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Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Turkey 1988 - 1993

Research Areas

Chemical Engineering and Technology, Process and Reactor Design, Chemical Process System Engineering, Basic Operations and Thermodynamics, Thermodynamics, Heat Transfer, Chemistry, Physical Chemistry, Thermodynamics, Fuel Cells, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Professor, Karadeniz Technical University, Fen Fakültesi, Kimya, 2000 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Guest editorial for special issue on "Progress in Energy Systems"**
JAVANI N., KAYGUSUZ K.
International Journal of Energy Research, vol.46, no.14, pp.20718, 2022 (SCI-Expanded)
- II. **Carbonized waste hazelnut wood-based shape-stable composite phase change materials for thermal management implementations**
HEKİMOĞLU G., SARI A., Kar T., KELEŞ S., KAYGUSUZ K., YILDIRIM N., Tyagi V. V., Sharma R. K., Saleh T. A.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.45, no.7, pp.10271-10284, 2021 (SCI-Expanded)
- III. **Walnut shell derived bio-carbon/methyl palmitate as novel composite phase change material with enhanced thermal energy storage properties**
HEKİMOĞLU G., SARI A., Kar T., KELEŞ S., KAYGUSUZ K., Tyagi V., Sharma R., Al-Ahmed A., Al-Sulaiman F. A., Saleh T. A.
JOURNAL OF ENERGY STORAGE, vol.35, 2021 (SCI-Expanded)
- IV. **Comparison of catalytic and noncatalytic pyrolysis and product yields of some waste biomass species**
Kar T., KELEŞ S., KAYGUSUZ K.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.43, no.6, pp.2032-2043, 2019 (SCI-Expanded)
- V. **Molecular Conformational Analysis, Spectroscopic Characterization, Intramolecular Hydrogen Bonding and Natural Bond Analysis of (E,Z)-2-(4-Amino-5-oxo-3-(thiophene-2-ylmethyl)-4,5-dihydro-1,2,4-triazole-1-yl)-N'-(thiophene-2-ylmethylene) Acetohydrazide**
ATALAY A., ÇELİK F., ÜNVER Y., SANCAK K., KAYGUSUZ K.
LETTERS IN ORGANIC CHEMISTRY, vol.16, no.3, pp.215-225, 2019 (SCI-Expanded)
- VI. **Catalytic fast pyrolysis of hazelnut cupula: Characterization of bio-oil**

KELEŞ S., Kar T., AKGUN M., KAYGUSUZ K.

ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.39, no.24, pp.2216-2225, 2017 (SCI-Expanded)

- VII. **A research on hydrogen production from industrial waste heat by thermal water splitting**
TOKLU E., Avci A. C., KAYGUSUZ K., Gur M.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.24, pp.10071-10079, 2016 (SCI-Expanded)
- VIII. **A perspective for potential and technology of bioenergy in Turkey: Present case and future view**
BİLGİN S., KELEŞ S., Sarikaya I., KAYGUSUZ K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.48, pp.228-239, 2015 (SCI-Expanded)
- IX. **Calculation of higher and lower heating values and chemical exergy values of liquid products obtained from pyrolysis of hazelnut cupulae**
BİLGİN S., KELEŞ S., KAYGUSUZ K.
ENERGY, vol.41, no.1, pp.380-385, 2012 (SCI-Expanded)
- X. **Regional sustainable water and energy development projects: A case of Southeastern Anatolia Project (GAP) in Turkey (Retracted article. See vol. 83, pg. 173, 2018)**
Akpınar A., KAYGUSUZ K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.16, no.2, pp.1146-1156, 2012 (SCI-Expanded)
- XI. **Energy for sustainable development: A case of developing countries**
Kaygusuz K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.16, no.2, pp.1116-1126, 2012 (SCI-Expanded)
- XII. **The Total Electricity Energy Production of the World, European Union, and Turkey: Projections and Comparison**
AKPINAR A. S., TAŞAN F., KOMURCU M. I., FILİZ M. H., KAYGUSUZ K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.7, no.1, pp.28-44, 2012 (SCI-Expanded)
- XIII. **Renewable energy sources for clean and sustainable energy policies in Turkey**
Yuksel I., KAYGUSUZ K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.15, no.8, pp.4132-4144, 2011 (SCI-Expanded)
- XIV. **Energy services and energy poverty for sustainable rural development**
Kaygusuz K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.15, no.2, pp.936-947, 2011 (SCI-Expanded)
- XV. **Prospect of concentrating solar power in Turkey: The sustainable future**
Kaygusuz K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.15, no.1, pp.808-814, 2011 (SCI-Expanded)
- XVI. **Sustainable Agriculture and the Production of Biomass for Energy Use**
Durusoy I., TÜRKER M. F., KELEŞ S., KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.33, no.10, pp.938-947, 2011 (SCI-Expanded)
- XVII. **The Paradigm of Sustainability In Turkey's Energy Sector**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.6, no.1, pp.83-95, 2011 (SCI-Expanded)
- XVIII. **Pyrolysis of Woody Biomass for Sustainable Bio-oil**
KELEŞ S., KAYGUSUZ K., AKGUN M.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.33, no.9, pp.879-889, 2011 (SCI-Expanded)
- XIX. **Sustainable Energy Policies in Turkey**
KAYGUSUZ K., Sari A.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.6, no.3, pp.207-219, 2011 (SCI-Expanded)
- XX. **Energy, Electricity and Socioeconomic Transformation of Rural Regions in Developing Countries**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.6, no.4, pp.384-394, 2011 (SCI-Expanded)
- XXI. **Hydrokinetic energy conversion systems: A technology status review**

- Guney M. S., KAYGUSUZ K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.14, no.9, pp.2996-3004, 2010 (SCI-Expanded)
- XXII. **Wind energy status in renewable electrical energy production in Turkey**
Kaygusuz K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.14, no.7, pp.2104-2112, 2010 (SCI-Expanded)
- XXIII. **Sustainable energy, environmental and agricultural policies in Turkey**
Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.51, no.5, pp.1075-1084, 2010 (SCI-Expanded)
- XXIV. **Contribution of the Southeastern Anatolia Project (GAP) to Irrigation and Hydroelectric Power Production in Turkey**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.5, no.2, pp.199-209, 2010 (SCI-Expanded)
- XXV. **Energy Services and Energy Poverty for Rural Regions**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.5, no.4, pp.424-433, 2010 (SCI-Expanded)
- XXVI. **Climate Change and Biomass Energy for Sustainability**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.5, no.2, pp.133-146, 2010 (SCI-Expanded)
- XXVII. **Hydropower in Turkey: The Sustainable Energy Future**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.4, no.1, pp.34-47, 2009 (SCI-Expanded)
- XXVIII. **Chemical Exergies of Some Coals in Turkey**
Kaygusuz K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.4, pp.299-307, 2009 (SCI-Expanded)
- XXIX. **Energy and environmental issues relating to greenhouse gas emissions for sustainable development in Turkey**
Kaygusuz K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.13, no.1, pp.253-270, 2009 (SCI-Expanded)
- XXX. **Biomass as a Renewable Energy Source for Sustainable Fuels**
KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.6, pp.535-545, 2009 (SCI-Expanded)
- XXXI. **Environmental Impacts of the Solar Energy Systems**
Kaygusuz K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.15, pp.1376-1386, 2009 (SCI-Expanded)
- XXXII. **Wind Power for a Clean and Sustainable Energy Future**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.4, no.1, pp.122-133, 2009 (SCI-Expanded)
- XXXIII. **Bioenergy as a Clean and Sustainable Fuel**
Kaygusuz K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.12, pp.1069-1080, 2009 (SCI-Expanded)
- XXXIV. **The Role of Hydropower for Sustainable Energy Development**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.4, no.4, pp.365-376, 2009 (SCI-Expanded)
- XXXV. **Thermodynamic Aspects of Renewable and Sustainable Development**
KAYGUSUZ K., BILGEN S.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.4, pp.287-298, 2009 (SCI-Expanded)

- XXXVI. **Use of Biomass as a Transitional Strategy to a Sustainable and Clean Energy System**
KAYGUSUZ K., KELEŞ S.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.1, pp.86-97, 2009 (SCI-Expanded)
- XXXVII. **Thermal Properties and Thermal Reliability of Capric Acid/Stearic Acid Mixture for Latent Heat Thermal Energy Storage**
Karaipekli A., Sari A., KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.3, pp.199-207, 2009 (SCI-Expanded)
- XXXVIII. **Thermal Characteristics of Paraffin/Expanded Perlite Composite for Latent Heat Thermal Energy Storage**
Karaipekli A., Sari A., KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.10, pp.814-823, 2009 (SCI-Expanded)
- XXXIX. **Energy situation and renewables in Turkey and environmental effects of energy use**
AKPINAR A., KOMURCU M. I., Kankal M., Ozolcer I. H., KAYGUSUZ K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.12, no.8, pp.2013-2039, 2008 (SCI-Expanded)
- XL. **The calculation of the chemical exergies of coal-based fuels by using the higher heating values**
BİLGEN S., KAYGUSUZ K.
APPLIED ENERGY, vol.85, no.8, pp.776-785, 2008 (SCI-Expanded)
- XLI. **Status of geothermal energy amongst Turkey's energy sources**
AKPINAR A., KOEMUERCUE M. I., ONSOYA H., KAYGUSUZ K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.12, no.4, pp.1148-1161, 2008 (SCI-Expanded)
- XLII. **Thermal energy storage performance of paraffin in a novel tube-in-shell system**
AKGUN M., AYDM O., KAYGUSUZ K.
APPLIED THERMAL ENGINEERING, vol.28, pp.405-413, 2008 (SCI-Expanded)
- XLIII. **Global warming and renewable energy sources for sustainable development: A case study in Turkey**
BİLGEN S., KELEŞ S., Kaygusuz A., Sari A., KAYGUSUZ K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.12, no.2, pp.372-396, 2008 (SCI-Expanded)
- XLIV. **Capric acid and stearic acid mixture impregnated with gypsum wallboard for low-temperature latent heat thermal energy storage**
Sari A., Karaipekli A., KAYGUSUZ K.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.32, no.2, pp.154-160, 2008 (SCI-Expanded)
- XLV. **Capric acid and myristic acid for latent heat thermal energy storage**
Sari A., Karaipekli A., KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.30, no.16, pp.1498-1507, 2008 (SCI-Expanded)
- XLVI. **Thermal energy storage behavior of CaCl(2)center dot 6H(2)O during melting and solidification**
BİLEN K., Takgil F., KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.30, no.9, pp.775-787, 2008 (SCI-Expanded)
- XLVII. **Encapsulated fatty acids in an acrylic resin as shape-stabilized phase change materials for latent heat thermal energy storage**
KAYGUSUZ K., Alkan C., Sari A., Uzun O.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.30, no.11, pp.1050-1059, 2008 (SCI-Expanded)
- XLVIII. **Second law (exergy) analysis of cogeneration system**
BİLGEN S., KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.30, no.13, pp.1267-1280, 2008 (SCI-Expanded)
- XLIX. **Fatty acid/expanded graphite composites as phase change material for latent heat thermal energy**

storage

Sari A., Karaipekli A., KAYGUSUZ K.

ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.30, no.5, pp.464-474, 2008 (SCI-Expanded)

- L. **Thermodynamic aspects of energy systems and sustainable development**
BİLGEN S., KAYGUSUZ K., Sari A.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.30, no.4, pp.325-333, 2008 (SCI-Expanded)
- LI. **The Future of Nuclear Power and Renewable Energy Sources in the European Union**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.3, no.4, pp.348-361, 2008 (SCI-Expanded)
- LII. **Thermal properties and long-term reliability of capric acid/lauric acid and capric acid/myristic acid mixtures for thermal energy storage**
Karaipekli A., Sari A., KAYGUSUZ K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.30, no.13, pp.1248-1258, 2008 (SCI-Expanded)
- LIII. **Energy Related Environmental Policies in Turkey**
KAYGUSUZ K., BİLGEN S.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.3, no.4, pp.396-410, 2008 (SCI-Expanded)
- LIV. **Energy use and air pollution issues in Turkey**
Kaygusuz K.
CLEAN-SOIL AIR WATER, vol.35, no.6, pp.539-547, 2007 (SCI-Expanded)
- LV. **Thermal conductivity improvement of stearic acid using expanded graphite and carbon fiber for energy storage applications**
KARAIPEKLI A., Sari A., Kaygusuz K.
RENEWABLE ENERGY, vol.32, no.13, pp.2201-2210, 2007 (SCI-Expanded)
- LVI. **An experimental optimization study on a tube-in-shell latent heat storage**
Aydin O., AKGUN M., Kaygusuz K.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.31, no.3, pp.274-287, 2007 (SCI-Expanded)
- LVII. **Experimental study on melting/solidification characteristics of a paraffin as PCM**
AKGUN M., Aydin O., Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.48, no.2, pp.669-678, 2007 (SCI-Expanded)
- LVIII. **High density polyethylene/paraffin composites as form-stable phase change material for thermal energy storage**
Kaygusuz K., SARI A.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.29, no.3, pp.261-270, 2007 (SCI-Expanded)
- LIX. **Thermal energy storage behavior of a paraffin during melting and solidification**
AKGUN M., AYDIN O., Kaygusuz K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.29, no.14, pp.1315-1326, 2007 (SCI-Expanded)
- LX. **Poly(vinyl alcohol)/fatty acid blends for thermal energy storage**
SARI A., Kaygusuz K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.29, no.10, pp.873-883, 2007 (SCI-Expanded)
- LXI. **The role of biomass in greenhouse gas mitigation**
BILGEN S., KELES S., Kaygusuz K.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.29, no.13, pp.1243-1252, 2007 (SCI-Expanded)
- LXII. **Energy for sustainable development: Key issues and challenges**
Kaygusuz K.

- ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.2, no.1, pp.73-83, 2007 (SCI-Expanded)
- LXIII. **Renewable energy sources in the European Union: Markets and capacity**
Kaygusuz K., YUKSEK O., SARI A.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.2, no.1, pp.19-29, 2007 (SCI-Expanded)
- LXIV. **Small hydropower plants as a new and renewable energy source**
YUEKSEK Ö., Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.1, no.3, pp.279-290, 2006 (SCI-Expanded)
- LXV. **Studies on poly(vinyl chloride)/fatty acid blends as shape-stabilized phase change material for latent heat thermal energy storage**
Sari A., Kaygusuz K.
INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES, vol.13, no.3, pp.253-258, 2006 (SCI-Expanded)
- LXVI. **Thermal energy storage characteristics of myristic and stearic acids eutectic mixture for low temperature heating applications**
SARI A., Kaygusuz K.
CHINESE JOURNAL OF CHEMICAL ENGINEERING, vol.14, no.2, pp.270-275, 2006 (SCI-Expanded)
- LXVII. **Developing wind energy in the European Union**
Kaygusuz K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.1, no.1, pp.9-21, 2006 (SCI-Expanded)
- LXVIII. **The benefits of renewables in Turkey**
Kaygusuz K., Sari A.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.1, no.1, pp.23-35, 2006 (SCI-Expanded)
- LXIX. **Thermal energy storage performance of fatty acids as a phase change material**
Kaygusuz K., SARI A.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.28, pp.105-116, 2006 (SCI-Expanded)
- LXX. **Thermal energy storage system using a technical grade paraffin wax as latent heat energy storage material**
Kaygusuz K., SARI A.
ENERGY SOURCES, vol.27, no.16, pp.1535-1546, 2005 (SCI-Expanded)
- LXXI. **Lauric and myristic acids eutectic mixture as phase change material for low-temperature heating applications**
KELES S., Kaygusuz K., SARI A.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.29, no.9, pp.857-870, 2005 (SCI-Expanded)
- LXXII. **Lauric and palmitic acids eutectic mixture as latent heat storage material for low temperature heating applications**
TUNCBILEK K., SARI A., TARHAN S., ERGUNES G., Kaygusuz K.
ENERGY, vol.30, no.5, pp.677-692, 2005 (SCI-Expanded)
- LXXIII. **Geothermal energy in Turkey: the sustainable future**
Kaygusuz K., KAYGUSUZ A.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.8, no.6, pp.545-563, 2004 (SCI-Expanded)
- LXXIV. **Renewable energy for a clean and sustainable future**
BILGEN S., Kaygusuz K., SARI A.
ENERGY SOURCES, vol.26, no.12, pp.1119-1129, 2004 (SCI-Expanded)
- LXXV. **The role of renewables in future energy directions of Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.26, no.12, pp.1131-1140, 2004 (SCI-Expanded)
- LXXVI. **Energy and sustainable development. Part II: Environmental impacts of energy use**
Kaygusuz K., KAYGUSUZ A.
ENERGY SOURCES, vol.26, no.11, pp.1071-1082, 2004 (SCI-Expanded)
- LXXVII. **Second law analysis of various types of coal and woody biomass in Turkey**
BILGEN S., Kaygusuz K., SARI A.

- ENERGY SOURCES, vol.26, no.11, pp.1083-1094, 2004 (SCI-Expanded)
- LXXVIII. **Climate change mitigation in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.26, no.6, pp.563-573, 2004 (SCI-Expanded)
- LXXIX. **Energy utilization, environmental pollution and renewable energy sources in Turkey**
OCAK M., OCAK Z., BILGEN S., KELES S., Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.45, no.6, pp.845-864, 2004 (SCI-Expanded)
- LXXX. **First and second laws analyses of a closed latent heat thermal energy storage system**
SARI A., Kaygusuz K.
CHINESE JOURNAL OF CHEMICAL ENGINEERING, vol.12, no.2, pp.290-293, 2004 (SCI-Expanded)
- LXXXI. **Hydropower and the world's energy future**
Kaygusuz K.
ENERGY SOURCES, vol.26, no.3, pp.215-224, 2004 (SCI-Expanded)
- LXXXII. **Wind energy: Progress and potential**
Kaygusuz K.
ENERGY SOURCES, vol.26, no.2, pp.95-105, 2004 (SCI-Expanded)
- LXXXIII. **Energy policies and climate change mitigation in Turkey**
Kaygusuz K.
ENERGY EXPLORATION & EXPLOITATION, vol.22, no.2, pp.145-160, 2004 (SCI-Expanded)
- LXXXIV. **Phase change energy storage for solar heating systems**
Kaygusuz K.
ENERGY SOURCES, vol.25, no.8, pp.791-807, 2003 (SCI-Expanded)
- LXXXV. **Energy policy and climate change in Turkey**
Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.44, no.10, pp.1671-1688, 2003 (SCI-Expanded)
- LXXXVI. **Some fatty acids used for latent heat storage: thermal stability and corrosion of metals with respect to thermal cycling**
SAN A., Kaygusuz K.
RENEWABLE ENERGY, vol.28, no.6, pp.939-948, 2003 (SCI-Expanded)
- LXXXVII. **Oil and gas market developments in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.25, no.3, pp.229-240, 2003 (SCI-Expanded)
- LXXXVIII. **Renewable energy potential and utilization in Turkey**
Kaygusuz K., SARI A.
ENERGY CONVERSION AND MANAGEMENT, vol.44, no.3, pp.459-478, 2003 (SCI-Expanded)
- LXXXIX. **Thermal and heat transfer characteristics in a latent heat storage system using lauric acid**
SARI A., Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.43, no.18, pp.2493-2507, 2002 (SCI-Expanded)
- XC. **Geothermal energy: Power for a sustainable future**
Kaygusuz K., KAYGUSUZ A.
ENERGY SOURCES, vol.24, no.10, pp.937-947, 2002 (SCI-Expanded)
- XCI. **Sustainable development of hydroelectric power**
Kaygusuz K.
ENERGY SOURCES, vol.24, no.9, pp.803-815, 2002 (SCI-Expanded)
- XCII. **Biomass energy potential in Turkey**
Kaygusuz K., TURKER M.
RENEWABLE ENERGY, vol.26, no.4, pp.661-678, 2002 (SCI-Expanded)
- XCIII. **Renewable energy sources: The key to a better future**
Kaygusuz K.
ENERGY SOURCES, vol.24, no.8, pp.787-799, 2002 (SCI-Expanded)
- XCIV. **Renewable and sustainable energy use in Turkey: a review**

- Kaygusuz K.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.6, no.4, pp.339-366, 2002 (SCI-Expanded)
- XCIV. **Environmental impacts of energy utilisation and renewable energy policies in Turkey**
Kaygusuz K.
ENERGY POLICY, vol.30, no.8, pp.689-698, 2002 (SCI-Expanded)
- XCVI. **Energy and sustainable development in Turkey. Part I: Energy utilization and sustainability**
Kaygusuz K., KAYGUSUZ A.
ENERGY SOURCES, vol.24, no.6, pp.483-498, 2002 (SCI-Expanded)
- XCVII. **Review of Biomass energy in Turkey**
Kaygusuz K., TURKER M.
ENERGY SOURCES, vol.24, no.5, pp.383-401, 2002 (SCI-Expanded)
- XCVIII. **Sustainable development of hydropower and biomass energy in Turkey**
Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.43, no.8, pp.1099-1120, 2002 (SCI-Expanded)
- XCIX. **Thermal performance of palmitic acid as a phase change energy storage material**
SARI A., Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.43, no.6, pp.863-876, 2002 (SCI-Expanded)
- C. **Renewable energy and sustainable development in Turkey**
Kaygusuz K., KAYGUSUZ A.
RENEWABLE ENERGY, vol.25, no.3, pp.431-453, 2002 (SCI-Expanded)
- CI. **Thermal performance of a eutectic mixture of lauric and stearic acids as PCM encapsulated in the annulus of two concentric pipes**
SARI A., Kaygusuz K.
SOLAR ENERGY, vol.72, no.6, pp.493-504, 2002 (SCI-Expanded)
- CII. **Oil and gas production and consumption in Turkey**
Kaygusuz K.
ENERGY EXPLORATION & EXPLOITATION, vol.20, no.1, pp.37-50, 2002 (SCI-Expanded)
- CIII. **Thermal performance of myristic acid as a phase change material for energy storage application**
SARI A., Kaygusuz K.
RENEWABLE ENERGY, vol.24, no.2, pp.303-317, 2001 (SCI-Expanded)
- CIV. **Hydropower and biomass as renewable energy sources in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.23, no.9, pp.775-799, 2001 (SCI-Expanded)
- CV. **Investigation of the variables effects on fuelwood consumption as an energy source in forest villages of Turkey**
TURKER M., Kaygusuz K.
ENERGY CONVERSION AND MANAGEMENT, vol.42, no.10, pp.1215-1227, 2001 (SCI-Expanded)
- CVI. **Thermal energy storage system using some fatty acids as latent heat energy storage materials**
SARI A., Kaygusuz K.
ENERGY SOURCES, vol.23, no.3, pp.275-285, 2001 (SCI-Expanded)
- CVII. **Renewable energy: Power for a sustainable future**
Kaygusuz K.
ENERGY EXPLORATION & EXPLOITATION, vol.19, no.6, pp.603-626, 2001 (SCI-Expanded)
- CVIII. **Thermal energy storage system using stearic acid as a phase change material**
SARI A., Kaygusuz K.
SOLAR ENERGY, vol.71, no.6, pp.365-376, 2001 (SCI-Expanded)
- CIX. **Environmental impacts of energy utilization and renewable energy sources in Turkey**
Kaygusuz K.
ENERGY EXPLORATION & EXPLOITATION, vol.19, no.5, pp.497-509, 2001 (SCI-Expanded)
- CX. **Experimental and theoretical investigation of a solar heating system with heat pump**
Kaygusuz K.

- RENEWABLE ENERGY, vol.21, no.1, pp.79-102, 2000 (SCI-Expanded)
- CXI. **Calculation of required collector area of a solar-assisted series heat pump for domestic heating**
Kaygusuz K.
ENERGY SOURCES, vol.22, no.3, pp.247-256, 2000 (SCI-Expanded)
- CXII. **Energy and exergy calculations of latent heat energy storage systems**
SARI A., Kaygusuz K.
ENERGY SOURCES, vol.22, no.2, pp.117-126, 2000 (SCI-Expanded)
- CXIII. **Energy and water potential of the Southeastern Anatolia Project (GAP)**
Kaygusuz K.
ENERGY SOURCES, vol.21, no.10, pp.913-922, 1999 (SCI-Expanded)
- CXIV. **Investigation of a combined solar-heat pump system for residential heating. Part 2: Simulation results**
Kaygusuz K.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.23, no.14, pp.1225-1237, 1999 (SCI-Expanded)
- CXV. **Investigation of a combined solar-heat pump system for residential heating. Part 1: Experimental results**
Kaygusuz K.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.23, no.14, pp.1213-1223, 1999 (SCI-Expanded)
- CXVI. **Forest biomass as a source of renewable energy in Turkey**
TURKER M., AYAZ H., Kaygusuz K.
ENERGY SOURCES, vol.21, no.8, pp.705-714, 1999 (SCI-Expanded)
- CXVII. **The viability of thermal energy storage**
Kaygusuz K.
ENERGY SOURCES, vol.21, no.8, pp.745-755, 1999 (SCI-Expanded)
- CXVIII. **Experimental and theoretical investigation of combined solar heat pump system for residential heating**
Kaygusuz K., AYHAN T.
ENERGY CONVERSION AND MANAGEMENT, vol.40, no.13, pp.1377-1396, 1999 (SCI-Expanded)
- CXIX. **Hydropower potential in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.21, no.7, pp.581-588, 1999 (SCI-Expanded)
- CXX. **Utilization of solar energy and waste heat**
Kaygusuz K.
ENERGY SOURCES, vol.21, no.7, pp.595-610, 1999 (SCI-Expanded)
- CXXI. **Energy situation, future developments, energy saving, and energy efficiency in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.21, no.5, pp.405-416, 1999 (SCI-Expanded)
- CXXII. **The comparison of measured and calculated solar radiations in Trabzon, Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.21, no.4, pp.347-353, 1999 (SCI-Expanded)
- CXXIII. **Electricity generation: A case study in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.21, no.3, pp.275-290, 1999 (SCI-Expanded)
- CXXIV. **Analysis of solar radiation data for Trabzon, Turkey**
Kaygusuz K., AYHAN T.
ENERGY CONVERSION AND MANAGEMENT, vol.40, no.5, pp.545-556, 1999 (SCI-Expanded)
- CXXV. **Use of wood as an energy source in Turkey**
Kaygusuz K., TURKER M.
ENERGY SOURCES, vol.20, no.7, pp.605-614, 1998 (SCI-Expanded)
- CXXVI. **Drying behaviour of hazelnuts**
DEMIRTAS C., AYHAN T., Kaygusuz K.

- JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE, vol.76, no.4, pp.559-564, 1998 (SCI-Expanded)
- CXXVII. **Energy, water, and environment in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.19, no.9, pp.917-930, 1997 (SCI-Expanded)
- CXXVIII. **Rural energy resources: Applications and consumption in Turkey**
Kaygusuz K.
ENERGY SOURCES, vol.19, no.6, pp.549-557, 1997 (SCI-Expanded)
- CXXIX. **Role of the clean energy potential for energy savings and air pollution control in Turkey**
Kaygusuz K., KARGI H., KAYGUSUZ A.
ENERGY SOURCES, vol.18, no.8, pp.885-901, 1996 (SCI-Expanded)
- CXXX. **EXPERIMENTAL AND THEORETICAL INVESTIGATION OF LATENT-HEAT STORAGE FOR WATER-BASED SOLAR HEATING-SYSTEMS**
KAYGUSUZ K.
ENERGY CONVERSION AND MANAGEMENT, vol.36, no.5, pp.315-323, 1995 (SCI-Expanded)
- CXXXI. **Socio-economic analysis of fuelwood use in a rural area of Turkey**
TURKER M., Kaygusuz K.
BIORESOURCE TECHNOLOGY, vol.54, no.3, pp.285-290, 1995 (SCI-Expanded)
- CXXXII. **PERFORMANCE OF SOLAR-ASSISTED HEAT-PUMP SYSTEMS**
KAYGUSUZ K.
APPLIED ENERGY, vol.51, no.2, pp.93-109, 1995 (SCI-Expanded)
- CXXXIII. **PERFORMANCE OF AN AIR-TO-AIR HEAT-PUMP UNDER FROSTING AND DEFROSTING CONDITIONS**
KAYGUSUZ K.
APPLIED ENERGY, vol.48, no.3, pp.225-241, 1994 (SCI-Expanded)
- CXXXIV. **SOLAR-ASSISTED HEAT-PUMP AND ENERGY-STORAGE FOR RESIDENTIAL HEATING**
COMAKLI O., KAYGUSUZ K., AYHAN T.
SOLAR ENERGY, vol.51, no.5, pp.357-366, 1993 (SCI-Expanded)
- CXXXV. **EXERGY ANALYSIS OF SOLAR-ASSISTED HEAT-PUMP SYSTEMS FOR DOMESTIC HEATING**
KAYGUSUZ K., AYHAN T.
ENERGY, vol.18, no.10, pp.1077-1085, 1993 (SCI-Expanded)
- CXXXVI. **EXPERIMENTAL INVESTIGATION AND A DYNAMIC SIMULATION OF THE SOLAR-ASSISTED ENERGY-STORAGED HEAT-PUMP SYSTEM**
COMAKLI O., KAYGUSUZ K., AYHAN T., ARSLAN F.
SOLAR ENERGY, vol.51, no.2, pp.147-158, 1993 (SCI-Expanded)
- CXXXVII. **SOLAR-ASSISTED HEAT-PUMP AND ENERGY-STORAGE FOR DOMESTIC HEATING IN TURKEY**
KAYGUSUZ K., GULTEKIN N., AYHAN T.
ENERGY CONVERSION AND MANAGEMENT, vol.34, no.5, pp.335-346, 1993 (SCI-Expanded)
- CXXXVIII. **ENERGY AND ECONOMIC COMPARISONS OF AIR-TO-AIR HEAT-PUMPS AND CONVENTIONAL HEATING-SYSTEMS FOR THE TURKISH CLIMATE**
KAYGUSUZ K.
APPLIED ENERGY, vol.45, no.3, pp.257-267, 1993 (SCI-Expanded)
- CXXXIX. **EXPERIMENTAL INVESTIGATION OF THE EXERGETIC EFFICIENCY OF SOLAR ASSISTED AND ENERGY-STORAGE HEAT-PUMP SYSTEMS**
AYHAN T., COMAKLI O., KAYGUSUZ K.
ENERGY CONVERSION AND MANAGEMENT, vol.33, no.3, pp.165-173, 1992 (SCI-Expanded)
- CXL. **HEAT-STORAGE CHEMICAL MATERIALS WHICH CAN BE USED FOR DOMESTIC HEATING BY HEAT-PUMPS**
GULTEKIN N., AYHAN T., KAYGUSUZ K.
ENERGY CONVERSION AND MANAGEMENT, vol.32, no.4, pp.311-317, 1991 (SCI-Expanded)
- CXLI. **SOLAR-ASSISTED HEAT-PUMP SYSTEMS AND ENERGY-STORAGE**
KAYGUSUZ K., COMAKLI O., AYHAN T.
SOLAR ENERGY, vol.47, no.5, pp.383-391, 1991 (SCI-Expanded)

Articles Published in Other Journals

- I. **Fast pyrolysis of fig leaves: influence of pyrolysis parameters and characterization of bio-oil**
KAR T., KELEŞ S., EMİR Z., KAYGUSUZ K.
Turkish Journal of Analytical Chemistry (Online), vol.4, no.2, pp.80-87, 2022 (Peer-Reviewed Journal)
- II. **Hydrogen production potential from renewable energy sources in Turkey**
AVCI A. C., KAYGUSUZ K.
Journal of Engineering Research and Applied Science, 2019 (Peer-Reviewed Journal)
- III. **Prediction of the solar photovoltaic potential for electricity generation in Turkey**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, 2019 (Peer-Reviewed Journal)
- IV. **Theoretical thermal performance of the air-source heat pumps in Trabzon, Turkey**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, 2019 (Peer-Reviewed Journal)
- V. **Potential and utilization of hydroelectric energy in Turkey**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, 2019 (Peer-Reviewed Journal)
- VI. **Potential and utilization of solar energy policies in Turkey**
KAYGUSUZ K., AVCI A. C.
Journal of Engineering Research and Applied Science, 2019 (Peer-Reviewed Journal)
- VII. **Theoretical performance of solar heat pump residential heating applications**
KAYGUSUZ K., KAYGUSUZ Ö.
Journal of Engineering Research and Applied Science, 2019 (Peer-Reviewed Journal)
- VIII. **Green chemistry and green energy technologies for environmental friendly sustainable development**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, 2018 (Peer-Reviewed Journal)
- IX. **Small hydropower potential and utilization in Turkey**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, 2018 (Peer-Reviewed Journal)
- X. **Renewable energy for rural development in Turkey**
GÜNEY M. Ş., Kaygusuz Ö., KAYGUSUZ K.
Journal of Engineering Research and Applied Science, vol.7, no.2, pp.886-895, 2018 (Peer-Reviewed Journal)
- XI. **Performance of solar assisted parallel and series heat pump systems with energy storage for building heating**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, 2018 (Peer-Reviewed Journal)
- XII. **Renewable energy potential, utilization and policies in Turkey for environmental friendly sustainable development**
KAYGUSUZ K., coşkun a.
Journal of Engineering Research and Applied Science, 2018 (Peer-Reviewed Journal)
- XIII. **Thermal processing technologies for biomass conversion to clean fuels**
KAYGUSUZ K., KELEŞ S., Kar T.
Journal of Engineering Research and Applied Science, 2018 (Peer-Reviewed Journal)
- XIV. **Second law of thermodynamics and heat pumps for domestic heating**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, vol.6, no.2, pp.668-679, 2017 (Peer-Reviewed Journal)
- XV. **Global utilization of wood pellet for residential heating**
KAYGUSUZ K., TOKSOY D., BAYRAMOĞLU M. M.
Journal of Engineering Research and Applied Science, vol.6, no.2, pp.688-697, 2017 (Peer-Reviewed Journal)
- XVI. **Renewable energy from woody biomass in Turkey**
KELEŞ S., KAR T., BAHADIR A., KAYGUSUZ K.

- journal of engineering research and applied science, vol.6, no.2, pp.652-661, 2017 (Peer-Reviewed Journal)
- XVII. **Current state and future prospects of biomass energy in Turkey**
KARA B., EMİR Z., ŞEKER T., BAHADIR A., KAYGUSUZ K.
Journal of Engineering Research and Applied Science, vol.6, no.1, pp.522-529, 2017 (Peer-Reviewed Journal)
- XVIII. **Bioenergy potential, utilization and policies in Turkey**
KELEŞ S., BİLGİN S., KAYGUSUZ K.
Journal of Engineering Research and Applied Science, vol.6, no.1, pp.566-576, 2017 (Peer-Reviewed Journal)
- XIX. **Biomass energy source in developing countries**
KELEŞ S., BİLGİN S., KAYGUSUZ K.
Journal of Engineering Research and Applied Science, vol.6, no.1, pp.566-576, 2017 (Peer-Reviewed Journal)
- XX. **Bio-oil production from fast pyrolysis of maple fruit (acer platanoides samaras): product yields**
Bahadır A., Kar T., KELEŞ S., KAYGUSUZ K.
WORLD JOURNAL OF ENGINEERING, vol.14, no.1, pp.55-59, 2017 (ESCI)
- XXI. **Dynamics of energy utilization patterns in Turkey for sustainable development**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, vol.5, no.2, pp.399-407, 2016 (Peer-Reviewed Journal)
- XXII. **Hydropower as clean and renewable energy source for electricity generation**
KAYGUSUZ K.
Journal of Engineering Research and Applied Science, vol.5, no.1, pp.359-369, 2016 (Peer-Reviewed Journal)
- XXIII. **Fast pyrolysis of biomass for bio oils**
KELEŞ S., KAYGUSUZ K.
Journal of Engineering Research and Applied Science, no.1, pp.370-377, 2016 (Peer-Reviewed Journal)
- XXIV. **The increase of exploitability of renewable energy sources in Turkey**
KAYGUSUZ K., TOKLU E.
Journal of Engineering Research and Applied Science, vol.5, no.1, pp.352-358, 2016 (Peer-Reviewed Journal)
- XXV. **Renewable energy technologies for clean and sustainable development**
KAYGUSUZ K.
Energy & Diplomacy, 2015 (Peer-Reviewed Journal)
- XXVI. **Sustainable bioenergy policies in Turkey**
KAYGUSUZ K., KELEŞ S.
Journal of Engineering Research and Applied Science, vol.1, no.1, pp.34-43, 2012 (Peer-Reviewed Journal)

Books & Book Chapters

I. Termodinamik

KAYGUSUZ K., TABAK A., KINAL A.

in: Fizikokimya, Nursel Pekel BAYRAMGİL, Gülsen ASMAN, Editor, Palme Yayıncılık, Ankara, pp.1-32, 2015

Supported Projects

SAVAŞKAN YILMAZ S., KAYGUSUZ K., KOLCUOĞLU Y., ALTIN İ., BACAĞSIZ E., Project Supported by Higher Education Institutions, INTERNATIONAL CONFERENCE ON CHEMICAL ENERGY AND SEMICONDUCTOR PHOTOCHEMISTRY, 2019 - 2020

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