

Prof. AYŞE EREN PÜTÜN

Personal Information

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

Education

Undergraduate, Yıldız 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 çığıdi 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)