

Prof. ZUHAL OKTAY COŞKUN

Personal Information

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Research Areas

Mechanical Engineering, Energy, Conventional Energy Systems and Their Technology, Alternative Energy Resources, Solar energy, Engineering and Technology

Academic Titles / Tasks

Professor, Recep Tayyip Erdogan University, Mühendislik Fak., Enerji Sistemleri Müh. , 2012 - Continues

Academic and Administrative Experience

Recep Tayyip Erdogan University, 2012 - 2015

Courses

Yakma teknolojileri, Postgraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015

Jury Memberships

Post Graduate, TEZ SAVUNMA , KTÜ, December, 2016

Appointment to Academic Staff-Assistant Professorship, Yard. Doç. Jüri üyeliği, RTEÜ, June, 2015

Associate Professor Exam, Doçentlik sınav jürisi, rteü, June, 2015

Post Graduate, Tez Savunma Jürisi, RTEÜ, May, 2015

Academic Staff Examination, Akademik personel sınavında başkanlık, rteü, March, 2015

Appointment to Academic Staff-Assistant Professorship, Doç. Jüri üyeliği, RTEÜ, June, 2014

Appointment to Academic Staff-Assistant Professorship, Yrd Doc.atama Jürisi, RTEÜ, June, 2013

Appointment to Academic Staff-Assistant Professorship, Yrd Doc.atama Jürisi, RTEÜ, May, 2013

Doctorate, Tez Savunma Jürisi, KTÜ, May, 2013

Appointment to Academic Staff-Assistant Professorship, Yrd Doc.atama Jürisi, RTEÜ, February, 2013

Appointment to Academic Staff-Assistant Professorship, Yrd Doc.atama Jürisi, RTEÜ, April, 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. Sensitivity analysis of implicit correlations for photovoltaic module temperature: A review**
Coskun C., TOYGAR U., Sarpdag O., Oktay Z.
JOURNAL OF CLEANER PRODUCTION, vol.164, pp.1474-1485, 2017 (SCI-Expanded)

- II. **A new approach to calculation of energy demand and amount of emission according to different indoor temperature**
Erturk M., Oktay Z., COSKUN C., Kilic G. A., DASDEMIR A.
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.7, no.3, pp.395-408, 2015 (SCI-Expanded)
- III. **Comparing advanced exergetic assessments of two geothermal district heating systems for residential buildings**
Kecebas A., COSKUN C., Oktay Z., Hepbasli A.
ENERGY AND BUILDINGS, vol.81, pp.141-151, 2014 (SCI-Expanded)
- IV. **A new approach to determine the outdoor temperature distributions for building energy calculations**
COSKUN C., Erturk M., Oktay Z., Hepbasli A.
ENERGY CONVERSION AND MANAGEMENT, vol.78, pp.165-172, 2014 (SCI-Expanded)
- V. **Change in heating energy requirements for various interior space temperatures: A case study of Karabuk**
ERTURK M., KILIC G. A., Çay Y., COSKUN C., OKTAY COŞKUN Z.
Energy Education Science and Technology Part A:ENERGY EDUCATION SCIENCE AND TECHNOLOGY PART A-ENERGY SCIENCE AND RESEARCH, vol.31, no.4, pp.1983-1990, 2013 (SCI-Expanded)
- VI. **Estimation of the Monthly Based Hourly Wind Speed Characteristics and the Generated Power Characteristics for Developing Bidding Strategies in an Actual Wind Farm: A Case Study**
Akyuz E., Demiral D., COSKUN C., Oktay Z.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.38, no.2, pp.263-275, 2013 (SCI-Expanded)
- VII. **Performance assessment of a novel hybrid district energy system**
COSKUN C., Oktay Z., DINCER I.
APPLIED THERMAL ENGINEERING, vol.48, pp.268-274, 2012 (SCI-Expanded)
- VIII. **Investigation of biogas and hydrogen production from waste water of milk-processing industry in Turkey**
COSKUN C., Bayraktar M., Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.37, no.21, pp.16498-16504, 2012 (SCI-Expanded)
- IX. **Performance investigation of hydrogen production from a hybrid wind-PV system**
Akyuz E., Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.37, no.21, pp.16623-16630, 2012 (SCI-Expanded)
- X. **Investigation of environmental and exergetic performance for coal-preparation units in cement production processes**
Sogut Z., Oktay Z., Karakoc H., Hepbasli A.
ENERGY, vol.46, no.1, pp.72-77, 2012 (SCI-Expanded)
- XI. **Thermodynamic analyses and case studies of geothermal based multi-generation systems**
COSKUN C., Oktay Z., Dinçer I.
JOURNAL OF CLEANER PRODUCTION, vol.32, pp.71-80, 2012 (SCI-Expanded)
- XII. **A novel approach for estimation of photovoltaic exergy efficiency**
Akyuz E., COSKUN C., Oktay Z., DINCER I.
ENERGY, vol.44, no.1, pp.1059-1066, 2012 (SCI-Expanded)
- XIII. **Investigation of a hybrid solar and geothermal driven absorption cooling system for district applications**
COSKUN C., Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF EXERGY, vol.11, no.2, pp.205-215, 2012 (SCI-Expanded)
- XIV. **A case study of hybrid wind-solar power system for reduction of CO₂ emissions**
Akyuz E., Oktay Z., Dinçer I.
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.4, no.1, pp.52-67, 2012 (SCI-Expanded)
- XV. **Performance evaluations of a geothermal power plant**
Coskun C., Oktay Z., DINCER I.
APPLIED THERMAL ENGINEERING, vol.31, pp.4074-4082, 2011 (SCI-Expanded)

- XVI. **Modified exergoeconomic modeling of geothermal power plants**
Coskun C., Oktay Z., DINCER I.
ENERGY, vol.36, no.11, pp.6358-6366, 2011 (SCI-Expanded)
- XVII. **Energy analysis of hydrogen production using biogas-based electricity**
Coskun C., Akyuz E., Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.36, no.17, pp.11418-11424, 2011 (SCI-Expanded)
- XVIII. **Hydrogen production probability distributions for a PV-electrolyser system**
Akyuz E., Coskun C., Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.36, no.17, pp.11292-11299, 2011 (SCI-Expanded)
- XIX. **A new approach for predicting cooling degree-hours and energy requirements in buildings**
Oktay Z., Coskun C., DINCER I.
ENERGY, vol.36, no.8, pp.4855-4863, 2011 (SCI-Expanded)
- XX. **Estimation of monthly solar radiation distribution for solar energy system analysis**
Coskun C., Oktay Z., DINCER I.
ENERGY, vol.36, no.2, pp.1319-1323, 2011 (SCI-Expanded)
- XXI. **Impact assessment of CO₂ emissions caused by exergy losses in the cement sector**
Sogut Z., Oktay Z., Karakoc H.
INTERNATIONAL JOURNAL OF EXERGY, vol.9, no.3, pp.280-296, 2011 (SCI-Expanded)
- XXII. **Investigation of some renewable energy and exergy parameters for two Geothermal District Heating Systems**
Coskun C., Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF EXERGY, vol.8, no.1, pp.1-15, 2011 (SCI-Expanded)
- XXIII. **Energetic and exergetic performance evaluation of the quadruple-effect evaporator unit in tomato paste production**
Sogut Z., Ilten N., Oktay Z.
ENERGY, vol.35, no.9, pp.3821-3826, 2010 (SCI-Expanded)
- XXIV. **Mathematical modeling of heat recovery from a rotary kiln**
Sogut Z., Oktay Z., Karakoc H.
APPLIED THERMAL ENGINEERING, vol.30, pp.817-825, 2010 (SCI-Expanded)
- XXV. **THERMOECONOMIC ANALYSIS OF FARINE MILL IN DRY TYPE CEMENT PRODUCTION**
Sogut Z., Oktay Z., Karakoc H., YORU Y.
ISI BILIMI VE TEKNIGI DERGISI-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.30, no.1, pp.59-72, 2010 (SCI-Expanded)
- XXVI. **A new approach for simplifying the calculation of flue gas specific heat and specific exergy value depending on fuel composition**
Coskun C., Oktay Z., Ilten N.
ENERGY, vol.34, no.11, pp.1898-1902, 2009 (SCI-Expanded)
- XXVII. **Energetic and exergetic assessment of a trass mill process in a cement plant**
Sogut M. Z., Oktay Z., Hepbasli A.
ENERGY CONVERSION AND MANAGEMENT, vol.50, no.9, pp.2316-2323, 2009 (SCI-Expanded)
- XXVIII. **New energy and exergy parameters for geothermal district heating systems**
Coskun C., Oktay Z., DINCER I.
APPLIED THERMAL ENGINEERING, vol.29, pp.2235-2242, 2009 (SCI-Expanded)
- XXIX. **Exergoeconomic analysis of the Gonen geothermal district heating system for buildings**
Oktay Z., DINCER I.
ENERGY AND BUILDINGS, vol.41, no.2, pp.154-163, 2009 (SCI-Expanded)
- XXX. **Investigation of coal-fired power plants in Turkey and a case study: Can plant**
Oktay Z.
APPLIED THERMAL ENGINEERING, vol.29, pp.550-557, 2009 (SCI-Expanded)
- XXXI. **Investigation of effect of varying dead-state temperatures on energy and exergy efficiencies of a Raw Mill process in a cement plant**

- Sogut Z., Oktay Z., Hepbasli A.
INTERNATIONAL JOURNAL OF EXERGY, vol.6, no.5, pp.655-670, 2009 (SCI-Expanded)
- XXXII. **The techno-economic and environmental aspects of a hybrid PV-diesel-battery power system for remote farm houses**
Akyuz E., Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.1, pp.392-404, 2009 (SCI-Expanded)
- XXXIII. **Energetic and exergetic performance investigation of the Bigadic Geothermal District Heating System in Turkey**
Oktay Z., Coskun C., DINCER I.
ENERGY AND BUILDINGS, vol.40, no.5, pp.702-709, 2008 (SCI-Expanded)
- XXXIV. **Energetic, exergetic and environmental assessments of the Edremit Geothermal District Heating System**
OKTAY COŞKUN Z., DINCER I.
ASHRAE JOURNAL, vol.114, no.1, pp.116-127, 2008 (SCI-Expanded)
- XXXV. **Energy and exergy analyses in a thermal process of a production line for a cement factory and applications**
Sogut Z., Oktay Z.
INTERNATIONAL JOURNAL OF EXERGY, vol.5, no.2, pp.218-240, 2008 (SCI-Expanded)
- XXXVI. **Geothermal district heating in Turkey: The Gonen case study**
Oktay Z., ASLAN A.
GEOTHERMICS, vol.36, no.2, pp.167-182, 2007 (SCI-Expanded)
- XXXVII. **Energetic, exergetic, economic and environmental assessments of the bigadic geothermal district heating system as a potential green solution**
Oktay Z., DINCER I.
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.4, no.5, pp.549-569, 2007 (SCI-Expanded)
- XXXVIII. **Energy and exergy analyses of a raw mill in a cement production**
UTLU Z., Söğüt Z., HEPBASLI A., Oktay Z.
APPLIED THERMAL ENGINEERING, vol.26, pp.2479-2489, 2006 (SCI-Expanded)
- XXXIX. **Olive cake as a biomass fuel for energy production**
Oktay Z.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.28, no.4, pp.329-339, 2006 (SCI-Expanded)
- XL. **Performance evaluation of a heat pump assisted mechanical opener dryer**
Oktay Z., HEPBASLI A.
ENERGY CONVERSION AND MANAGEMENT, vol.44, no.8, pp.1193-1207, 2003 (SCI-Expanded)
- XLI. **Utilization of olive cake as a potential energy source in Turkey**
HEPBASLI A., AKDENİZ R., VARDAR-SUKAN F., Oktay Z.
ENERGY SOURCES, vol.25, no.5, pp.405-417, 2003 (SCI-Expanded)
- XLII. **Testing of a heat-pump-assisted mechanical opener dryer**
Oktay Z.
APPLIED THERMAL ENGINEERING, vol.23, no.2, pp.153-162, 2003 (SCI-Expanded)

Articles Published in Other Journals

- I. **Energetic, environmental and economic aspects of a hybrid renewable energy system: A case study**
AKYUZ E., OKTAY COŞKUN Z., DINCER I.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.6, pp.44-54, 2011 (Scopus)

Books & Book Chapters

- I. **Energy analysis of hydrogen production from a hybrid wind turbine-electrolyzer system**
Akyüz E., OKTAY COŞKUN Z., Dinçer İ.
in: Progress in Exergy, Energy, and the Environment, İbrahim Dinçer, Editor, Springer International Publishing, Londra, pp.377-384, 2014
- II. **Prediction of daily average global solar radiation and parabolic monthly irradiation model parameters for Turkey**
OKTAY COŞKUN Z., COSKUN C., ERTURK M.
in: Progress in Exergy, Energy, and the Environment, İbrahim Dinçer, Editor, Springer International Publishing, Londra, pp.867-874, 2014
- III. **Investigating the exergetic and environmental effects of subcooling and superheating processes on the performance of direct expansion systems**
Söğüt Z., Karakoç H., OKTAY COŞKUN Z., HEPBASLI A.
in: Progress in Exergy, Energy, and the Environment, İbrahim Dinçer, Editor, Springer International Publishing, Londra, pp.713-722, 2014
- IV. **New parameters for reduction of heating-based greenhouse gas emissions: A case study**
COSKUN C., ERTURK M., OKTAY COŞKUN Z., DINCER I.
in: Causes, Impacts and Solutions to Global Warming, İbrahim Dinçer, Editor, Springer New Basic Books, New York, New York, pp.1067-1076, 2013
- V. **A new parameter for comparison of flue gas enthalpy values: Flue gas petrol equivalence coefficient**
COSKUN C., OKTAY COŞKUN Z.
in: Handbook of Sustainable Energy, Lee Cho, Editor, Nova Science Publishers, New York, pp.707-712, 2011

Refereed Congress / Symposium Publications in Proceedings

- I. **Isıtma ve Soğutma Yüklerindeki Değişimin Uzun Dönemli Tahmini: Karabük Örneği**
COŞKUN C., ERTÜRK M. A. E., BALCI K., OKTAY COŞKUN Z.
1st International Conference on Energy Systems Engineering, (ICESE'17) 2017, Karabük, Turkey, 2 - 04 November 2017, pp.60-65
- II. **INVESTIGATION OF POWER PLANT WASTE HEAT UTILIZATION IN BIOGAS BASED ELECTRICITY PRODUCTION PROCESS**
COŞKUN C., OKTAY COŞKUN Z., BALCI K., TOYGAR U., AKTAŞ M.
ISS2017 2nd International Science Symposium "Science Festival", Tbilisi, Georgia, 5 - 08 September 2017, pp.5
- III. **SENSITIVITY ANALYSIS OF ELECTRICITY PRODUCTION BASED HOURLY AND DAILY CO2 EMISSION ESTIMATION FOR TURKEY**
Coşkun C., Balci K., Aktaş M., Oktay Coşkun Z., Toygar U.
ISS2017 2nd International Science Symposium "Science Festival", Tbilisi, Georgia, 5 - 08 September 2017, pp.4

Activities in Scientific Journals

Journal of Renewable Energy, Editor, 2014 - Continues

Scientific Refereeing

Advances in Mechanical Engineering, SCI Journal, May 2016

RENEWABLE ENERGY, SCI Journal, April 2016

ENERGY, SCI Journal, March 2016

Journal of Cleaner Production, SCI Journal, March 2016

Journal of Cleaner Production, SCI Journal, February 2016

international journal of hydrogen energy, SCI Journal, February 2016

applied energy, SCI Journal, January 2016

Environmental Progress & Sustainable Energy, SCI Journal, January 2016

Metrics

Publication: 51

Citation (WoS): 992

Citation (Scopus): 1095

H-Index (WoS): 20

H-Index (Scopus): 21

Congress and Symposium Activities

A NOVEL APPROACH FOR ESTIMATION OF PV MODULE SURFACE TEMPERATURE, Attendee, Albania, 2016

ENERGY AND ECONOMIC ANALYSIS OF A HYDROELECTRIC POWER PLANT: A CASE STUDY, Attendee, Albania, 2016