylene terephthalate, polystyrene, and polyvinyl chloride: Synergistic effects and product characteristics**
ÖZSİN G., PÜTÜN A. E.
JOURNAL OF CLEANER PRODUCTION, vol.205, pp.1127-1138, 2018 (SCI-Expanded)
- X. **Co-pyrolytic behaviors of biomass and polystyrene: Kinetics, thermodynamics and evolved gas analysis**
ÖZSİN G., PÜTÜN A. E.
KOREAN JOURNAL OF CHEMICAL ENGINEERING, vol.35, no.2, pp.428-437, 2018 (SCI-Expanded)
- XI. **Insights into pyrolysis and co-pyrolysis of biomass and polystyrene: Thermochemical behaviors, kinetics and evolved gas analysis**
ÖZSİN G., PÜTÜN A. E.
ENERGY CONVERSION AND MANAGEMENT, vol.149, pp.675-685, 2017 (SCI-Expanded)
- XII. **Equilibrium, kinetic, and thermodynamic studies of the adsorption of Fe(III) metal ions and 2,4-dichlorophenoxyacetic acid onto biomass-based activated carbon by ZnCl₂ activation**
KIRBIYIK Ç., PÜTÜN A. E., Putun E.
SURFACES AND INTERFACES, vol.8, pp.182-192, 2017 (SCI-Expanded)
- XIII. **Kinetics and evolved gas analysis for pyrolysis of food processing wastes using TGA/MS/FT-IR**
ÖZSİN G., PÜTÜN A. E.
WASTE MANAGEMENT, vol.64, pp.315-326, 2017 (SCI-Expanded)
- XIV. **The effect of pyrolysis atmosphere on bio-oil yields and structure**
ÖNAL E., Uzun B. B., PÜTÜN A. E.
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.14, no.1, pp.1-8, 2017 (SCI-Expanded)
- XV. **Thermal decomposition behavior of tobacco stem Part I: TGA-FTIR-MS analysis**
POLAT S., Apaydin-Varol E., PÜTÜN A. E.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.38, no.20, pp.3065-3072, 2016 (SCI-Expanded)
- XVI. **Comparative studies on adsorptive removal of heavy metal ions by biosorbent, bio-char and activated carbon obtained from low cost agro-residue**
KIRBIYIK Ç., PÜTÜN A. E., Putun E.
WATER SCIENCE AND TECHNOLOGY, vol.73, no.2, pp.423-436, 2016 (SCI-Expanded)
- XVII. **Thermal decomposition behavior of tobacco stem Part II: Kinetic analysis**
POLAT S., Apaydin-Varol E., PÜTÜN A. E.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.38, no.20, pp.3073-3080, 2016 (SCI-Expanded)
- XVIII. **The Evaluation of Mesoporous Materials as Catalyst in Fast Pyrolysis of Wheat Straw**

- ATEŞ F., Tophanecioglu S., PÜTÜN A. E.
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.12, no.1, pp.57-64, 2015 (SCI-Expanded)
- XIX. **A pyrolysis study for the thermal and kinetic characteristics of an agricultural waste with two different plastic wastes**
Cepeliogullar O., PÜTÜN A. E.
WASTE MANAGEMENT & RESEARCH, vol.32, no.10, pp.971-979, 2014 (SCI-Expanded)
- XX. **Bio-oil production via co-pyrolysis of almond shell as biomass and high density polyethylene**
ÖNAL E., Uzun B. B., PÜTÜN A. E.
ENERGY CONVERSION AND MANAGEMENT, vol.78, pp.704-710, 2014 (SCI-Expanded)
- XXI. **Converting of oil shale and biomass into liquid hydrocarbons via pyrolysis**
Kilic M., PÜTÜN A. E., Uzun B. B., Putun E.
ENERGY CONVERSION AND MANAGEMENT, vol.78, pp.461-467, 2014 (SCI-Expanded)
- XXII. **EVALUATION OF FIELD DEBRIS OF CHICKPEA HUSK AS A LOW-COST BIOSORBENT FOR REMOVAL OF METHYLENE BLUE FROM AQUEOUS SOLUTIONS**
KILIÇ M., Cepeliogullar O., ÖZSİN G., Uzun B. B., PÜTÜN A. E.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.29, no.4, pp.717-726, 2014 (SCI-Expanded)
- XXIII. **PYROLYSIS KINETICS AND THERMAL DECOMPOSITION BEHAVIOR OF POLYCARBONATE - a TGA-FTIR study**
Apaydin-Varol E., Polat S., PÜTÜN A. E.
THERMAL SCIENCE, vol.18, no.3, pp.833-842, 2014 (SCI-Expanded)
- XXIV. **Synthetic fuel production from cottonseed: Fast pyrolysis and a TGA/FT-IR/MS study**
Apaydin-Varol E., Uzun B. B., ÖNAL E., PÜTÜN A. E.
JOURNAL OF ANALYTICAL AND APPLIED PYROLYSIS, vol.105, pp.83-90, 2014 (SCI-Expanded)
- XXV. **Thermal and kinetic behaviors of biomass and plastic wastes in co-pyrolysis**
Cepeliogullar O., PÜTÜN A. E.
ENERGY CONVERSION AND MANAGEMENT, vol.75, pp.263-270, 2013 (SCI-Expanded)
- XXVI. **Adsorption of heavy metal ions from aqueous solutions by bio-char, a by-product of pyrolysis**
Kilic M., KIRBIYIK Ç., Cepeliogullar O., PÜTÜN A. E.
APPLIED SURFACE SCIENCE, vol.283, pp.856-862, 2013 (SCI-Expanded)
- XXVII. **Optimization of biodiesel production from castor oil using factorial design**
Kilic M., Uzun B. B., Putun E., PÜTÜN A. E.
FUEL PROCESSING TECHNOLOGY, vol.111, pp.105-110, 2013 (SCI-Expanded)
- XXVIII. **An experimental study on bio-oil production from co-pyrolysis with potato skin and high-density polyethylene (HDPE)**
ÖNAL E., Uzun B. B., PÜTÜN A. E.
FUEL PROCESSING TECHNOLOGY, vol.104, pp.365-370, 2012 (SCI-Expanded)
- XXIX. **Preparation and surface characterization of activated carbons from Euphorbia rigida by chemical activation with ZnCl₂, K₂CO₃, NaOH and H₃PO₄**
Kilic M., Apaydin-Varol E., PÜTÜN A. E.
APPLIED SURFACE SCIENCE, vol.261, pp.247-254, 2012 (SCI-Expanded)
- XXX. **Biodiesel production from waste frying oils: Optimization of reaction parameters and determination of fuel properties**
Uzun B. B., Kilic M., ÖZBAY N., PÜTÜN A. E., Putun E.
ENERGY, vol.44, no.1, pp.347-351, 2012 (SCI-Expanded)
- XXXI. **Use of sesame stalk biomass for the removal of Ni(II) and Zn(II) from aqueous solutions**
Kirbiyik C., Kilic M., Cepeliogullar O., PÜTÜN A. E.
WATER SCIENCE AND TECHNOLOGY, vol.66, no.2, pp.231-238, 2012 (SCI-Expanded)
- XXXII. **Removal of copper(II) and cadmium(II) ions from aqueous solutions by biosorption onto pine cone**
Degirmen G., Kilic M., Cepeliogullar O., PÜTÜN A. E.
WATER SCIENCE AND TECHNOLOGY, vol.66, no.3, pp.564-572, 2012 (SCI-Expanded)

- XXXIII. **Adsorptive removal of phenol from aqueous solutions on activated carbon prepared from tobacco residues: Equilibrium, kinetics and thermodynamics**
Kilic M., Apaydin-Varol E., PÜTÜN A. E.
JOURNAL OF HAZARDOUS MATERIALS, vol.189, no.1-2, pp.397-403, 2011 (SCI-Expanded)
- XXXIV. **Steam pyrolysis of an industrial waste for bio-oil production**
ÖNAL E., Uzun B. B., PÜTÜN A. E.
FUEL PROCESSING TECHNOLOGY, vol.92, no.5, pp.879-885, 2011 (SCI-Expanded)
- XXXV. **Synthetic fuel production from tea waste: Characterisation of bio-oil and bio-char**
Uzun B. B., Apaydin-Varol E., ATEŞ F., ÖZBAY N., PÜTÜN A. E.
FUEL, vol.89, no.1, pp.176-184, 2010 (SCI-Expanded)
- XXXVI. **Rapid Pyrolysis of Olive Residue. 2. Effect of Catalytic Upgrading of Pyrolysis Vapors in a Two-Stage Fixed-Bed Reactor**
Putun E., Uzun B. B., PÜTÜN A. E.
ENERGY & FUELS, vol.23, no.3-4, pp.2248-2258, 2009 (SCI-Expanded)
- XXXVII. **Catalytic pyrolysis of biomass in inert and steam atmospheres**
Puetuen E., ATEŞ F., PÜTÜN A. E.
FUEL, vol.87, no.6, pp.815-824, 2008 (SCI-Expanded)
- XXXVIII. **Rapid pyrolysis of olive residue. 1. Effect of heat and mass transfer limitations on product yields and bio-oil compositions**
Uzun B. B., Putun A. E., Putun E.
ENERGY & FUELS, vol.21, no.3, pp.1768-1776, 2007 (SCI-Expanded)
- XXXIX. **Composition of products obtained via fast pyrolysis of olive-oil residue: Effect of pyrolysis temperature**
Uzun B. B., Putun A. E., Putun E.
JOURNAL OF ANALYTICAL AND APPLIED PYROLYSIS, vol.79, no.1-2, pp.147-153, 2007 (SCI-Expanded)
- XL. **Production of bio-fuels from cottonseed cake by catalytic pyrolysis under steam atmosphere**
Putun E., Uzun B. B., Putun A. E.
BIOMASS & BIOENERGY, vol.30, no.6, pp.592-598, 2006 (SCI-Expanded)

Articles Published in Other Journals

- I. **Humulus lupulus As a Raw Material for Bio-oil Production via Slow Pyrolysis**
Apaydin-Varol E., KILIÇ M., PÜTÜN A. E., Degirmen G., Putun E.
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.30, no.2, pp.111-122, 2017 (ESCI)

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **CATALYTIC PYROLYSIS OF BIOMASS: YIELDS AND CHARACTERIZATION OF THE PRODUCTS**
ATEŞ F., PÜTÜN A. E., Putun E.
2nd International Conference on Energy Sustainability, Florida, United States Of America, 10 - 14 August 2008, pp.723-727, (Full Text)