

## Prof. AYÇA TOKUÇ

### Personal Information

**Office Phone:** [+90 232 301 8497](tel:+902323018497)

**Email:** [ayca.tokuc@deu.edu.tr](mailto:ayca.tokuc@deu.edu.tr)

**Web:** [https://Dokuz Eylül Üniversitesi Mimarlık Fakültesi Mimarlık Bölümü](https://Dokuz Eylul Üniversitesi Mimarlık Fakültesi Mimarlık Bölümü)

**Address:** Dokuz Eylül Üniversitesi Faculty of Architecture Department of Architecture  
Tınaztepe Campus Doğu Caddesi No:209 Kuruçeşme İzmir



### International Researcher IDs

ScholarID: 0dMXSZ0AAAAJ

ORCID: 0000-0002-4988-3233

Publons / Web Of Science ResearcherID: L-1388-2019

ScopusID: 55317909000

Yoksis Researcher ID: 27681

### Education Information

Associate Degree, Anadolu University, Open Education Faculty, Department Of Wholesale And Retail Sales, Turkey 2014 - 2018

Doctorate, Dokuz Eylül University, Fen Bilimleri Enstitüsü, Building Construction and Technology (PhD), Turkey 2005 - 2013

Postgraduate, Dokuz Eylül University, Fen Bilimleri Enstitüsü, Building Construction and Technology (MSc) (with thesis), Turkey 2001 - 2005

Undergraduate, Middle East Technical University, Faculty Of Architecture, Department Of Architecture, Turkey 1995 - 2001

### Biography

*Ayça Tokuç is an architect, lecturer, and researcher. She got her bachelors' degree in the Architecture Department at Middle East Technical University, Ankara/Turkey in 2001, her M.Sc. degree in the Architecture Department at Dokuz Eylül University, İzmir/Turkey in 2005, PhD. degree in the Architecture Department at Dokuz Eylül University, İzmir/Turkey in 2013, She took Assoc.Prof. degree from Turkish Interuniversity Board in 2017 in the fields of "Control of Physical Environment" and "Construction Materials". She is still an academic member of the Department of Architecture at Dokuz Eylül University.*

*She has been involved in a number of collaborative projects to enhance the built environment and health in the city. Her research examines sustainable design as both a concept and in implementation in various scales including building and community scales. Her area of expertise is building science, especially energy and sustainability issues in the built environment. Her areas of interest include: low energy architecture, renewable energy, energy efficiency, building energy simulation, thermal energy storage, carbon in the built environment, biodesign, regenerative design, innovative design and climate change.*

*Her recent research focuses on growing and using microalgae on building facades from the point of energy consumption, thermal and visual comfort and circularity. Another recent project led to a patent on heat recovery ventilation.*

*She took part in the establishment of the first biodesign team in Turkey (www.biodesignteam.com). They are using living organisms to get inspiration for their designs and as a bio-collaborator in their projects. Their projects include recycling agricultural waste with fungi and using biocalcification process to generate materials, using slime mould pathfinding algorithms for transportation models.*

## Foreign Languages

English, C2 Mastery

## Dissertations

Doctorate, Use of Phase Change Materials in Building Elements for Thermal Energy Storage, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Building Construction and Technology (PhD), 2013

Postgraduate, Design Criteria for Energy Efficient Apartment Buildings in İzmir, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Yapı Bilgisi (YI) (Tezli), 2005

## Research Areas

Physical Urban Protection, Building materials

## Academic Titles / Tasks

Professor, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2023 - Continues

Associate Professor, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2017 - 2023

Assistant Professor, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2013 - 2017

Research Assistant, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2010 - 2013

Research Assistant, Dokuz Eylul University, Fen Bilimleri Enstitüsü, 2001 - 2010

## Academic and Administrative Experience

Assistant Manager of Research and Application Center, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2024 - Continues

Bilimsel etkinlik ve organizasyon komisyonu, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2023 - Continues

Chairperson of Department Strategic Planning Commission, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2023 - Continues

Head of the Department Bologna Commission, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2023 - Continues

Bölüm Akademik Teşvik Değerlendirme Komisyonu Üyesi, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2022 - Continues

Fakülte Kurulu Üyesi, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2022 - 2023

Rektörlük Akademik Teşvik Değerlendirme Komisyonu Üyesi, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2018 - 2022

Deputy Head of Department, Dokuz Eylul University, Mimarlık Fakültesi, Mimarlık Bölümü, 2014 - 2017

## Courses

ZERO CARBON SETTLEMENTS, Undergraduate, 2023 - 2024, 2022 - 2023, 2017 - 2018, 2016 - 2017, 2015 - 2016  
BUILDING APPLICATION PROJECT, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2019 - 2020, 2018 - 2019,  
2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014  
MSc Seminer, Postgraduate, 2022 - 2023, 2021 - 2022, 2019 - 2020, 2018 - 2019, 2015 - 2016, 2014 - 2015, 2013 - 2014  
MSC THESIS, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017,  
2015 - 2016, 2014 - 2015, 2013 - 2014  
INTRODUCTION TO BUILDING CONSTRUCTION I, Undergraduate, 2022 - 2023, 2021 - 2022, 2019 - 2020, 2018 - 2019,  
2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015  
M.Sc Research, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 -  
2017, 2015 - 2016, 2013 - 2014  
Sustainability Tools in Architecture, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2018 - 2019, 2017 - 2018,  
2015 - 2016, 2014 - 2015  
Energy and Flow Analysis in Buildings, Postgraduate, 2021 - 2022, 2020 - 2021, 2016 - 2017  
MİM 1602 YAPIM BİLGİSİNE GİRİŞ II, Undergraduate, 2016 - 2017, 2014 - 2015, 2013 - 2014  
MİM 2602 YAPIM BİLGİSİ II, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014  
MİM 2601 Yapı Bilgisi I, Undergraduate, 2016 - 2017  
MİM 2601 YAPIM BİLGİSİ I, Undergraduate, 2015 - 2016, 2014 - 2015

## Advising Theses

Tokuç A., Evaluation of possibilities to integrate photosynthetic organisms into building facades, Postgraduate,  
Y.YAMAN(Student), 2022  
Tokuç A., Biyotasarım ile üretilen miselyum kompozit yapı elemanlarının değerlendirilmesi, Postgraduate,  
S.NUR(Student), 2022  
Tokuç A., Başaran T., Experimental and numerical investigation of a heat recovery ventilation unit with phase change  
material for building facades, Doctorate, T.PEKDOĞAN(Student), 2021  
Tokuç A., Investigation of the effect of building elements on environmental comfort in 'nearly zero energy' office  
buildings via building energy simulation, Postgraduate, A.SENA(Student), 2019  
Tokuç A., Evaluation of special finishing materials used in hospital buildings particularly operating rooms in the context  
of constructional design criteria, Postgraduate, İ.ŞAHİN(Student), 2016  
Tokuç A., Bio adaptive facade elements, Postgraduate, İ.KÜKDAMAR(Student), 2016

## Jury Memberships

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Karabük Üniversitesi, June,  
2024  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Dokuz Eylül Üniversitesi, June,  
2024  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İzmir Yüksek Teknoloji  
Enstitüsü, June, 2024  
Associate Professor Exam, Associate Professor Exam, Dokuz Eylül Üniversitesi, May, 2024  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Hacettepe Üniversitesi, May,  
2024  
Associate Professor Exam, Associate Professor Exam, Dokuz Eylül Üniversitesi, January, 2024  
Post Graduate, Post Graduate, Yaşar Üniversitesi, January, 2024  
Associate Professor Exam, Associate Professor Exam, Dokuz Eylül Üniversitesi, January, 2024  
Associate Professor Exam, Associate Professor Exam, Dokuz Eylül Üniversitesi, January, 2024  
Post Graduate, Post Graduate, İzmir Yüksek Teknoloji Enstitüsü, December, 2022  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Dokuz Eylül Üniversitesi, June,

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effect of an algae integrated water wall on energy consumption and CO<sub>2</sub> emission**  
Altunacar N., EZAN M. A., Yaman Y., TOKUÇ A., Budakoğlu B., Köktürk G., Deniz İ.  
International Journal of Global Warming, vol.29, no.1-2, pp.121-138, 2023 (SCI-Expanded)
- II. **Experimental investigation on heat transfer and air flow behavior of latent heat storage unit in a facade integrated ventilation system**  
Pekdogan T., Tokuç A., Ezan M. A., Basaran T.  
JOURNAL OF ENERGY STORAGE, vol.44, 2021 (SCI-Expanded)
- III. **Closing water cycles in the built environment through nature-based solutions: The contribution of vertical greening systems and green roofs**  
Pearlmutter D., Pucher B., Calheiros C. S. C., Hoffmann K. A., Aicher A., Pinho P., Stracqualursi A., Korolova A., Pobric A., Galvão A., et al.  
Water (Switzerland), vol.13, no.16, 2021 (SCI-Expanded)
- IV. **Experimental investigation of a decentralized heat recovery ventilation system**  
Pekdogan T., Tokuç A., Ezan M. A., Basaran T.  
JOURNAL OF BUILDING ENGINEERING, vol.35, 2021 (SCI-Expanded)
- V. **Design approaches for retrofitting offices to reach nearly zero energy: A case study in the Mediterranean climate**  
Cildir A. S., Kokturk G., Tokuç A.  
ENERGY FOR SUSTAINABLE DEVELOPMENT, vol.58, pp.167-181, 2020 (SCI-Expanded)
- VI. **A general framework for adaptation strategies to sea level rise: the case of Turkey**  
Ercanli C., Savaşır G., Tokuç A., Altınörs Çırak A.  
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.18, pp.336-362, 2019 (SCI-Expanded)
- VII. **Biodesign as an innovative tool to decrease construction induced carbon emissions in the environment**  
Kirdok O., Altun T. D., Dokgöz G. D., Tokuç A.  
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.19, pp.127-144, 2019 (SCI-Expanded)
- VIII. **The effect of phase change material incorporated building wall on the CO<sub>2</sub> mitigation: a case study of Izmir, Turkey**  
Asker M., ALPTEKİN E., TOKUÇ A., EZAN M. A., Ganjehsarabi H.  
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.19, pp.54-75, 2019 (SCI-Expanded)
- IX. **Nature-based building solutions: circular utilization of photosynthetic organisms**  
Kirdok O., TOKUÇ A.  
ENERGY GENERATION AND EFFICIENCY TECHNOLOGIES FOR GREEN RESIDENTIAL BUILDINGS, vol.155, pp.233-258, 2019 (SCI-Expanded)
- X. **FROM COMPETITION TO IMPLEMENTATION: ASSET-BASED DEVELOPMENT IN THE CESME PENINSULA, TURKEY**  
Tokuç A., Güller E.  
JOURNAL OF ARCHITECTURAL AND PLANNING RESEARCH, vol.35, no.1, pp.47-68, 2018 (SSCI)
- XI. **Vision for wind energy with a smart grid in Izmir**  
KÖKTÜRK G. G., TOKUÇ A.  
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.73, pp.332-345, 2017 (SCI-Expanded)
- XII. **An evaluation methodology proposal for building envelopes containing phase change materials: the case of a flat roof in Turkey's climate zones**  
TOKUÇ A., Yesugey S. C., Basaran T.  
ARCHITECTURAL SCIENCE REVIEW, vol.60, no.5, pp.408-423, 2017 (AHCI)
- XIII. **An experimental and numerical investigation on the use of phase change materials in building**

**elements: The case of a flat roof in Istanbul**

Tokuç A., Basaran T., Yesugey S. C.

ENERGY AND BUILDINGS, vol.102, pp.91-104, 2015 (SCI-Expanded)

**XIV. Sustainability in the city scale to fight global warming**

Tokuç A., Köktürk G. G.

INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.3, pp.173-193, 2011 (SCI-Expanded)

**Articles Published in Other Journals**

- I. **Effects of photobioreactor façades on thermal and visual performance of an office in Izmir**  
Yaman Y., Altunacar N., Tokuç A., Köktürk G. G., Deniz Can İ., Ezan M. A.  
Eskişehir Technical University Journal of Science and and Technology A- Applied Sciences and Engineering, vol.23, pp.68-75, 2022 (Peer-Reviewed Journal)
- II. **Parametric Optimization of a Responsive Façade System for Daylight Performance**  
Kızılörenli E., Tokuç A.  
JOURNAL OF ARCHITECTURAL SCIENCES AND APPLICATIONS, vol.7, no.1, pp.72-81, 2022 (Peer-Reviewed Journal)
- III. **ANKARA İKLİMİNDE BİYOKÜTLE ÜRETEN BİR CEPHE ELEMANININ ENERJİ, AYDINLATMA VE ISIL KONFOR ÜZERİNE ETKİSİNİN PARAMETRİK ANALİZİ**  
Köktürk G. G., Yaman Y., Tokuç A.  
eksen, vol.3, no.1, pp.20-33, 2022 (Peer-Reviewed Journal)
- IV. **TOWARDS CARBON NEUTRAL SETTLEMENTS WITH ALGAE**  
Yaman Y., Tokuç A., Köktürk G. G.  
INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE, vol.0, no.25, pp.1-32, 2022 (Peer-Reviewed Journal)
- V. **Mimarlığın Doğa ile İlişkinde Yeni Bir Boyut: Biyotasarım**  
Özkaban F. F., Altun T. D., Tokuç A., Andiç Çakır Ö., Köktürk G. G., Şendemir A.  
Yapı, no.461, pp.48-53, 2020 (Peer-Reviewed Journal)
- VI. **World from children's eyes: This is our World!**  
Güller E., Tokuç A.  
International Journal of New Trends in Social Sciences, vol.4, no.1, pp.25-35, 2020 (Peer-Reviewed Journal)
- VII. **Alglerle Yeşeren Cepheler**  
Tokuç A., Köktürk G. G., Savaşır K.  
Mimarlık, vol.56, no.408, pp.59-63, 2019 (Peer-Reviewed Journal)
- VIII. **2D Numerical Investigation of the Flow Modul of a Latent Heat Thermal Energy Storage Tank**  
YILDIRIM N. H., KAHRAMAN Y. E., YILMAZ A. B., Alptekin E., TOKUÇ A., Ezan M. A., Erek A.  
Tesisat Mühendisliği, vol.2019, no.169, pp.7-14, 2019 (Peer-Reviewed Journal)
- IX. **Development of ecological biodesign products by bacterial biocalcification**  
Keskin Gündoğdu T., Deniz Can İ., Arıç A., Yılmazsoy B. T., Andiç Çakır Ö., Erdoğan A., Altun T. D., Tokuç A., Demirci B. F., Şendemir A., et al.  
Journal EJENS - European Journal of Engineering and Natural Sciences, vol.3, no.1, pp.17-25, 2019 (Peer-Reviewed Journal)
- X. **Evaluation of Surgical Units in Terms of Legislation and Design Criteria**  
Sahin I., Tokuç A.  
MEGARON, vol.13, no.2, pp.237-249, 2018 (ESCI)
- XI. **FINAL DECLARATION OF THE 1ST WORKSHOP ON BIODESIGN AT THE INTERSECTION OF CREATIVITY AND BIOENGINEERING**  
Deniz İ., Keskin Gündoğdu T., Tokuç A., Şendemir Ürkmez A., Köktürk G. G., Andiç Çakır Ö., Altun T. D.  
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.18, no.52, pp.7, 2016 (Peer-Reviewed Journal)
- XII. **Experimental data showing the thermal behavior of a flat roof with phase change material**

- TOKUÇ A., Basaran T., Yesugey S. C.  
DATA IN BRIEF, vol.5, pp.476-480, 2015 (ESCI)
- XIII. **Sağlık Yapılarında Yeşil Bina Değerlendirmesi**  
TOKUÇ A., KARAKAŞ G.  
Yapı, no.407, pp.98-102, 2015 (Peer-Reviewed Journal)
- XIV. **Yenilenebilir enerji alanında sosyal bilincin artırılması ISEM İzmir Yenilenebilir Enerji Müzesi**  
Köktürk G. G., Birol Akkurt H., Tokuç A.  
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.17, no.3, pp.191-199, 2015 (Peer-Reviewed Journal)
- XV. **From Competition to Application for Sustainability: The Solar Decathlon**  
Güller E., Tokuç A.  
Yapı, no.401, pp.170-174, 2015 (Peer-Reviewed Journal)
- XVI. **Yeniden Kullanılabilir Malzeme ile Mimarlık Deneyimleri**  
GÜLAY TAŞÇI B., TOKUÇ A.  
Ege Mimarlık, vol.25, no.89/90 2015 1/2, pp.24-29, 2015 (Peer-Reviewed Journal)
- XVII. **Sustainable Wave as a Legacy to London from the 2012 Olympics**  
TOKUÇ A., SAVAŞIR K.  
Civil and Environmental Research, vol.7, no.3/2015, pp.97-103, 2015 (Peer-Reviewed Journal)
- XVIII. **Enerji Etkin Cephelerde Nanoteknoloji**  
Tokuç A., Gülay Taşçı B.  
Yapı, no.397, pp.146-150, 2014 (Peer-Reviewed Journal)
- XIX. **Ege nin En Köklü Mimarlık Fakültesi Dokuz Eylül Mimarlık Bölümü**  
TOKUÇ A.  
İnsan, no.145, pp.68, 2014 (Non Peer-Reviewed Journal)
- XX. **Sürdürülebilir Üniversite Kavramı: Dünya'dan ve Türkiye'den Örnekler**  
KÖKTÜRK G. G., TOKUÇ A.  
ELECTRICA, pp.242-254, 2013 (ESCI)
- XXI. **Enerji Etkin Konut Tasarımında Tesisat Bileşenleri ile Birlikte Kullanılabilecek Yapı Elemanlarının Araştırılması**  
Tokuç A., Yıldızber Z. E.  
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.11, no.32, pp.31-42, 2009 (Peer-Reviewed Journal)
- XXII. **Bina Enerji Benzetim Araçları ve Seçim Ölçütleri**  
Tokuç A.  
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.11, no.32, pp.19-30, 2009 (Peer-Reviewed Journal)
- XXIII. **Gelecekte Rüzgardan Enerji Üretiminde Kullanılabilecek Yeni Teknolojiler**  
KÖKTÜRK G. G., TOKUÇ A.  
ELECTRICA, pp.254-258, 2009 (ESCI)
- XXIV. **Research on Architectural Design and Construction of Energy Efficient Apartment Buildings in İzmir**  
Tokuç A., Güzel N.  
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.10, no.1, pp.1-14, 2008 (Peer-Reviewed Journal)

## **Books & Book Chapters**

### **I. Potential of Bacterial Cellulose for Sustainable Cities: A Review and Bibliometric Analysis on Bacterial Cellulose**

Kale İ., Kırdök O., Bilgi E., Altun T. D., Tokuç A., Köktürk G. G., Özkaban F. F., Şendemir A., Andıç Çakır Ö., Hameş E. E. in: A Sustainable Green Future Perspectives on Energy, Economy, Industry, Cities and Environment, Suphi S. Onel,

Editor, Springer, Bern, pp.329-357, 2023

- II. **Design studies and applications of mycelium biocomposites in architecture**  
Kırdök O., Altun T. D., Dahy H., Strobel L., Hameş Tuna E. E., Köktürk G. G., Andiç Çakır Ö., Tokuç A., Özkaban F. F., Şendemir A.  
in: Biomimicry for Materials, Design and Habitats Innovations and Applications, Marjan Eggermont, Vikram Shyam and Aloysius F. Hepp, Editor, Elsevier Science, Oxford/Amsterdam, Amsterdam, pp.489-527, 2022
- III. **Potentials of Using Adaptive Materials for Sustainability: Building Skin Applications**  
Kale İ., Tokuç A.  
in: Mimarlık Bilimlerinde Araştırma ve Uygulamalar-I, Murat Dal, Editor, Livre de Lyon, Lyon, pp.81-102, 2021
- IV. **Environmental Problems and Solution Proposals from the Perspective of Secondary School Students**  
Güller E., Tokuç A., Köktürk G. G., Savaşır K.  
in: Environmentally-Benign Energy Solutions, İbrahim Dinçer, Can Özgür Çolpan, Mehmet Akif Ezan, Editor, Springer Nature, Basel, pp.3-37, 2020
- V. **Heating and Ventilation Performance of a Solar Chimney Designed in a Low-Cost Ecological Home**  
Baş H., Tokuç A.  
in: Environmentally-Benign Energy Solutions, İbrahim Dinçer, Can Özgür Çolpan, Mehmet Akif Ezan, Editor, Springer Nature, Basel, pp.211-227, 2020
- VI. **Experimental and Numerical Shortest Route Optimization in Generating a Design Template for a Recreation Area in Kadifekale**  
Köktürk G. G., Tokuç A., Altun T. D., Kale İ., Özkaban F. F., Andiç Çakır Ö., Şendemir A.  
in: Environmentally-Benign Energy Solutions, İbrahim Dinçer, Can Özgür Çolpan, Mehmet Akif Ezan, Editor, Springer Nature, Basel, pp.779-799, 2020
- VII. **YAŞAYAN YAPILAR: MİSELYUM VE MİMARLIK**  
SERTKAYA S. N., TOKUÇ A.  
in: Geleneksel ve Çağdaş Mimari Yapılar Üzerine Akademik Çalışmalar, Murat DAL, Editor, İKSAD Yayınevi, Ankara, pp.3-27, 2020
- VIII. **Nature and Architecture for Little Designers - I Learn from Nature, I Design for Nature...**  
Güller E., Tokuç A., Köktürk G. G., Savaşır K.  
Nobel Yayınevi, Ankara, 2019
- IX. **Nature-based building solutions: Circular utilization of photosynthetic organisms**  
Kırdök O., Tokuç A.  
in: Energy Generation and Efficiency Technologies for Green Residential Buildings, Ting Dacid S-K, Carriveau Rupp, Editor, IET The Institution of Engineering and Technology, Luton, pp.233-258, 2019
- X. **Biomimetic Facade Applications for a More Sustainable Future**  
Tokuç A., Özkaban F. F., Andiç Çakır Ö.  
in: Interdisciplinary Expansions in Engineering and Design With the Power of Biomimicry, Gulden Kokturk, Tutku Didem Akyol Altun, Editor, Intech, Rijeka, pp.77-99, 2018
- XI. **Numerical Simulation of Building Wall Integrated with Phase Change Material: A Case Study of a Mediterranean City Izmir, Turkey**  
Asker M., Alptekin E., Tokuç A., Ezan M. A., Ganjehsarabı H.  
in: The Role of Exergy in Energy and the Environment, Nizetic, Sandro; Papadopoulos, Agis, Editor, Springer Nature, Berlin, pp.757-768, 2018
- XII. **A New Approach for a Control System of an Innovative Building Integrated Photobioreactor**  
KÖKTÜRK G. G., ÜNAL A., TOKUÇ A.  
in: Exergetic, Energetic and Environmental Dimensions, Dinçer I, Çolpan C.O., Kizilkan O, Editor, Academic Press Elsevier, pp.71-85, 2017
- XIII. **Net Zero Energy Residential Building Architecture in the Future**  
Gönülol O., Tokuç A.  
in: Exergetic, Energetic and Environmental Dimensions, Dinçer I, Çolpan C.O., Kizilkan O, Editor, Academic Press, Massachusetts, pp.39-53, 2017
- XIV. **Implementing Sustainability in Higher Education Via Student Architectural Design Competitions in**

## Turkey

TOKUÇ A., GÜLLER E.

in: Developments in Science and Engineering, Recep Efe, Lia Matchavariani, Abdulkadir Yaldir, László Lévai, Editor, ST. KLIMENT OHRIDSKI UNIVERSITY PRESS, Sofija, pp.625-635, 2016

### XV. Enerji Etkin Tasarım Kriterleri

Tokuç A., Savaşır K., Alakavuk E., Çavka B., Zağpus Yiğitoğlu S., Altın M.

in: Sürdürülebilir Yapı Tasarımı Kılavuzu, KAHRAMAN İLKER, Editor, Mimarlar Odası İzmir Şubesi, İzmir, pp.18-65, 2015

### XVI. Yapı Kabuğu

ALAKAVUK E., TOKUÇ A., SAVAŞIR K.

in: Sürdürülebilir Yapı Tasarımı Kılavuzu, Kahraman, İlker, Editor, Mimarlar Odası İzmir Şubesi Yayınları, İzmir, pp.22-28, 2015

### XVII. Enerji

TOKUÇ A., KÖKTÜRK G. G., ERYIL B., ŞENCAMBAZ C., KUTLUCA A. K., CAN O. N., ÖZLEM S.

in: İzmir Kent Sağlık Profili, KARABABA ALİ OSMAN, ALTUN T. DİDEM, KÖKTÜRK G. GÜLDEN, Editor, İmaj Matbaacılık, İzmir, İzmir, pp.176-184, 2009

## Refereed Congress / Symposium Publications in Proceedings

- I. **Comparative life cycle assessment and environmental impact of photobioreactor facades for green buildings**  
Tokuç A., Yaman Y., Can I. D., Köktürk G. G., Ezan M. A.  
International Conference On Harmonisation Between Architecture And Nature (ICHAN-24), Kuala-Lumpur, Malaysia, 12 - 13 June 2024, pp.1
- II. **Energy Use and Lighting of Algal Green Buildings**  
Tokuç A., Yaman Y., Budakoğlu B., Köktürk G. G., Can I. D., Ezan M. A.  
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APPLIED ENERGY, SCI Journal, March 2022

BUILDINGS (BASEL), SCI Journal, March 2022

BUILDINGS (BASEL), SCI Journal, March 2022

BUILDINGS (BASEL), SCI Journal, February 2022

BUILDINGS (BASEL), SCI Journal, February 2022

BUILDINGS (BASEL), SCI Journal, February 2022

BUILDINGS (BASEL), SCI Journal, January 2022

Journal Of The Faculty Of Engineering And Architecture Of Gazi University, Journal Indexed in SCI-E, December 2021

BUILDINGS (BASEL), SCI Journal, December 2021

Applied Energy, Journal Indexed in SCI-E, August 2021

Iranian Journal of Science and Technology-Transactions of Civil Engineering, Journal Indexed in SCI-E, August 2021

uluslararası Doğu Anadolu Fen Mühendislik ve Tasarım Dergisi, Other Journals, June 2021

ENERGY REPORTS, Journal Indexed in SCI-E, March 2021

JOURNAL OF ASIAN ARCHITECTURE AND BUILDING ENGINEERING, Journal Indexed in SCI-E, February 2021

## **Metrics**

Publication: 131

Citation (WoS): 146

Citation (Scopus): 145

H-Index (WoS): 7

H-Index (Scopus): 7

## **Invited Talks**

Panel-Canlı Sistemlerle Tasarım: İnsan ve Doğa Arası Biyotasarım Yaklaşımları, Seminar, İzmir Akdeniz Akademisi, Turkey, October 2022

6th Biodesign Workshop, Workshop, Biodesign Team Turkey, Turkey, April 2021

İdeaport Üretimin Geleceği Yeni Malzemeler, Workshop, Türkiye Teknoloji Geliştirme Vakfı, Turkey, November 2020

5th Biodesign Workshop, Workshop, Biodesign Team Turkey, Turkey, October 2019

3th Biodesign Workshop, Workshop, Biodesign Team Turkey, Turkey, June 2018

2nd Biodesign Workshop, Workshop, Biodesign Team Turkey, Turkey, October 2017