

**Asst. Prof. ALİ AVCI**



## Personal Information

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Derslikler Merkez Hakkari



## International Researcher IDs

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Publons / Web Of Science ResearcherID: AAI-3086-2021

ScopusID: 57190294903

Yoksis Researcher ID: 180317

## Education Information

Doctorate, Yıldız Technical University, Fen Bilimleri Enstitüsü, İmal Usulleri (Dr), Turkey  
2015 - 2022

Postgraduate, Yıldız Technical University, Fen Bilimleri Enstitüsü, İmal Usulleri (YI)  
(Tezli), Turkey 2011 - 2015

Undergraduate, Marmara University, Teknik Eğitim Fakültesi, Makine Eğitimi Bölümü,  
Turkey 2006 - 2010

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, OTOMOTİV SEKTÖRÜNDE KULLANILMAK ÜZERE ÇEVRE DOSTU YENİ NESİL DOĞAL LİF TAKVİYELİ  
KOMPOZİT MALZEMELERİN GELİŞTİRİLMESİ, Yıldız Technical University, Fen Bilimleri Enstitüsü, İmal Usulleri (Dr),  
2022

Postgraduate, Termal bariyer kaplamaların oksidasyon ve sıcaklık korozyonu davranışının incelenmesi, Yıldız Technical  
University, Fen Bilimleri Enstitüsü, İmal Usulleri (YI) (Tezli), 2015

## Research Areas

Tribology, Non-traditional manufacturing methods, Material, Corrosion and Corrosion Protection, Composites, Plating

## Academic Titles / Tasks

Assistant Professor, Hakkari University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2022 - Continues

Research Assistant, Yildiz Technical University, Faculty Of Mechanical Engineering, Makine Mühendisliği Bölümü, 2012 - 2020

## Academic and Administrative Experience

Hakkari University, 2022 - Continues

## Courses

Mukavmet I, Undergraduate, 2023 - 2024

Malzeme Bilgisi, Undergraduate, 2023 - 2024, 2022 - 2023

Yapı Malzemeleri, Postgraduate, 2023 - 2024

İleri Teknoloji Malzemeleri, Postgraduate, 2022 - 2023

MALZEME DERSİ LABORATUVAR UYGULAMASI, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2012 - 2013

İleri Teknoloji Malzemeleri Dersi Asistanı, Postgraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013

Malzeme I Dersi Asistanı, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013

KAYNAKLOR LABORATUVAR UYGULAMALARI, Undergraduate, 2016 - 2017, 2014 - 2015, 2013 - 2014

Malzeme 2 Dersi Asistanı, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013

Makine Mühendisliğinde Kompozit Malzemeler, Undergraduate, 2016 - 2017, 2014 - 2015, 2012 - 2013

Talaşlı İmalat Uygulamaları, Undergraduate, 2013 - 2014

MALZEME DERSİ LABORATUVAR UYGULAMASI, Undergraduate, 2011 - 2012

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

- I. **Enhanced CMAS and hot corrosion degradation of YSZ thermal barrier coating with nano powders**  
ÖZÇELİK A., AKDOĞAN EKER A., KARABAŞ M., AVCI A., KÜÇÜKYILDIRIM B. O.  
Surface and Coatings Technology, vol.481, 2024 (SCI-Expanded)
- II. **Improvement of CMAS resistance of laser glazed and nano-modified YSZ thermal barrier coatings**  
AVCI A., Karabaş M., AKDOĞAN EKER A., AKMAN E., Aslan C.  
Ceramics International, vol.50, no.7, pp.9985-9999, 2024 (SCI-Expanded)
- III. **The effects of various boron compounds on the thermal, microstructural and mechanical properties of PLA biocomposites**  
AVCI A., AKDOĞAN EKER A., BODUR M. S., KÜÇÜKYILDIRIM B. O.  
Thermochimica Acta, vol.731, 2024 (SCI-Expanded)
- IV. **Hot corrosion and CMAS degradation of laser-glazed YSZ coating with optimum parameter**  
AVCI A., Karabaş M., AKDOĞAN EKER A., AKMAN E., Aslan C.  
Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, vol.237, no.11, pp.2722-2734, 2023 (SCI-Expanded)
- V. **Hot corrosion behavior of CYSZ thermal barrier coating with optimized laser surface modification**  
AVCI A., Karabaş M., AKDOĞAN EKER A., AKMAN E., Aslan C.  
Ceramics International, vol.49, no.19, pp.31396-31404, 2023 (SCI-Expanded)
- VI. **Water absorption characterization of boron compounds-reinforced PLA/flax fiber sustainable composite**  
AVCI A., AKDOĞAN EKER A., Bodur M. S., CANDAN Z.  
International Journal of Biological Macromolecules, vol.233, 2023 (SCI-Expanded)
- VII. **Investigations on the Mechanical Properties of PC and ABS Electrospun Nanofiber Embedded Glass**

### **Fiber Reinforced Composite**

Bodur M. S., Baysan A. A., Komurlu M. U., AVCI A.

Polymer (Korea), vol.47, no.2, pp.117-126, 2023 (SCI-Expanded)

- VIII. **An experimental investigation on the thermal and mechanical characterization of boron/flax/PLA sustainable composite**  
AVCI A., AKDOĞAN EKER A., Bodur M. S., CANDAN Z.  
Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, vol.236, no.12, pp.2561-2573, 2022 (SCI-Expanded)
- IX. **Influence of Compatibilization and Internal Lubricant on the Mechanical and Thermo-mechanical Properties of PLA/TPU Compound**  
AVCI A., AKDOĞAN EKER A., Bodur M. S.  
Polymer (Korea), vol.46, no.5, pp.671-683, 2022 (SCI-Expanded)
- X. **Effect of coupling agent and alkali treatment on mechanical, thermal and morphological properties of flax-fiber-reinforced PLA composites**  
Avci A., AKDOĞAN EKER A., Bodur M. S.  
Green Materials, vol.9, no.3, pp.131-144, 2020 (SCI-Expanded)
- XI. **An investigation of oxidation, hot corrosion, and thermal shock behavior of atmospheric plasma-sprayed YSZ-Al<sub>2</sub>O<sub>3</sub> composite thermal barrier coatings**  
AVCI A., AKDOĞAN EKER A., Karabas M.  
International Journal of Materials Research, vol.111, no.7, pp.567-580, 2020 (SCI-Expanded)
- XII. **Comparison of the early period effects of bone marrow-derived mesenchymal stem cells and platelet-rich plasma on the Achilles tendon ruptures in rats**  
Yüksel S., Guleç M. A., Gultekin M. Z., Adanır O., Çağlar A., Beytemur O., KÜÇÜKYILDIRIM B. O., AVCI A., Subaşı C., İnci Ç., et al.  
Connective Tissue Research, vol.57, no.5, pp.360-373, 2016 (SCI-Expanded)

### **Articles Published in Other Journals**

- I. **YSZ Termal Bariyer Kaplamanın Elektroforetik Nano-YSZ Kaplama ile Korozyon Direncinin İyileştirilmesi**  
ÖZÇELİK A., AVCI A., KARABAŞ M., AKDOĞAN EKER A.  
All Sciences Proceedings, vol.7, no.4, pp.371-382, 2023 (Peer-Reviewed Journal)
- II. **Examination of water uptake performance and mechanical properties of PLA/flax fiber biocomposites with the coupling agent**  
AVCI A., AKDOĞAN EKER A., BODUR M. S., BAKKAL M.  
Synsint Research Group, vol.2, pp.14-20, 2022 (Peer-Reviewed Journal)
- III. **Ti-6Al-4V Alaşımının Şekillendirilmesi İçin Kalıp Malzemesi Seçimi**  
YÜKSEL K. M., AKDOĞAN EKER A., AVCI A., KÜÇÜKYILDIRIM B. O.  
Avrupa Bilim ve Teknoloji Dergisi, vol.34, pp.729-734, 2022 (Peer-Reviewed Journal)
- IV. **A Review Of Performance Of Green Composites And Using In Automotive Industry**  
Avci A., Akdogan Eker A., Bodur M. S.  
İğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.11, no.4, pp.3035-3054, 2021 (Peer-Reviewed Journal)
- V. **Investigation of the Effects of Splenectomy on Bone Healing (Experimental Study)**  
Gültekin M. Z., Yüksel S., Alagöz E., Özsoy Ş., AVCI A., Güleç A., BAYRAMOĞLU Z.  
Istanbul Medical Journal, vol.22, no.1, pp.45-49, 2021 (Peer-Reviewed Journal)
- VI. **Material selection in hot shaping molds of titanium alloys**  
AKDOĞAN EKER A., AVCI A., Aydın H., Aydoğan C. S., Erol E.  
PROCEDIA MANUFACTURING, vol.50, pp.723-728, 2020 (Scopus)
- VII. **Ratlarda Opioidlerin ve Non-Steroid Anti-Enflamatuvar İlaçların Kırık İyileşmesi Üzerine Etkilerinin Karşılaştırılması**

Gültekin M. Z., Yüksel S., Alagöz E., Özsoy Ş., AVCI A., Güleç A., Uğur O.  
Adıyaman Üniversitesi Sağlık Bilimleri Dergisi, pp.1033-1047, 2018 (Peer-Reviewed Journal)

VIII. **RİVAROKSABAN VE FARKLI ANTİKOAGÜLANLARIN KIRIK KAYNAMASI ÜZERİNE ETKİLERİNİN BİR RAT MODELİNDE KARŞILAŞTIRILMASI**

Gültekin M. Z., Alagöz E., Yüksel S., Özsoy Ş., AVCI A., Güleç A., Uğur O.  
Adıyaman Üniversitesi Sağlık Bilimleri Dergisi, pp.310-322, 2018 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Additive Manufacturing in the Automotive Industry**  
AVCI A.  
in: Composite Materials with Different Engineering Approaches IV, Boztoprak Yalçın, Yazıcı Murat, Editor, Özgür Press, pp.133-154, 2023
- II. **DOĞAL LİF TAKVİYELER**  
AVCI A., BODUR M. S., AKDOĞAN EKER A.  
in: Mühendislik Bilimleri Alanında Yeni Trendler, Prof. Dr. Birol KILIÇ, Prof. Dr. Gülten BAŞYİĞİT KILIÇ, Editor, Duvar, Ankara, pp.47-64, 2022
- III. **BİYOKOMPOZİTLERİN TERMAL ÖZELLİKLERİ**  
AVCI A., AKDOĞAN EKER A., BODUR M. S.  
in: Mühendislik Bilimleri Alanında Yeni Trendler, Prof. Dr. Birol KILIÇ, Prof. Dr. Gülten BAŞYİĞİT KILIÇ, Editor, Duvar, Ankara, pp.721-741, 2022
- IV. **Microstructure and Oxidation Behavior of Atmospheric Plasma-Sprayed Thermal Barrier Coatings**  
AVCI A., AKDOĞAN EKER A., EKER B.  
in: Exergetic, Energetic and Environmental Dimensions, Ibrahim Dincer, C. Ozgur Colpan, Onder Kizilkan, Editor, Elsevier, Oxford, pp.793-814, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **YSZ Termal Bariyer Kaplamanın Elektroforetik Nano-YSZ Kaplama ile Korozyon Direncinin İyileştirilmesi**  
ÖZÇELİK A., AVCI A., KARABAŞ M., AKDOĞAN EKER A.  
1st International Conference on Contemporary Academic Research, Konya, Turkey, 17 - 19 May 2023
- II. **The effect of ulexite compound on the mechanical properties of the PLA matrix**  
AVCI A., AKDOĞAN EKER A., BODUR M. S.  
6th International Conference on Advances in Natural and Applied Sciences, Ağrı, Turkey, 11 - 13 October 2022, pp.209-213
- III. **An experimental study on the thermal properties of boron/PLA sustainable biocomposites**  
AVCI A., AKDOĞAN EKER A., BODUR M. S.  
6th International Conference on Advances in Natural and Applied Sciences, Ağrı, Turkey, 11 - 13 October 2022, pp.203-208
- IV. **EFFECT OF WATER UPTAKE PERFORMANCE OF PLA/FLAX FIBER GREEN COMPOSITES ON THE IMPACT BEHAVIOUR**  
AVCI A., AKDOĞAN EKER A., BAKKAL M., BODUR M. S.  
INTERNATIONAL CONFERENCE ON NUCLEAR TECHNOLOGY, RADIATION SAFETY AND ADVANCED TECHNOLOGICAL RESEARCHES, İstanbul, Turkey, 10 - 11 December 2021, pp.147-148
- V. **EFFECT OF LASER SURFACE MODIFICATION ON HOT CORROSION BEHAVIOR OF YSZ AND CYSZ THERMAL BARRIER COATINGS**  
AVCI A., KARABAŞ M., AKMAN E., AKDOĞAN EKER A., ASLAN C.  
6th International Conference on Advances in Mechanical Engineering, İstanbul, Turkey, 20 - 22 October 2021,

pp.423-431

- VI. **INVESTIGATION OF WATER UPTAKE PERFORMANCE OF PLA/FLAX FIBER GREEN COMPOSITES WITH ALKALI TREATMENT**  
AKDOĞAN EKER A., BODUR M. S., AVCI A.  
6th International Conference on Advances in Mechanical Engineering, İstanbul, Turkey, 20 - 22 October 2021, pp.432-437
- VII. **INVESTIGATION OF MECHANICAL AND THERMOS MECHANICAL BEHAVIOR OF FLAX FIBER-REINFORCED PLA BIO-COMPOSITES WITH A COUPLING AGENT AND INTERNAL LUBRICANT**  
AVCI A., AKDOĞAN EKER A., BODUR M. S.  
6th INTERNATIONAL CONGRESS ON ENGINEERING, ARCHITECTURE AND DESIGN, İstanbul, Turkey, 17 - 18 December 2020, pp.531-540
- VIII. **ALKALİ İYİLEŞTİRMENİN KETEN LİFİNİN MORFOLOJİSİNE ETKİSİ**  
AVCI A., AKDOĞAN EKER A.  
2nd INTERNATIONAL CONGRESS ON ENGINEERING AND TECHNOLOGY MANAGEMENT, Mardin, Turkey, 24 - 25 October 2019, pp.179
- IX. **ZİRKONYA ESASLI TERMAL BARIYER KAPLAMALARIN OPTİMUM LAZER YÜZEY MODİFİKASYON PARAMETRELERİNİN BELİRLENMESİ**  
Aslan C., AKDOĞAN EKER A., AKMAN E., AVCI A., KARABAŞ M.  
4 INTERNATIONAL CONGRESS ON ENGINEERING, ARCHITECTURE AND DESIGN, İstanbul, Turkey, 23 - 24 April 2019, vol.1, pp.304-312
- X. **EFFECT OF THE EXTRUSION PARAMETERS ON THE MECHANICAL PROPERTIES OF NATURAL FIBER REINFORCED COMPOSITES**  
BAYSAN A. A., AVCI A., BODUR S., AKDOĞAN EKER A., BAKKAL M.  
4. ULUSLARARASIMÜHENDİSLİK, MİMARLIK VE TASARIM KONGRESİ, Turkey, 23 - 24 April 2019, pp.530-539
- XI. **ATMOSFERİK PLAZMA SPREY YÖNTEMİ İLE ÜRETİLEN FARKLI SERAMİK KAPLAMALARIN KURU AŞINMA DAVRANIŞININ İNCELENMESİ**  
AVCI A., AKDOĞAN EKER A., KARABAŞ M., BAL E.  
3.uluslararası mühendislik mimarlık ve tasarım kongresi, 4 - 05 May 2018
- XII. **Thermal Shock Behaviour of Atmospheric Plasma Spray Thermal Barrier Coatings**  
AVCI A., AKDOĞAN EKER A., Yaşar A.  
INTERNATIONAL MATERIALS TECHNOLOGIES AND METALLURGY CONFERENCE 2017, 26 - 27 October 2017, pp.125-129
- XIII. **"Isothermal Oxidation Behavior of Atmospheric Plasma Sprayed Thermal Barrier Coatings At 1050 °C**  
AKDOĞAN EKER A., AVCI A., Akılotu A.  
INTERNATIONAL MATERIALS TECHNOLOGIES AND METALLURGY CONFERENCE 2017, 26 - 27 October 2017, pp.133-136
- XIV. **Wear behaviour of NiTi Shape Memory Alloys**  
AVCI A., AKDOĞAN EKER A.  
9th International CONFERENCE ON TRIBOLOGY, Nevşehir, Turkey, 13 - 15 September 2017, pp.30-36
- XV. **RAYLI SİSTEMLERDE KULLANILAN MAKAS ISITICILARINDA HASAR ANALİZİ VE KOROZYON TESTİ**  
AVCI A., AKDOĞAN EKER A., Deniz F.  
INTERNATIONAL CONGRESS ON ENGINEERING ARCHITECTURE AND DESIGN, 12 - 13 May 2017, pp.809-810
- XVI. **MICROSTRUCTURAL AND OXIDATION BEHAVIOR OF ATMOSPHERIC PLASMA SPRAYED THERMAL BARRIER COATINGS**  
AVCI A., AKDOĞAN EKER A.  
INTERNATIONAL CONFERENCE ON ENERGY SYSTEMS ISTANBUL 2016- ICES201621-23 December 2016, Yıldız Technical University, İstanbul, Turkey, 21 - 23 December 2016
- XVII. **HOT CORROSION BEHAVIOR OF YSZ AL<sub>2</sub>O<sub>3</sub> COMPOSITE THERMAL BARRIER COATINGS PRODUCED BY PLASMA SPREYED**  
AVCI A., AKDOĞAN EKER A.

16th International Materials Symposium IMSP'xx2016, PAMUKKALE ÜNİVERSİTESİ, Denizli, Turkey, 12 - 14 October 2016

- XVIII. **Hardness and fracture toughness of atmospheric plasma sprayed yttria stabilized zirconia thermal barrier coatings**  
AVCI A., AKDOĞAN EKER A.  
International Journal of ArtsSciencesFREIBURG CONFERENCEGERMANY, Freiburg, Germany, 28 November - 02 December 2016
- XIX. **Effect of carbon nanotube type on the growth of Lima Bean Phaseolus lunatus seeds in watering**  
AVCI A., KÜÇÜKYILDIRIM B. O., AKDOĞAN EKER A.  
EEAE'xx2015-VI Internaional Scientific Conference, Ruse, Bulgaria, 11 - 12 November 2015, pp.321-325
- XX. **TIME DEPENDENT EFFECT OF CARBON NANO TUBE ON THE GROWTH OF LIMA BEAN PHASEOLUS LUNATUS SEEDS IN WATERING**  
KÜÇÜKYILDIRIM B. O., AKDOĞAN EKER A., YILDIZ C., AVCI A.  
INTERNATIONAL JOURNAL OF ARTS AND SCIENCE ROME ITALY, 19 - 22 October 2015
- XXI. **FATIGUE BEHAVIOR OF Ni Ti SHAPE MEMORY ALLOY WIRES**  
AVCI A., KÜÇÜKYILDIRIM B. O., AKDOĞAN EKER A., ERDEM U.  
FATIGUE BEHAVIOR OF Ni-Ti SHAPE MEMORY ALLOY WIRES, 16 June 2014
- XXII. **TRIBOLOGICAL PERFORMANCES OF YSZ AND AL2O3 COMPOSITE COATINGS DEPOSITED BY AIR PLASMA SPRAY PROCESS**  
AVCI A., AKDOĞAN EKER A.  
8th International Quality Conference, Kragujevac, Serbia, 23 - 25 May 2014, pp.735-740

## **Metrics**

Publication: 46

Citation (Scopus): 81

H-Index (WoS): 1

H-Index (Scopus): 5

## **Artistic Activity**

AVCI A., IV. Ulusal Nano Teknoloji Kongresi, March 2015