

## Assoc. Prof. SEDAT KELEŞ

### Personal Information

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### Education Information

Doctorate, Karadeniz Technical University, Fen Fakültesi / Fen Bilimleri Enstitüsü, Kimya Bölümü / Fizikokimya, Turkey  
2003 - 2009

Post Graduate, Karadeniz Technical University, Fen Fakültesi / Fen Bilimleri Enstitüsü, Kimya Bölümü / Fizikokimya,  
Turkey 2000 - 2003

Under Graduate, Karadeniz Technical University, Fen Fakültesi , Kimya Bölümü , Turkey 1994 - 1998

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Hızlı Piroлиз Yöntemi ile Fındık Kupulasının Katalitik Piroлиз ve Sıvı Ürünlerin Karakterizasyonu , Karadeniz  
Technical University, Fen Bilimleri Enstitüsü, Kimya Bölümü / Fizikokimya, 2009

Post Graduate, Laurik-miristik Asit Ötektik Karışımının Enerji Depolama Karakteristiklerinin Belirlenmesi , Karadeniz  
Technical University, Fen Bilimleri Enstitüsü, Kimya Bölümü / Fizikokimya, 2003

### Research Areas

Chemistry, Physical Chemistry, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Karadeniz Technical University, Fen Fakültesi, Kimya, 2014 - Continues

Assistant Professor, Karadeniz Technical University, Fen Fakültesi, Kimya, 2010 - 2014

Research Assistant, Karadeniz Technical University, Fen Fakültesi, Kimya, 2002 - 2009

### Academic and Administrative Experience

Deputy Head of Department, Karadeniz Technical University, 2015 - 2018

### Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **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 (Journal Indexed in 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, 2021 (Journal Indexed in SCI)
- III. **Characterisation of bio-oil and its sub-fractions from catalytic fast pyrolysis of biomass mixture**  
Kar T., KELEŞ S.  
WASTE MANAGEMENT & RESEARCH, vol.37, no.7, pp.674-685, 2019 (Journal Indexed in SCI)
- 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 (Journal Indexed in SCI)
- V. **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 (Journal Indexed in SCI)
- VI. **A perspective for potential and technology of bioenergy in Turkey: Present case and future view**  
BİLGEN S., KELEŞ S., Sarikaya I., KAYGUSUZ K.  
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.48, pp.228-239, 2015 (Journal Indexed in SCI)
- VII. **Fast pyrolysis of chestnut cupulae: yields and characterization of the bio-oil**  
Kar T., KELEŞ S.  
ENERGY EXPLORATION & EXPLOITATION, vol.31, no.6, pp.847-858, 2013 (Journal Indexed in SCI)
- VIII. **Renewable energy sources in Turkey for climate change mitigation and energy sustainability**  
KELEŞ S., BİLGEN S.  
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.16, no.7, pp.5199-5206, 2012 (Journal Indexed in SCI)
- IX. **Calculation of higher and lower heating values and chemical exergy values of liquid products obtained from pyrolysis of hazelnut cupulae**  
BİLGEN S., KELEŞ S., KAYGUSUZ K.  
ENERGY, vol.41, no.1, pp.380-385, 2012 (Journal Indexed in SCI)
- X. **Fossil Energy Sources, Climate Change, and Alternative Solutions**  
Keles S.  
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.33, no.12, pp.1184-1195, 2011 (Journal Indexed in SCI)
- XI. **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 (Journal Indexed in SCI)
- XII. **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 (Journal Indexed in SCI)
- XIII. **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 (Journal Indexed in SCI)
- XIV. **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 (Journal Indexed in SCI)

XV. **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 (Journal Indexed in SCI)

XVI. **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 (Journal Indexed in SCI)

XVII. **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 (Journal Indexed in SCI)

## Articles Published in Other Journals

I. **Hydrogen production from renewables: Biomass**

KAR T., KELEŞ S.

Journal of Engineering Research and Applied Science, vol.8, no.2, pp.1279-1285, 2019 (Refereed Journals of Other Institutions)

II. **Thermal processing technologies for biomass conversion to clean fuels**

KAYGUSUZ K., KELEŞ S., Kar T.

Journal of Engineering Research and Applied Science, 2018 (Refereed Journals of Other Institutions)

III. **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 (Refereed Journals of Other Institutions)

IV. **Biomass energy source in developing countries**

KELEŞ S., BİLGEN S., KAYGUSUZ K.

Journal of Engineering Research and Applied Science, vol.6, no.1, pp.566-576, 2017 (Refereed Journals of Other Institutions)

V. **Bio-oil production from fast pyrolysis of maple fruit (acer platanoides samaras): product yields**

Bahadir A., Kar T., KELEŞ S., KAYGUSUZ K.

WORLD JOURNAL OF ENGINEERING, vol.14, no.1, pp.55-59, 2017 (Journal Indexed in ESCI)

VI. **Environmental impacts of biomass combustion for heating and electricity generation**

KAR T., KELEŞ S.

Journal of Engineering Research and Applied Science, no.2, pp.458-465, 2016 (Refereed Journals of Other Institutions)

VII. **Fast pyrolysis of biomass for bio oils**

KELEŞ S., KAYGUSUZ K.

Journal of Engineering Research and Applied Science, no.1, pp.370-377, 2016 (Refereed Journals of Other Institutions)

VIII. **Sustainable bioenergy policies in Turkey**

KAYGUSUZ K., KELEŞ S.

Journal of Engineering Research and Applied Science, vol.1, no.1, pp.34-43, 2012 (Refereed Journals of Other Institutions)

## Refereed Congress / Symposium Publications in Proceedings

I. **Catalytic Cracking and ZSM-5 Zeolite**

KAR T., KELEŞ S., KAYGUSUZ K.

INTERNATIONAL CONFERENCE ON CHEMICAL ENERGY AND SEMICONDUCTOR PHOTOCHEMISTRY, 4 - 06  
September 2019

**II. Hydrogen Production From Renewable Energy Sources**

KAYGUSUZ K., KAR T., KELEŞ S.

INTERNATIONAL CONFERENCE ON CHEMICAL ENERGY AND SEMICONDUCTOR PHOTOCHEMISTRY, 4 - 06  
September 2019, pp.30-47

**III. Catalytic Fast Pyrolysis of Some Bio-Wastes with Vanadium Oxide Catalyst**

KAR T., KELEŞ S., KAYGUSUZ K.

INTERNATIONAL CONFERENCE ON CHEMICAL ENERGY AND SEMICONDUCTOR PHOTOCHEMISTRY, 4 - 06  
September 2019

**IV. Characterization of Bio-Oil from the Catalytic Fast Pyrolysis of Hazelnut Cupula**

Keleş S., Kar T., Kaygusuz K.

International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2018), Ankara, Turkey,  
26 - 27 April 2018, pp.644

**V. Thermal Conversion of Biomass**

Kar T., Keleş S., Kaygusuz K.

International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2018), Ankara, Turkey,  
26 - 27 April 2018, pp.84

**VI. Syngas Cleanup**

KAR T., KELEŞ S.

21th International Energy and Environment Fair and Conference, İstanbul, Turkey, 6 - 08 May 2015, pp.167-171

**VII. Fundamentals of Gasification**

KAR T., KELEŞ S., KAYGUSUZ K.

21th International Energy and Environment Fair and Conference, İstanbul, Turkey, 6 - 08 May 2015, pp.177-181

**VIII. Bubbling Fluidized Bed and Circulating Fluidized Bed (CFB)**

KAR T., KELEŞ S., KAYGUSUZ K., BAHADIR A.

21th International Energy and Environment Fair and Conference, İstanbul, Turkey, 6 - 08 May 2015, pp.172-176

**IX. A correlation Depending on the Elemental Analysis for Estimating og the Chemical Exergy Value of Bio-oil Obtained from Fast Pyrolysis of Biomass**

BİLGİN S., Ayyıldız L. M. , KELEŞ S.

20th International Energy and Environment Fair and Conference, İstanbul, 2013, İstanbul, Turkey, 24 - 26 April  
2014, pp.170-173

**X. A Correlation Depending On The Elemental Analysis For Estimating of The Chemical Exergy Value of Bio-Oil Obtained From Fast Pyrolysis of Biomass**

BİLGİN S., AYYILDIZ L. M. , KELEŞ S.

20th International Energy and Environment Fair and Conference, İstanbul, Turkey, 24 - 26 April 2014, pp.170-173

**XI. Catalytic Upgrading of Bio-oil**

KELEŞ S., KAR T.

20th International Energy and Environment Fair and Conference, İstanbul, Turkey, 24 - 26 April 2014, pp.204-207

**XII. Fast Pyrolysis of Sweet Tree**

KAR T., KELEŞ S., ŞEKERCİ T., KAYGUSUZ K.

20th International Energy and Environment Fair and Conference, İstanbul, Turkey, 24 - 26 April 2014, pp.196-199

**XIII. Gasification Product composition**

KAR T., KELEŞ S., BİLGİN S., KAYGUSUZ K.

20th International Energy and Environment Fair and Conference, İstanbul, 2013, İstanbul, Turkey, 24 - 26 April  
2014, pp.200-203

**XIV. Gasification Product Composition**

KAR T., KELEŞ S., BİLGİN S., KAYGUSUZ K.

20th International Energy and Environment Fair and Conference, İstanbul, Turkey, 24 - 26 April 2014, pp.200-203

**XV. Calculation of Higher and Lower Heating Values and Chemical Exergy Values of Liquid Products**

### **Obtained from Pyrolysis of Hazelnut Cupulae**

BİLGİN S., KELEŞ S., KAR T., KAYGUSUZ K.

19th International Energy and Environment Fair and Conference, Istanbul, 2013, İstanbul, Turkey, 24 - 26 April 2013, pp.137-140

XVI. **Climate change Mitigation in Turkey**

KELEŞ S., BİLGİN S., KAR T., KAYGUSUZ K.

19th International Energy and Environment Fair and Conference, Istanbul, 2013, İstanbul, Turkey, 24 - 26 April 2013, pp.141-144

XVII. **Fast Pyrolysis of Chestnut Cupulae: Yields and Characterization of the Bio-oil**

KAR T., KELEŞ S., BİLGİN S., KAYGUSUZ K.

19th International Energy and Environment Fair and Conference, Istanbul, 2013, İstanbul, Turkey, 24 - 26 April 2013, pp.145-148

XVIII. **The Calculation of The Chemical Exergies of Coal-Based Fuels by Using HHV**

BİLGİN S., Üçüncü O., KELEŞ S., KAYGUSUZ K.

16th International Energy and Environment Fair and Conference, İstanbul, Turkey, 12 - 14 May 2010, pp.1

XIX. **Hydropower in Turkey for Sustainable Energy Future**

KELEŞ S., BİLGİN S., KAYGUSUZ K.

15th International Energy and Environment Fair and Conference, Istanbul, 2009, İstanbul, Turkey, 13 - 15 May 2009, pp.290

XX. **Global Warming and Renewable Energy Sources for Sustainable Development: A Case Study in Turkey**

BİLGİN S., KELEŞ S., KAYGUSUZ K.

14th International Energy and Environment Fair and Conference, İstanbul, Turkey, 15 - 17 May 2008, pp.382

XXI. **Second Law Analysis of a General Cogeneration System**

BİLGİN S., KELEŞ S., KAYGUSUZ K.

13th International Energy, Cogeneration and Environmental Technologies Conference & Exhibition, İstanbul, Turkey, 30 - 31 May 2007, pp.240

XXII. **The Chemical Exergies for Various Types of Turkish Tertiary Coals**

BİLGİN S., KELEŞ S., KAYGUSUZ K.

13th International Energy, Cogeneration and Environmental Technologies Conference & Exhibition, İstanbul, Turkey, 30 - 31 May 2007, pp.242

### **Scientific Refereeing**

INTERNATIONAL JOURNAL OF ENERGY RESEARCH, SCI Journal, November 2020

APPLIED ENERGY, SCI Journal, March 2020

JOURNAL OF RENEWABLE AND SUSTAINABLE ENERGY, SCI Journal, November 2019

BIORESOURCES, SCI Journal, November 2019

APPLIED ENERGY, SCI Journal, April 2019

APPLIED ENERGY, SCI Journal, February 2019

INTERNATIONAL JOURNAL OF ENERGY RESEARCH, SCI Journal, January 2019

JOURNAL OF RENEWABLE AND SUSTAINABLE ENERGY, SCI Journal, December 2018

APPLIED ENERGY, SCI Journal, September 2018

APPLIED ENERGY, SCI Journal, August 2018

APPLIED ENERGY, SCI Journal, July 2018

APPLIED ENERGY, SCI Journal, July 2018

APPLIED ENERGY, SCI Journal, July 2018

APPLIED ENERGY, SCI Journal, June 2018

APPLIED ENERGY, SCI Journal, June 2018

APPLIED ENERGY, SCI Journal, June 2018

APPLIED ENERGY, SCI Journal, June 2018

APPLIED ENERGY, SCI Journal, June 2018  
JOURNAL OF CLEANER PRODUCTION, SCI Journal, May 2018  
APPLIED ENERGY, SCI Journal, May 2018  
APPLIED ENERGY, SCI Journal, April 2018  
JOURNAL OF CLEANER PRODUCTION, National Scientific Refreed Journal, April 2018  
APPLIED ENERGY, SCI Journal, March 2018  
APPLIED ENERGY, SCI Journal, January 2018  
JOURNAL OF CLEANER PRODUCTION, SCI Journal, January 2018  
ENERGY, SCI Journal, December 2017  
APPLIED ENERGY, SCI Journal, December 2017  
APPLIED ENERGY, SCI Journal, November 2017  
APPLIED ENERGY, SCI Journal, November 2017  
APPLIED ENERGY, SCI Journal, September 2017  
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JOURNAL OF CLEANER PRODUCTION, SCI Journal, September 2017  
APPLIED ENERGY, SCI Journal, August 2017  
APPLIED ENERGY, SCI Journal, August 2017  
BIORESOURCES, SCI Journal, April 2017  
ENERGY, SCI Journal, August 2016  
ENERGY, SCI Journal, July 2016  
BIORESOURCES, SCI Journal, July 2015  
JOURNAL OF RENEWABLE AND SUSTAINABLE ENERGY, SCI Journal, March 2015  
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## **Citations**

Total Citations (WOS):358

h-index (WOS):10