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Publons / Web Of Science ResearcherID: ABA-8104-2020

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Education Information

Doctorate, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), Turkey 2003 - 2008

Postgraduate, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), Turkey 2000 - 2001

Undergraduate, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), Turkey 1989 - 1994

Dissertations

Doctorate, Exergetic and thermoeconomic performance analysis and optimization of diesel engine powered cogeneration systems, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), 2008

Postgraduate, Waste heat recovery from hot dyed wastewater of acrylic fiber dyeing plants, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), 2001

Research Areas

Mechanical Engineering, Energy, Renewable Energy Systems, Thermodynamics, Thermal Systems, Engineering and Technology

Academic Titles / Tasks

Professor, Istanbul Technical University, Makina, Makina Mühendisliği, 2020 - Continues

Associate Professor, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), 2014 - 2020

Assistant Professor, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), 2010 - 2014

Research Assistant, Gaziantep University, Faculty Of Engineering, Department Of Mechanical Engineering (English), 2002

Advising Theses

- Abuşoğlu A., Energy and exergy analysis of a hospital trigeneration system a case study: Kartal Dr. Lütfi Kırdar training and research hospital, Postgraduate, M.BURAK(Student), 2019
- Abuşoğlu A., Genetic algorithm based optimization of renewable power production process, Postgraduate, Ö.FARUK(Student), 2019
- Abuşoğlu A., Cost optimization of biogas based power production:comprehensive thermoeconomic analysis and evaluation methods, Doctorate, D.HAYDARGİL(Student), 2019
- Abuşoğlu A., Energy recovery using organic rankine cycle (ORC) from municipal sewage sludge as sustainable energy resource, Postgraduate, N.SUAT(Student), 2019
- Abuşoğlu A., An analysis and assessment of energy production potential from municipal wastes in Erbil city, Iraq, Postgraduate, K.TAMOO(Student), 2015
- Abuşoğlu A., Life cycle assessment and analysis of heat and power production alternatives from digested sewage sludge, Postgraduate, H.ALI(Student), 2014
- Abuşoğlu A., Thermoelastic analysis of thick pressurized cylinders, Postgraduate, B.KANLIKAMA(Student), 2013
- Abuşoğlu A., Energy and life cycle analysis of HVAC applications in historical and modern buildings, Postgraduate, M.SAEED(Student), 2013
- Abuşoğlu A., Thermodynamic and thermoeconomic analysis and optimization of biogas usage in electricity and hydrogen productions from wastewater treatment systems, Postgraduate, S.DEMİR(Student), 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Advanced Exergy Analysis of Waste-Based District Heating Options through Case Studies**
Ozcan H. G., HEPBAŞLI A., Abuşoğlu A., Anvari-Moghaddam A.
ENERGIES, vol.14, no.16, 2021 (SCI-Expanded)
- II. **Municipal solid waste-based district heating and electricity production: A case study**
Tozlu A., Abuşoğlu A., Ozahi E., Anvari-Moghaddam A.
Journal of Cleaner Production, vol.297, 2021 (SCI-Expanded)
- III. **District heating and electricity production based on biogas produced from municipal WWTPs in Turkey: A comprehensive case study**
Abuşoğlu A., Tozlu A., Anvari-Moghaddam A.
ENERGY, vol.223, 2021 (SCI-Expanded)
- IV. **A comparative thermoeconomic analysis and optimization of two different combined cycles by utilizing waste heat source of an MSWPP**
ÖZAHİ E., Abuşoğlu A., TOZLU A.
ENERGY CONVERSION AND MANAGEMENT, vol.228, 2021 (SCI-Expanded)
- V. **A comparative thermoeconomic cost accounting analysis and evaluation of biogas engine-powered cogeneration**
Haydargil D., Abusoglu A.
ENERGY, vol.159, pp.97-114, 2018 (SCI-Expanded)
- VI. **Thermoeconomic multi-objective optimization of an organic Rankine cycle (ORC) adapted to an existing solid waste power plant**
Ozahi E., Tozlu A., Abusoglu A.
ENERGY CONVERSION AND MANAGEMENT, vol.168, pp.308-319, 2018 (SCI-Expanded)
- VII. **Thermoeconomic analysis and optimization of a Re-compression supercritical CO₂ cycle using waste heat of Gaziantep Municipal Solid Waste Power Plant**
Tozlu A., Abusoglu A., Ozahi E.

ENERGY, vol.143, pp.168-180, 2018 (SCI-Expanded)

- VIII. **Thermodynamic and thermoeconomic analyses of an organic Rankine cycle adapted gas turbine cycle using S-CO₂**
Tozlu A., Ozahi E., Abusoglu A.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.33, no.3, pp.917-928, 2018 (SCI-Expanded)
- IX. **Thermodynamic Performance Assessment of Different Fluids in a Typical Organic Rankine Cycle for Usage in Municipal Solid Waste Power Plant**
Ozahi E., Tozlu A., Abusoglu A.
ACTA PHYSICA POLONICA A, vol.132, no.3, pp.807-812, 2017 (SCI-Expanded)
- X. **Thermoeconomic Analysis and Assessment of Gaziantep Municipal Solid Waste Power Plant**
Tozlu A., Abusoglu A., Ozahi E.
ACTA PHYSICA POLONICA A, vol.132, no.3, pp.513-517, 2017 (SCI-Expanded)
- XI. **Exergy analyses of green hydrogen production methods from biogas-based electricity and sewage sludge**
Abusoglu A., Ozahi E., Kutlar A. I., Demir S.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.16, pp.10986-10996, 2017 (SCI-Expanded)
- XII. **A comparative thermodynamic and economic analysis and assessment of a conventional HVAC and a VRF system in a social and cultural center building**
Ozahi E., Abusoglu A., Kutlar A. I., Dagci O.
ENERGY AND BUILDINGS, vol.140, pp.196-209, 2017 (SCI-Expanded)
- XIII. **Life cycle assessment (LCA) of digested sewage sludge incineration for heat and power production**
Abusoglu A., Ozahi E., Kutlar A. I., Al-jaf H.
JOURNAL OF CLEANER PRODUCTION, vol.142, pp.1684-1692, 2017 (SCI-Expanded)
- XIV. **Energy and economic analyses of models developed for sustainable hydrogen production from biogas-based electricity and sewage sludge**
Abusoglu A., Demir S., Ozahi E.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.31, pp.13426-13435, 2016 (SCI-Expanded)
- XV. **Geothermal energy use in absorption precooling for Claude hydrogen liquefaction cycle**
Kanoglu M., Yilmaz C., Abusoglu A.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.26, pp.11185-11200, 2016 (SCI-Expanded)
- XVI. **Waste to energy technologies for municipal solid waste management in Gaziantep**
Tozlu A., Ozahi E., Abusoglu A.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.54, pp.809-815, 2016 (SCI-Expanded)
- XVII. **Exergetic cost evaluation of hydrogen production powered by combined flash-binary geothermal power plant**
Yilmaz C., Kanoglu M., Abusoglu A.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.40, no.40, pp.14021-14030, 2015 (SCI-Expanded)
- XVIII. **Thermoeconomic cost evaluation of hydrogen production driven by binary geothermal power plant**
Yilmaz C., Kanoglu M., Abusoglu A.
GEOTHERMICS, vol.57, pp.18-25, 2015 (SCI-Expanded)
- XIX. **Thermodynamic analysis and life cycle assessment of the heating strategies in historical buildings: a case study**
Abusoglu A., Sedeeq M. S.
INTERNATIONAL JOURNAL OF EXERGY, vol.14, no.1, pp.60-82, 2014 (SCI-Expanded)
- XX. **Comparative exergoenvironmental analysis and assessment of various residential heating systems**
Abusoglu A., Sedeeq M. S.
ENERGY AND BUILDINGS, vol.62, pp.268-277, 2013 (SCI-Expanded)
- XXI. **Thermoeconomic assessment of a sustainable municipal wastewater treatment system**
Abusoglu A., Demir S., Kanoglu M.
RENEWABLE ENERGY, vol.48, pp.424-435, 2012 (SCI-Expanded)

- XXII. **Exergoeconomic assessment of a geothermal assisted high temperature steam electrolysis system**
 Kanoglu M., Ayanoglu A., Abusoglu A.
 ENERGY, vol.36, no.7, pp.4422-4433, 2011 (SCI-Expanded)
- XXIII. **Exergy-based industrial ecology assessment of integrated and separated power and heat production systems**
 Abusoglu A., Kanoglu M.
 INTERNATIONAL JOURNAL OF EXERGY, vol.9, no.1, pp.99-111, 2011 (SCI-Expanded)
- XXIV. **Exergoeconomic analysis and optimization of combined heat and power production: A review**
 Abusoglu A., Kanoglu M.
 RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.13, no.9, pp.2295-2308, 2009 (SCI-Expanded)
- XXV. **Allocation of Emissions for Power and Steam Production Based on Energy and Exergy in Diesel Engine Powered Cogeneration**
 Abusoglu A., Kanoglu M.
 ENERGY & FUELS, vol.23, pp.1526-1533, 2009 (SCI-Expanded)
- XXVI. **Exergetic and thermoeconomic analyses of diesel engine powered cogeneration: Part 1- Formulations**
 Abusoglu A., Kanoglu M.
 APPLIED THERMAL ENGINEERING, vol.29, pp.234-241, 2009 (SCI-Expanded)
- XXVII. **Exergetic and thermoeconomic analyses of diesel engine powered cogeneration: Part 2-Application**
 Abusoglu A., Kanoglu M.
 APPLIED THERMAL ENGINEERING, vol.29, pp.242-249, 2009 (SCI-Expanded)
- XXVIII. **First and second law analysis of diesel engine powered cogeneration systems**
 Abusoglu A., Kanoglu M.
 ENERGY CONVERSION AND MANAGEMENT, vol.49, no.8, pp.2026-2031, 2008 (SCI-Expanded)
- XXIX. **Performance characteristics of a Diesel engine power plant**
 Kanoglu M., Isik S., Abusoglu A.
 ENERGY CONVERSION AND MANAGEMENT, vol.46, pp.1692-1702, 2005 (SCI-Expanded)

Articles Published in Other Journals

- I. **GEO THERMAL ENERGY USE IN HYDROGEN PRODUCTION**
 YILMAZ C., KANOĞLU M., ABUŞOĞLU A.
 Journal of Thermal Engineering, vol.2, no.2, pp.699-708, 2015 (Scopus)

Books & Book Chapters

- I. **Thermoeconomic Optimization of Hydrogen Production and Liquefaction by Geothermal Power**
 YILMAZ C., KANOĞLU M., ABUŞOĞLU A.
 in: Exergy for A Better Environment and Improved Sustainability 2, Fethi Aloui Ibrahim Dincer, Editor, Springer, Cham, pp.951-966, 2018

Refereed Congress / Symposium Publications in Proceedings

- I. **Energy and Exergy Analysis of a Fluidized Bed Sewage Sludge Incineration Plant**
 ABUŞOĞLU A., ATAY N. S., TOZLU A.
 The International Conference of Materials and Engineering Technology (TICMET 2020), Gaziantep, Turkey, 5 - 07 November 2020
- II. **Producing Bio-electricity and Bio-heat from Urban Sewage Sludge in Turkey Using a Two-**

StageProcess

ABUŞOĞLU A., MOGHADDAM A. A., GUERRERO J.

Proc. of the 5th International Conference on Power Generation Systems and Renewable Energy Technologies (PGSRET), 26 - 27 August 2019

- III. **An Updated Portrait of Numerical Analyses on Spout-Fluidized Bed Incineration Systems**
ÖZAHİ E., TOZLU A., ABUŞOĞLU A., ÇUTAY A.
Proceedings of the 2nd International Conference on Design, Simulation, Manufacturing: The Innovation Exchange, DSMIE-2019, 11 - 14 June 2019
- IV. **Türkiye’de Hayvansal Atıktan Elde Edilen Biyogaza Bağlı Bölgesel Elektrik Ve Isı Üretiminin Bir Portresi**
MAVİGÖK B., ABUŞOĞLU A., MOGHADDAM A. A., GUERRERO J.
6th International Multidisciplinary Studies Congress, 26 - 27 April 2019
- V. **Bir Akışkan Yataklı Atık Su Çamuru Yakma Tesisinin Termodinamik Analizi ve Değerlendirmesi**
ATAY N. S., ABUŞOĞLU A.
6th International Multidisciplinary Studies Congress, 26 - 27 April 2019
- VI. **Thermodynamic Optimization of a Biogas Engine Powered Cogeneration System with Using Genetic Algorithm**
KURT Ö. F., ABUŞOĞLU A.
Uluslararası GAP Yenilenebilir Enerji Ve Enerji Verimliliği Kongresi - 2018, Şanlıurfa, Turkey, 10 - 12 May 2018, pp.218
- VII. **A Portrait of Municipal Wastewater Treatment Systems in Turkey as Self-sustaining Renewable Energy Producers**
ABUŞOĞLU A.
8th International 100 Renewable Energy Conference, İstanbul, Turkey, 7 - 09 May 2018, pp.30-34
- VIII. **Application and Comparison of Exergetic Cost Theory and Wonerger Methods to a Biogas Engine Powered Cogeneration**
HAYDARGİL D., ABUŞOĞLU A.
8th International 100 Renewable Energy Conference, İstanbul, Turkey, 7 - 09 May 2018, pp.100-106
- IX. **Energy and Exergy Analysis of a Hospital Trigeneration System**
ÖZGÖZTAŞI M. B., ABUŞOĞLU A.
8th International 100 Renewable Energy Conference, İstanbul, Turkey, 7 - 09 May 2018, pp.84-89
- X. **A Thermodynamic Comparison of Gas Turbine, Kalina and Organic Rankine Cycles in frame of Waste Heat Recovery**
TOZLU A., ÖZAHİ E., ABUŞOĞLU A.
4th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESSEN-2017), 4 - 08 October 2017
- XI. **Thermoeconomic Analyses and Assessment of Combined Systems: GT-ORC and GT-KAL cycle**
TOZLU A., ÖZAHİ E., ABUŞOĞLU A.
4th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESSEN-2017), 4 - 08 October 2017
- XII. **Auxiliary Heat and Power Productions in a Sewage Treatment Facility**
ABUŞOĞLU A., ÖZAHİ E., TOZLU A.
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Budapest, Hungary, 3 - 07 May 2017
- XIII. **Environmental Impact Assessment of Sewage Sludge Use in Energy Recovery**
ABUŞOĞLU A., ÖZAHİ E., TOZLU A.
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Budapest, Hungary, 3 - 07 May 2017
- XIV. **Energy and Exergy Analyses of a Gas Turbine Developed for Heat Recovery in a MSW Power Plant**
TOZLU A., ÖZAHİ E., ABUŞOĞLU A.
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Budapest, Hungary, 3 - 07 May

2017

- XV. **A Developed Closed-Cycle GT Using Transcritical CO₂ for WHR in a Typical MSW Power Plant**
TOZLU A., ÖZAHİ E., ABUŞOĞLU A.
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Budapest, Hungary, 3 - 07 May 2017
- XVI. **Influence of Inner Geometry of Pipe Fittings on Pressure Drop in Steady Pipe Flow**
ÖZAHİ E., TOZLU A., ABUŞOĞLU A., KUTLAR A. İ.
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Budapest, Hungary, 3 - 07 May 2017
- XVII. **Thermodynamic Analyses of a Coal-Fired Power Plant in Izmir, Turkey**
ÖZAHİ E., TOZLU A., ABUŞOĞLU A., KUTLAR A. İ.
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Budapest, Hungary, 3 - 07 May 2017
- XVIII. **Thermodynamic Performance Assessment of Different Fluids in a Typical Organic Rankine Cycle for Usage in Municipal Solid Waste Power Plant**
ÖZAHİ E., TOZLU A., ABUŞOĞLU A.
3rd INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESSEN-2016), 19 - 24 October 2016
- XIX. **Thermoeconomic Analysis and Assessment of Gaziantep Municipal Solid Waste Power Plant**
TOZLU A., ÖZAHİ E., ABUŞOĞLU A.
3rd INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESSEN-2016), 19 - 24 October 2016
- XX. **Energetic and exergetic analyses of a solid waste power plant using Aspen Plus**
TOZLU A., ÖZAHİ E., ABUŞOĞLU A.
The 2016 International Conference on Energy, Environment, Ecosystems, and Development, EEED 2016, 28 - 30 May 2016
- XXI. **An adapted organic Rankine cycle ORC in Gaziantep Municipal Solid Waste Power Plant**
ÖZAHİ E., TOZLU A., ABUŞOĞLU A.
The 2016 International Conference on Energy, Environment, Ecosystems, and Development, EEED 2016, 28 - 30 May 2016
- XXII. **A portrait of sewage sludge use for sustainable energy recovery potential in Turkey in the frame of EU environmental legislations**
ABUŞOĞLU A., ÖZAHİ E., TOZLU A.
The 2016 International Conference on Energy, Environment, Ecosystems, and Development, EEED 2016, 28 - 30 May 2016
- XXIII. **A General View on Municipal Solid Waste Management in Gaziantep**
TOZLU A., ÖZAHİ E., ABUŞOĞLU A.
INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SCIENCE AND TECHNOLOGY - ICOEST 2015, 9 - 13 September 2015
- XXIV. **Thermoeconomic Optimization of Hydrogen Production by A Flash Binary Geothermal Power Plant**
YILMAZ C., KANOĞLU M., ABUŞOĞLU A.
INTERNATIONAL CONFERENCE ON ADVANCED TECHNOLOGY AND SCIENCES - ICAT 2015, 4 - 07 August 2015
- XXV. **Thermoeconomic Optimization of Hydrogen Production and Liquefaction by Geothermal Power**
YILMAZ C., KANOĞLU M., ABUŞOĞLU A.
7th INTERNATIONAL ENERGY, EXERGY AND ENVIRONMENT SYMPOSIUM, 27 - 30 April 2015
- XXVI. **Jeotermal Destekli Hidrojen Sıvılaştırma Çevriminin Termodinamik ve Termoekonomik Analizi**
YILMAZ C., KANOĞLU M., ABUŞOĞLU A.
12. ULUSAL TESİSAT MÜHENDİSLİĞİ KONGRESİ, Turkey, 8 - 11 April 2015

Other Publications

- I. **Comparison of five developed power cycles in the frame of waste heat recovery**
Tozlu A., Abuşoğlu A., Özahi E.
Other, pp.1-9, 2021

Supported Projects

Abuşoğlu A., Project Supported by Public Organizations in Other Countries, Green and Flexible Heating/Cooling and Power Production in Turkey, 2019 - 2022

Abuşoğlu A., Özahi E., TUBITAK Project, BİYOBOZUNUR KATI ATIK TESİSLERİNİN TERMODİNAMİK, TERMOEKONOMİK ANALİZ VE OPTİMİZASYONLARI ÇERÇEVESİNDE YENİLENEBİLİR ENERJİ POTANSİYELLERİNİN ARAŞTIRILMASI VE SIFIR ATIK YAKLAŞIMIYLA SÜRDÜRÜLEBİLİR MODELLERİN GELİŞTİRİLEBİLMESİ, 2014 - 2017

Abuşoğlu A., Kanoğlu M., TUBITAK Project, Jeotermal Enerjinin Hidrojen Üretimi ve Sıvılaştırılmasında Kullanımının Termoeconomik Analizi Optimizasyonu ve Yaşam Döngü Maliyet Analizi, 2013 - 2015

Abuşoğlu A., Kanoğlu M., TUBITAK Project, ATIK SU ARITMA TESİSLERİNDEN ELDE EDİLEN BİYOGAZIN ELEKTRİK VE HİDROJEN ÜRETİMİNDE KULLANIMININ TERMODİNAMİK TERMOEKONOMİK ANALİZ VE OPTİMİZASYONU, 2010 - 2012

Metrics

Publication: 59

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H-Index (Scopus): 18