Assoc. Prof. SAFİYE İPEK AYVAZ



Personal Information

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International Researcher IDs
ScholarID: TeO0FUIAAAAJ
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Publons / Web Of Science ResearcherID: JGM-4592-2023
ScopusID: 57218667838
Yoksis Researcher ID: 25265

Education

Doctorate, Manisa Celal Bayar University, Turkey 2015 - 2020
Undergraduate, Manisa Celal Bayar University, Mühendislik Fakültesi, Makine Mühendisliği, Turkey 2014 - 2015
Postgraduate, Suleyman Demirel University, Fen Bilimleri Enstitüsü, Turkey 2009 - 2011
Undergraduate, Suleyman Demirel University, Teknik Eğitim Fakültesi, Makine Eğitimi Bölümü, Turkey 2005 - 2009

Dissertations

Doctorate, Mikrodalga ısıtmanın biyomedikal 316l alaşımının borlama kinetiğine etkisinin incelenmesi ve borür tabakasının karakterizasyonu, Manisa Celal Bayar University, 2020
Postgraduate, Doğru mesh üretiminin çözüm üzerindeki etkileri, Suleyman Demirel University, Fen Bilimleri Enstitüsü, 2011

Research Areas

Avesis Research Areas: Mechanical Engineering, Metallurgical and Materials Engineering, Engineering and Technology
WoS Research Areas: Engineering Computing & Technology (Eng)
Scopus Research Areas: Biomaterials, Materials Science (miscellaneous), Mechanical Engineering

Academic Positions

Assistant Professor, Manisa Celal Bayar University, Turgutlu Meslek Yüksekokulu, Makine Ve Metal Teknolojileri, 2025 - Present
Associate Professor, Manisa Celal Bayar University, Turgutlu Meslek Yüksekokulu, Makine Ve Metal Teknolojileri, 2025 - Present
Lecturer PhD, Manisa Celal Bayar University, Turgutlu Meslek Yüksekokulu, Makine Ve Metal Teknolojileri, 2020 - 2025
Lecturer, Manisa Celal Bayar University, Turgutlu Meslek Yüksekokulu, Makine Ve Metal Teknolojileri, 2012 - 2020

Courses

Postgraduate

Bilimsel Araştırma Yöntemleri ve Yayın Etiği, Postgraduate, 2024 - 2025

Tasarımda En İyileştirme, Postgraduate, 2023 - 2024

Kompozit Malzemeler, Postgraduate, 2024 - 2025

Undergraduate

Dinamik, Undergraduate, 2023-2024

Hidrolik ve Pnömatik Sistemleri, Undergraduate, 2020-2021

Associate Degree

Makine Elemanları, Associate Degree, 2024-2025, 2023-2024, 2022-2023, 2021-2022, 2020-2021

Meslek Etiği, Associate Degree, 2024-2025, 2023-2024, 2022-2023, 2021-2022, 2020-2021

Teknik Resim, Associate Degree, 2024-2025, 2023-2024, 2022-2023, 2021-2022, 2020-2021

Araştırma Yöntem ve Teknikleri, Associate Degree, 2024-2025, 2023-2024, 2022-2023, 2021-2022, 2020-2021

İnovasyon Yönetimi, Associate Degree, 2024-2025, 2023-2024, 2022-2023

Kalite Güvencesi ve Standartları, Associate Degree, 2024-2025, 2023-2024, 2022-2023, 2021-2022, 2020-2021

Hidrolik ve Pnömatik, Associate Degree, 2023-2024, 2022-2023, 2021-2022, 2020-2021

Sosyal Sorumluluk, Associate Degree, 2023-2024, 2022-2023, 2021-2022, 2020-2021

İşletmede Mesleki Eğitim, Associate Degree, 2023-2024, 2022-2023, 2021-2022

Bilgisayar Destekli Tasarım, Associate Degree, 2023-2024, 2022-2023, 2021-2022, 2020-2021

Hidrolik Pnömatik, Associate Degree, 2022-2023, 2021-2022

İş Yeri Uygulama Eğitimi, Associate Degree, 2020-2021

Supervised Theses

SOYKÖK İ. F., İPEK AYVAZ S., Sürtünme karıştırma yöntemi ile AA5754-SİC yüzey kompoziti üretimi ve tribolojik özelliklerinin incelenmesi, Postgraduate, Ç.UZUN(Student), 2025

Articles

I. **Investigation of Microstructural and Tribological Properties of AA6082-SiC/*n*-Al_2O_3 Hybrid Surface Composites Produced by the Friction Stir Process**
Safiye İpek Ayvaz I.
PROTECTION OF METALS AND PHYSICAL CHEMISTRY OF SURFACES, vol.61, no.3, pp.612-622, 2025 (SCI-Expanded, Scopus)

II. **Determination of diffusion kinetics, wear and corrosion behaviour of boro-sintered powder metal AISI 316 stainless steel alloy**
İPEK AYVAZ S., Zalaoğlu D., Özer E., BAHÇEPINAR A. İ., AYDIN İ.
Surfaces and Interfaces, vol.62, 2025 (SCI-Expanded, Scopus)

III. **Influences of post-weld artificial aging on microstructural and tensile properties of friction stir-welded Al-Zn-Mg-Si-Cu aluminum alloy joints**
ARSLAN D., ayvaz s. i.
International Advanced Researches and Engineering Journal, vol.8, no.2, pp.76-83, 2024 (TRDizin)

IV. **Growth Kinetics and Microstructure of Iron Boride Layers on AISI 1050 Steel**
İPEK AYVAZ S.
Metal Science and Heat Treatment, vol.65, no.11-12, pp.751-757, 2024 (SCI-Expanded, Scopus)

V. **Characterization of a Duplex Coating (Boriding plus Hydroxyapatite) on Austenitic Steel**
Ali İhsan Bahçepinar I., İPEK AYVAZ S., İbrahim Aydin A.
PHYSICS OF METALS AND METALLOGRAPHY, vol.124, no.14, pp.1837-1844, 2023 (SCI-Expanded, Scopus)

VI. **Effect of Shot Blasting on the Boriding Kinetics of AISI 316L Stainless Steel**
İPEK AYVAZ S., AYDIN İ., BAHÇEPINAR A. İ.
Protection of Metals and Physical Chemistry of Surfaces, vol.59, no.4, pp.671-678, 2023 (SCI-Expanded, Scopus)

VII. **Investigation of the effect of boriding on the wear behaviour of AISI 1050 carbon steel**
ayvaz s. i.
International Advanced Researches and Engineering Journal, vol.7, no.1, pp.1-7, 2023 (TRDizin)

VIII. **Enhancing the wear performance of Ti-6Al-4V against Al2O3and WC-6Co via TiBnlayer produced by boriding**
İPEK AYVAZ S.
Materialpruefung/Materials Testing, vol.65, no.2, pp.279-290, 2023 (SCI-Expanded, Scopus)

IX. **Comparative Study of Conventional and Microwave-Assisted Boriding of AISI 1040 and AISI 4140 Steels**
İPEK AYVAZ S., Özer E.
Tehnicki Glasnik, vol.17, no.2, pp.286-292, 2023 (ESCI, Scopus)

X. **Investigation of mechanical and tribological behavior of SiC and B4C reinforced Al-Zn-Mg-Si-Cu alloy matrix surface composites fabricated via friction stir processing**
İPEK AYVAZ S., Arslan D., AYVAZ M.
Materials Today Communications, vol.31, 2022 (SCI-Expanded, Scopus)

XI. **Tribological and adhesion properties of microwave-assisted borided AISI 316L steel**
İPEK AYVAZ S., AYDIN İ.
Materialpruefung/Materials Testing, vol.64, no.2, pp.249-259, 2022 (SCI-Expanded, Scopus)

XII. **Effect of the Microwave Heating on Diffusion Kinetics and Mechanical Properties of Borides in AISI 316L**
İPEK AYVAZ S., AYDIN İ.
Transactions of the Indian Institute of Metals, vol.73, no.10, pp.2635-2644, 2020 (SCI-Expanded, Scopus)

XIII. **A novel method for determining effects of fire damage on the safety of the Type I pressure hydrogen storage tanks**
AYVAZ M., İPEK AYVAZ S., AYDIN İ.
International Journal of Hydrogen Energy, vol.43, no.44, pp.20271-20283, 2018 (SCI-Expanded, Scopus)

XIV. **THE EFFECT OF BIOMATERIAL SELECTION ON THE STATIC STRENGTH OF FEMUR PROSTHESIS**
Kural S., Ipek Ayvaz S.
TEHNICKI GLASNIK-TECHNICAL JOURNAL, vol.12, no.3, pp.146-150, 2018 (Peer-Reviewed Journal)

Books

I. **METALLIC BIOMATERIALS PRODUCTION BY SELECTIVE LASER MELTING**
İPEK AYVAZ S.
in: Academic Studies in ENGINEERING, ÖZALP COŞKUN, Editor, Gece Kitaplığı, pp.104-116, 2023

II. **HYDROXYAPATITE SYNTHESIS AND COATING METHODS**
İPEK AYVAZ S.
in: International Theory, Research and Reviews in Engineering, ÖZALP COŞKUN, BARDAK SELAHATTİN, Editor, Serüven Yayınevi, pp.34-48, 2023

Papers Presented at Peer-Reviewed Scientific Conferences

I. **Boro-Sinterlemenin Toz Metal Saf Demirin Aşınma Direncine Etkisi**
Yıldırım M., İpek Ayvaz S.
5. Uluslararası Türk Dünyası Mühendislik ve Fen Bilimleri Kongresi, Antalya, Turkey, 4 - 07 December 2025, pp.24, (Summary Text)

II. **Investigation of the Wear Resistance of AISI 316 Stainless Steel Alloy Produced by Powder Metallurgy**
İPEK AYVAZ S.
9th International Students Science Congress, Manisa, Turkey, 22 - 23 May 2025, (Summary Text)

III. **Investigation of the Wear Behavior of AA6082 Against Different Counterparts**
İPEK AYVAZ S., AYVAZ M.
5 th International Students Science Congress, Turkey, 21 - 22 May 2021, (Full Text)

IV. **Effect of the Counterpart on the Dry Sliding Friction and Wear Performance of the AISI 316L**
İPEK AYVAZ S., AYVAZ M.
International Online Conferences On Engineering And Natural Sciences, Turkey, 5 - 07 July 2021, (Summary Text)

V. **TI6AL4V TİTANYUM ALAŞIMLARININ BORLAMA SONRASI ÖZELLİKLERİNİN İNCELENMESİ**
İPEK AYVAZ S., AYVAZ M., AYDIN İ.
International Science and Technology Conference, Paris, France, 18 July 2018, pp.652, (Summary Text)

VI. **Üç Boyutlu Yazdırma Teknolojisinde Yazdırma Sıcaklığının Numunelerin Sürtünme Karakterine Etkisinin İncelenmesi**
KURAL S., AYVAZ M., İPEK AYVAZ S.
2. International Students Science Congress, 4 - 05 May 2018, (Summary Text)

VII. **3D PLA Numunelerde Yazdırma Katman Kalınlığının Sürtünme Karakterine Etkisi**
KURAL S., İPEK AYVAZ S., AYVAZ M.
2. International Students Science Congress, Turkey, 4 - 05 May 2018, (Summary Text)

VIII. **Ti6Al4V Titanyum Alaşımlarının Borlama Sonrası Özelliklerinin İncelenmesi**
İPEK AYVAZ S., AYVAZ M., AYDIN İ.
International Science and Technology Conference, France, 18 - 20 July 2018, (Summary Text)

IX. **An Investigation of the Effect of Biomaterial Selection on the Static Strength of Femur Implants**
KURAL S., İPEK AYVAZ S.
International Advanced Researches Engineering Congress-2017, Osmaniye, Turkey, 16 - 18 November 2017, (Full Text)

X. **A Novel Approach for Determining Effects of Fire Temperature on the Safety of the Type I Metallic Hydrogen Storage Tanks**
AYVAZ M., İPEK AYVAZ S., AYDIN İ.
International Advanced Researches Engineering Congress, Turkey, 16 - 18 November 2017, (Full Text)

XI. **Investigation of Wear Behavior of Hydroxyapatite Coatings Produced in Glycolic Acid - Sodium Gluconate Buffer System by Using Biomimetic Method**
AYDIN İ., İPEK AYVAZ S.
International Advanced Researches Engineering Congress, Osmaniye, Turkey, 16 - 18 November 2017, (Full Text)

Funded Projects

İPEK AYVAZ S., ÖZDEMİR A., Project Supported by Higher Education Institutions, BAP Research Project, Geri Dönüştürülmüş Camlardan Cam Füzyon Tekniği İle Sanatsal ve Dekoratif Ürünler Üretilmesi, 2024 - 2025

Bahçepınar A. İ., İpek Ayvaz S., Aydın İ., Soybilge Ö. C., Project Supported by Higher Education Institutions, BAP Research Project, Aısı 4150 Çeliğine Termoreaktif Difüzyon Yöntemi İle Oluşturulan Titanyum Karbür Kaplamaların Yüzey Özelliklerinin İncelenmesi, 2024 - 2026

BAHÇEPINAR A. İ., AYDIN İ., ZALAOĞLU D., ÖZER E., İPEK AYVAZ S., Project Supported by Higher Education Institutions, Borlanmış Toz Metal Aısı 316 Paslanmaz Çelik Alaşımının Difüzyon Kinetiğinin, Aşınma ve Korozyon Davranışlarının Belirlenmesi, 2022 - 2023

AYDIN İ., İPEK AYVAZ S., Project Supported by Higher Education Institutions, Biyomimetik Yöntem İle Çoklu Tampon Sisteminde Ti6al4v Alaşımlarının Hidroksiapatit İle Kaplanması ve Kaplamanın Yüzey Karakterizasyonu, 2018 - 2019

İPEK AYVAZ S., USAL M. R., Project Supported by Higher Education Institutions, Doğru Mesh Üretiminin Çözüm Üzerindeki Etkileri, 2010 - 2011

Patent

AYDIN İ., İPEK AYVAZ S., KIRMAN M., Biyomimetik yöntemle aminoasetik asit-sodyum aminoasetat tampon ortamında hidroksiapatit üretimi, Patent, CHAPTER C Chemistry; Metallurgy, Standard Registration, 2022

Metrics

Publication: 30
Citation (WoS): 92
Citation (Scopus): 128
H-Index (WoS): 5
H-Index (Scopus): 6

Congress and Symposium Activities

9th International Students Science Congress, Session Moderator, Manisa, Turkey, 2025

Non Academic Experience

Milli Eğitim Bakanliği / Kemal Atatürk İlköğretim Okulu, Teknoloji ve Tasarım Öğretmenliği
Süleyman Demirel Üniversitesi / Fen Bilimleri Enstitüsü, Kısmi zamanlı öğrenci