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Personal Information

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International Researcher IDs

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Education

Doctorate, University of Illinois at Chicago, Mühendislik Fakültesi, İnşaat Ve Malzeme Mühendisliği, United States Of America 2006 - 2009

Postgraduate, Tulane University, İnşaat Ve Çevre Mühendisliği, Çevre Mühendisliği, United States Of America 2003 - 2005

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Environmental Engineering, Turkey 1999 - 2003

Foreign Languages

English, C1 Advanced

Research Areas

Environmental Engineering, Environmental Technology, Environmental Impact Assessment, Environmental Risk Assessment, Environmental Management, Engineering and Technology

Academic Positions

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2020 - Continues

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2013 - 2020

Lecturer PhD, Hacettepe University, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2010 - 2013

Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2015 - 2017

Supervised Theses

ŞENGÜL H., Ankara'nın kentsel metabolizması: Eryaman bölgesinde 3B CBS ile stoğa net katkı (SNK) indikatörü tahmini, Postgraduate, N.Reçber(Student), 2018

ŞENGÜL H., Ankara ilindeki konutlarda aydınlatma teknolojisi tercihleri, Postgraduate, M.Yükselen(Student), 2018
ŞENGÜL H., Bor minerali kritikliğinin dinamik değerlendirmesi, Postgraduate, C.Mermer(Student), 2018
ŞENGÜL H., ANDAÇ A. M., InP/ZnS, CuInS kuantum partikülleri ile CdSe/ZnS kuantum partiküllerinin faz transferinin farklı çevresel koşullarda karşılaştırılmalı değerlendirilmesi, Postgraduate, D.Marşan(Student), 2018
ŞENGÜL H., Etken maddesi klorheksidin glukonat ve benidamin hidroklorür olan likit farmasötik ürünün yaşam döngüsü değerlendirmesi, Postgraduate, Ç.Emre(Student), 2018
ŞENGÜL H., Enerji verimli araç kullanımının geri sekme etkisinin (rebound effect) gelir gruplarına göre karşılaştırılması, Postgraduate, M.Kutucu(Student), 2018
ŞENGÜL H., Aşağı Gediz Havzası nehir sularının kalitesinin değerlendirilmesi ve fizikokimyasal parametrelerin makroomurgasız üzerine etkilerinin incelenmesi, Postgraduate, G.Kıymaz(Student), 2018
ŞENGÜL H., Linyit yakıtlı pilot termik santral için baca gazı emisyon azaltma seçeneklerinin yaşam döngüsü değerlendirmesi, Postgraduate, E.Taşkın(Student), 2018
ŞENGÜL H., Fotovoltaik, tüketim geri bildirim ve enerji verimli sistemlerin adaptasyonu ile konutlarda azami elektrik tasarrufunun tahmini, Postgraduate, T.OLGU(Student), 2016
Şengül H., Aydınalp Köksal M., Life Cycle Assessment of Mining Phase of Lignite Used for Electricity Generation, Postgraduate, F.BAYRAK(Student), 2014

Journal articles indexed in SCI, SSCI, and AHCI

- I. **Cradle-to-gate life cycle assessment of a liquid pharmaceutical product through analysis of chemical production pathways**
Gunes C. E., ŞENGÜL H.
CLEAN TECHNOLOGIES AND ENVIRONMENTAL POLICY, vol.24, no.6, pp.1741-1755, 2022 (SCI-Expanded)
- II. **Addressing potential resource scarcity for boron mineral: A system dynamics perspective**
Mermer C., ŞENGÜL H.
JOURNAL OF CLEANER PRODUCTION, vol.270, 2020 (SCI-Expanded)
- III. **Survey assessment of organizational resiliency potential of a group of Seveso organizations in Turkey**
ŞENGÜL H., Marsan D., Gun T.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART O-JOURNAL OF RISK AND RELIABILITY, vol.233, no.3, pp.470-486, 2019 (SCI-Expanded)
- IV. **Comparative assessment of the phase transfer behaviour of InP/ZnS and CuInS/ZnS quantum dots and CdSe/ZnS quantum dots under varying environmental conditions**
MARŞAN D., ŞENGÜL H., Ozdil A. M.
ENVIRONMENTAL SCIENCE-NANO, vol.6, no.3, pp.879-891, 2019 (SCI-Expanded)
- V. **Transport of TiO₂ nanoparticles and their effects on the mobility of Cu in soil media**
KHAN S., ŞENGÜL H., Dan Z.
DESALINATION AND WATER TREATMENT, vol.131, pp.230-237, 2018 (SCI-Expanded)
- VI. **Development of Generalized Additive Models (GAMs) for Salmo rizeensis Endemic to North-Eastern Streams of Turkey**
REZAEİ R., ŞENGÜL H.
Turkish Journal Of Fisheries And Aquatic Sciences, 2018 (SCI-Expanded)
- VII. **Basic quantitative risk assessment of light sources: Comparison of light exposure assessment and endpoint life cycle impact assessment**
ŞENGÜL H.
HUMAN AND ECOLOGICAL RISK ASSESSMENT, vol.23, no.7, pp.1683-1702, 2017 (SCI-Expanded)
- VIII. **Experimental investigation of stability and transport of TiO₂ nanoparticles in real soil columns**
KHAN S., ŞENGÜL H.
DESALINATION AND WATER TREATMENT, vol.57, no.54, pp.26196-26203, 2016 (SCI-Expanded)
- IX. **A cradle to gate life cycle assessment of Turkish lignite used for electricity generation with site-**

specific data

ŞENGÜL H., BAYRAK F., KOKSAL M. A., ÜNVER B.

JOURNAL OF CLEANER PRODUCTION, vol.129, pp.478-490, 2016 (SCI-Expanded)

- X. **Analysis of hazardous material releases due to natural hazards in the United States**
ŞENGÜL H., Santella N., Steinberg L. J., Cruz A. M.
DISASTERS, vol.36, no.4, pp.723-743, 2012 (SSCI)
- XI. **An environmental impact assessment of quantum dot photovoltaics (QDPV) from raw material acquisition through use**
ŞENGÜL H., Theis T. L.
JOURNAL OF CLEANER PRODUCTION, vol.19, no.1, pp.21-31, 2011 (SCI-Expanded)
- XII. **Accidental Hazardous Material Releases With Human Impacts in the United States: Exploration of Geographical Distribution and Temporal Trends**
ŞENGÜL H., Santella N., Steinberg L. J., Chermak C.
JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE, vol.52, no.9, pp.920-925, 2010 (SCI-Expanded)
- XIII. **Petroleum and Hazardous Material Releases from Industrial Facilities Associated with Hurricane Katrina**
Santella N., Steinberg L. J., Sengul H.
RISK ANALYSIS, vol.30, no.4, pp.635-649, 2010 (SCI-Expanded)
- XIV. **Nanotechnology: Environmental Implications and Solutions by Louis Theodore and Robert G. Kunz**
ŞENGÜL H., THOMAS L T.
Journal Of Industrial Ecology, vol.12, pp.490-491, 2008 (SCI-Expanded)
- XV. **Natech risk and management: an assessment of the state of the art**
STEINBERG L. J., ŞENGÜL H., CRUZ A. M.
NATURAL HAZARDS, vol.46, no.2, pp.143-152, 2008 (SCI-Expanded)
- XVI. **Toward sustainable nanoproducts: An overview of nanomanufacturing methods**
Sengul H., Theis T. L., Ghosh S.
JOURNAL OF INDUSTRIAL ECOLOGY, vol.12, no.3, pp.329-359, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **Coefficient-based accounting of Net Additions to Stock (NAS) and associated embodied energy for Eryaman, Ankara**
Recher N., ŞENGÜL H.
INTERNATIONAL JOURNAL OF URBAN SUSTAINABLE DEVELOPMENT, vol.13, no.2, pp.317-333, 2021 (ESCI)
- II. **Türkiye’de Hızlı Kentleşen 10 İlin Kentleşme Seviyesi Tespiti Çalışması**
REÇBER N., ŞENGÜL H.
SOSYOEKONOMİ, vol.26, pp.49-63, 2018 (Peer-Reviewed Journal)
- III. **Doğu Karadeniz’de İşletmeye Açılan Bazı Nehir Tipi Hidroelektrik Santrallerinin Sucul Ekosistem ve Karadeniz Alabalığı (Salmo labrax) Populasyonları Üzerine Etkileri**
ZENGİN M., KURDOĞLU O., ŞENGÜL H., ÇAKMAK E.
Turkish Journal of Aquatic Science, vol.32, pp.189-207, 2017 (Peer-Reviewed Journal)

Books

- I. **QUANTUM DOT FATE AND TRANSPORT IN THE AQUEOUS MEDIUM: A LITERATURE REVIEW**
MARŞAN D., ŞENGÜL H.
in: Advances in Environmental Technology, ANDAÇ MÜGE, Editor, Hacettepe Üniversitesi, 2018
- II. **Chapter 41 – Life Cycle Inventory of Semiconductor Cadmium Selenide Quantum Dots for Environmental Applications**

ŞENGÜL H., THEIS T. L.

in: Nanotechnology Applications for Clean Water (Second Edition) Solutions for Improving Water Quality, Anita Street, Richard Sustich, Jeremiah Duncan, Nora Savage, Editor, Elsevier, 2014

III. Impacts of Emerging Technologies from a Life Cycle Perspective Life Cycle Implications of Quantum Dot Semiconductor Materials

ŞENGÜL H.

LAP Lambert Academic Publishing, 2010

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **Application of Existing IBM (Individual-Based Model) Model Instream for Trout Population Modeling of Salmo labrax in Solaklı River**
REZAEİ R., ŞENGÜL H., AKBULUT A., ZENGİN M., ÖZCAN AKPINAR İ.
13th International Symposium on Fisheries and Aquatic Sciences, 21 - 23 November 2018, (Summary Text)
- II. **Comparative assessment of phase transfer rates of three types of core-shell CdSe/ZnS, InP/ZnS, CuInSe/ZnS quantum dots from organic-to-water phase**
MARŞAN D., ŞENGÜL H., ANDAÇ ÖZDİL A. M.
1. ULUSLARARASI İÇMESUYU ve ATIKSU SEMPOZYUMU, 6 - 07 December 2018, (Summary Text)
- III. **Assessment of Net Additions to Stock and Embodied Energy for Eryaman District, Turkey via 3D GIS**
REÇBER N., ŞENGÜL H.
4th International Conference on Recycling and Reuse, İstanbul, Turkey, 24 - 26 October 2018, (Summary Text)
- IV. **LIFE CYCLE ASSESSMENT OF FLUE GAS EMISSION REDUCTION OPTIONS FOR LIGNITE-BASED PILOT THERMAL POWER PLANT**
TAŞKIN E., ŞENGÜL H.
SETAC EUROPE 24th LCA SYMPOSIUM, 24 - 26 September 2018, (Summary Text)
- V. **Ardışık Nehir Tipi Hidroelektrik Santrallerin Uzun-Dönemli, Kümülatif Etkilerinin Aktör Temelli Modelleme ile Araştırılması - Solaklı Havzası Durum Çalışması Arkaplanı**
ŞENGÜL H.
International EIA Conference, Turkey, 9 - 11 June 2013, (Full Text)
- VI. **Scenario analysis of environmental implications of adoption of QLEDs (Quantum dot based Light Emitting Diodes) in the United States in the next decade (2012-2022)**
ŞENGÜL H.
INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SCIENCE AND TECHNOLOGY, 18 - 21 June 2013, (Summary Text)
- VII. **Environmental aspects of applications of quantum dot based nanosensors**
ŞENGÜL H., THEIS T. L.
International Perspectives on Environmental Nanotechnology Conference, 07 August 2009 - 09 October 2008, (Full Text)

Funded Projects

Şengül H., İde S., Kaplan Can H., TUBITAK Project, Assessment of Photocatalytic Ozonation Treatment Efficiency Nanocomposite Recovery and Reuse for Mineralization of Nanoplastics with GO-TiO₂-Fe₃O₄ and Sepiolite-WO₃-Fe₃O₄ Nanocomposites, 2021 - 2023

ŞENGÜL H., TUBITAK Project, Inp/Zns, Cuins/Zns Kuantum Partikülleri İle Cdse/Zns Kuantum Partiküllerinin Farklı Ortam Koşullarında Taşınım Süreçlerinin Karşılaştırılmalı Değerlendirmesi, 2017 - 2018

ŞENGÜL H., REÇBER N., Project Supported by Higher Education Institutions, Çankaya ve Etimesgut Pilot Kentsel Bölgelerinin 3D GIS ile NAS İndikatörü Tahmini, 2017 - 2018

ŞENGÜL H., ZENGİN M., AKBULUT A., REZAEİ R., ÖZCAN AKPINAR İ., Project Supported by Higher Education Institutions,

Solaklı Havzasında Ekosisteme UzunDönemli Kümülatif Etkilerin inSTREAM Etmen Tabanlı Model ile Araştırılması, 2015 - 2018

ŞENGÜL H., BENLİ T. O., Project Supported by Higher Education Institutions, Fotovoltaik, tüketim geri bildirim ve enerji verimli sistemlerin adaptasyonu ile konutlarda azami elektrik tasarrufunun tahmini, 2015 - 2016

ŞENGÜL H., KHAN S., Project Supported by Higher Education Institutions, Toprak özelliklerinin TiO2 nanopartiküllerinin ve metal kirleticilerin toprakta taşınımına etkisinin incelenmesi, 2015 - 2015

Metrics

Publication: 30

Citation (WoS): 260

Citation (Scopus): 280

H-Index (WoS): 8

H-Index (Scopus): 7

Non Academic Experience

TÜBİTAK Başkanlık, Bilimsel Programlar Uzmanı

University of Illinois at Chicago, Asistan

Tulane University, Asistan