

Assoc. Prof. Taha Çağrı ŞENOCAK



Personal Information

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International Researcher IDs

ScholarID: DoIA34AAAAJ

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Publons / Web Of Science ResearcherID: A-4801-2018

ScopusID: 57216646879

Yoksis Researcher ID: 34302

Education Information

2022 - 2023	Post Doctorate, Silesian University of Technology, Biotechnology Center, Poland
2015 - 2020	Doctorate, Ataturk University, Mühendislik Fakültesi, Metalurji ve Malzeme Mühendisliği, Turkey
2014 - 2015	Postgraduate, Ataturk University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği Abd / Malzeme Bilimi, Turkey
2004 - 2010	Undergraduate, Firat University, Faculty Of Engineering, Department Of Metallurgical And Materials Engineering, Turkey

Foreign Languages

English, B2 Upper Intermediate

Dissertations

2020	Production of niobium oxynitride coatings for biomedical applications and investigation of the structural, corrosion and in-vitro biocompatibility-antimicrobial properties, Ataturk University, Mühendislik Fakültesi, Metalurji ve Malzeme Mühendisliği, Doctorate
2015	Deposition of nanocomposite h-BN/Al ₂ O ₃ coatings on AA2014 alloys by peo process; characterisation of structural and tribological properties, Ataturk University, Mühendislik Fakültesi, Metalurji ve Malzeme Mühendisliği, Postgraduate

Research Areas

Tissue Engineering, Metallurgical and Materials Engineering, Material science and engineering, Polymeric Materials, Biomaterials, Plating, Biotechnology, Engineering and Technology

Academic Titles / Tasks

2025 - Continues	Associate Professor, Ataturk University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği
2012 - 2025	Research Assistant PhD, Ataturk University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği

Courses

Postgraduate

2023 - 2024	Biyomühendislikte Doku Mühendisliği İlke ve Uygulamaları
2023 - 2024	Biyomühendislikte 3B Biyoyazıcı Uygulamaları

Undergraduate

2024 - 2025	Tarım, İnovasyon ve Gelecek
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Associate Degree

2023 - 2024	Teknik Resim
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Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Biofabricated tissue model for determining biocompatibility of metallic coatings**
ŞENOCAK T. Ç., Gudeti P. K. R., Zur-Pinska J., Wlodarczyk-Biegun M. K.
BIOMATERIALS SCIENCE, vol.13, no.4, pp.1075-1090, 2025 (SCI-Expanded)
- II. **Effects of PEO and BN-PVD coatings on the wear, corrosion, and surface properties of AZ31 magnesium alloy**
ŞENOCAK T. Ç.
Physica Scripta, vol.99, no.11, 2024 (SCI-Expanded)
- III. **Semi-quantitative analysis on sea buckthorn phenolic-rich extract coating bone-like open porous NiTi-based alloy**
YUCA H., ŞENOCAK T. Ç., Yiğit O., Albayrak M. G., GÜVENALP Z.
Heliyon, vol.10, no.14, 2024 (SCI-Expanded)
- IV. **Characterization and performance of Tantalum-Tungsten based coatings deposited on Cp-Ti substrates by PVD technique**
ŞENOCAK T. Ç.
Materials Today Communications, vol.37, 2023 (SCI-Expanded)
- V. **The antibacterial properties and corrosion behavior of silver-doped niobium oxynitride coatings**
Şenocak T. Ç., Ezirmik K. V., Cengiz S.
MATERIALS TODAY COMMUNICATIONS, vol.32, 2022 (SCI-Expanded)
- VI. **The mechanical, corrosion and tribological properties of Al₂O₃ films grown by anodisation and MAO**
Dayauc A. K., Acimert O. B., Senocak T. Ç.
INTERNATIONAL JOURNAL OF SURFACE SCIENCE AND ENGINEERING, vol.16, pp.105-123, 2022 (SCI-Expanded)
- VII. **Influence of sodium pentaborate (B₅H₁₀NaO₁₃) additive in plasma electrolytic oxidation process on WE43 magnesium alloys**
Şenocak T. Ç., Yilmaz T. A., Budak H. F., Gülten G., Yilmaz A. M., Ezirmik K. V., Totik Y.
MATERIALS TODAY COMMUNICATIONS, vol.30, 2022 (SCI-Expanded)
- VIII. **Niobium-oxynitride coatings for biomedical applications: Its antibacterial effects and in-vitro cytotoxicity**
Şenocak T. Ç., Ezirmik K. V., Aysin F., Şimşek Özek N., Cengiz S.
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.120, 2021 (SCI-Expanded)
- IX. **One-step synthesis of nano-hydroxyapatite/graphene nanosheet hybrid coatings on Ti6Al4V alloys by hydrothermal method and their in-vitro corrosion responses**
Yigit O., DİKİCİ B., ŞENOCAK T. Ç., Ozdemir N.
Surface and Coatings Technology, vol.394, 2020 (SCI-Expanded)

Articles Published in Other Journals

- I. **INVESTIGATION OF THE STRUCTURAL AND MECHANICAL PROPERTIES OF TiN, NbN, and VN COATING DEPOSITION ON THE Co-Cr-Mo ALLOY BY MAGNETRON SPUTTERING**

Şenocak T. Ç., Yiğit O.

International Journal of Innovative Engineering Applications, vol.6, no.2, pp.1-6, 2022 (Peer-Reviewed Journal)

II. Improving the Corrosion Properties of AZ91 Magnesium Alloy by Coating CrN/NbN with PEO and PVD Duplex Coating Methods

Yiğit O., Şenocak T. Ç.

Fırat Üniversitesi Mühendislik Bilimleri Dergisi, vol.34, no.1, pp.289-299, 2022 (Peer-Reviewed Journal)

Books

I. Composite Materials in Biomaterial Applications: A Comprehensive Overview

Şenocak T. Ç.

in: Composite Materials with Different Engineering Approaches- II , Boztoprak Yalçın, Editor, Özgür Yayınları, Gaziantep, pp.1-120, 2023

Papers Published in Refereed Scientific Meetings

I. Investigation Of The Corrosion Behavior Of Anodically Oxidized AZ31 Magnesium Alloys In Sodium Pentaborate-Enriched Electrolyte

ŞENOCAK T. Ç., EZİRMİK K. V.

22nd International Metallurgy and Materials Congress, İstanbul, Turkey, 19 - 21 September 2024

II. 316L Paslanmaz Çelik Üzerine Büyütülen Titanyum Kaplamanın Staphylococcus aureus Bakterisine Karşı Antibakteriyel Etkinliğin Araştırılması

ŞENOCAK T. Ç.

EFES ULUSLARARASI BİLİMSEL ARAŞTIRMALARDA GÜNCEL GELİŞMELER KONGRESİ, İzmir, Turkey, 15 - 16 September 2024

III. Raman Characterization Of Silver-Doped Tantalum-Tungsten Nitride Structure Grown On Microscope Slide Substrate Utilizing The Pvd Technique

Şenocak T. Ç.

The 5th International Conference of Materials and Engineering Technology (TICMET'23), Trabzon, Turkey, 13 - 16 November 2023

IV. Optimization of Melt Electrowriting (Mew) 3d Bioprinting Parameters Using the Taguchi Method

ŞENOCAK T. Ç., Gudeti P. K. R., Włodarczyk-Biegun M. K.

HealthTech Innovation Conference (HTIC), Zabrze, Poland, 10 October 2022, pp.9-30

V. Imaging of cells and bacteria for biomaterials researches with image processing technology

ŞENOCAK T. Ç.

International Online Conferences on Engineering and Natural Sciences IOCENS'21, Gümüşhane, Turkey, 05 July 2021

VI. PEO Yöntemiyle AA2014 Alüminyum Alaşımı Üzerine Büyütülen h-BN/Al₂O₃ Nanokompozit Kaplamaların Aşınma Özelliklerinin Karakterizasyonu

Şenocak T. Ç., Arslan E.

International Online Conferences on Engineering and Natural Sciences IOCENS'21, Gümüşhane, Turkey, 05 July 2021

VII. Investigation of Hardness and Microstructural Properties of AA7075 Alloy by ECAP Method

YILMAZ T. A., TOTİK Y., LÜLE ŞENÖZ G. M., ŞENOCAK T. Ç., EFEOĞLU İ.

The International Conference on Materials Science, Mechanical and Automotive Engineerings and Technology in Cappadocia/TURKEY (IMSMATEC 2019), 21 - 23 June 2019, pp.1157-1159

VIII. One step nano-hydroxyapatite/graphene coatings produced by Hydrothermal method on Ti6Al4V alloy

YİĞİT O., ŞENOCAK T. Ç., ÖZDEMİR N.

2nd International Conference on Physical Chemistry Functional Materials, Nevşehir, Turkey, 25 - 27 June 2019

IX. EKAP Yöntemi ile AA7075 Alaşımının Sertlik ve Mikroyapısal Özelliklerinin Araştırılması

YILMAZ T. A., TOTİK Y., LÜLE ŞENÖZ G. M., ŞENOCAK T. Ç., EFEOĞLU İ.

The International Conference on Materials Science, Mechanical and Automotive Engineerings and Technology in Cappadocia / TURKEY (IMSATEC 2019), Nevşehir, Turkey, 21 - 23 June 2019, pp.1

X. Elokalsal İşlemi Uygulanan Alüminyum Alaşımlarının Asidik ve Alkali Ortamlarda Korozyon Özelliklerinin İncelenmesi

AKPINAR F., KALAN F., ŞENOCAK T. Ç., DİKİCİ B., EZİRMİK K. V.

KORSEM'xx18-XVth International Corrosion Symposium, 26 - 28 September 2018

XI. Sıcak Daldırma Yöntemi ile Alüminyum Kaplanmış Yapı Çeliklerinin Korozyon Özelliklerinin İncelenmesi

KALAN F., AKPINAR F., ŞENOCAK T. Ç., EZİRMİK K. V.

KORSEM'xx18-XVth International Corrosion Symposium, Hatay, Antakya, Turkey, 26 - 28 September 2018

Supported Projects

2024 - 2025	Hodan yağı (<i>Borago officinalis</i>) ve aljinat bazlı hidrojel ile 3 boyutlu PCL iskelenin ratlardaki diyabetik yaraları iyileştirmedeki rolü, Project Supported by Higher Education Institutions
2023 - 2024	Yoğun bakım hasta karyolası egzersiz aparatı, Project Supported by Higher Education Institutions
2023 - 2024	Bariyerli tekerlekli sandalye güvenlik aparatı, Project Supported by Higher Education Institutions
2023 - 2024	Bronkoskop ikili işlem kanal aparatı, Project Supported by Higher Education Institutions
2023 - 2024	AKILLI SOĞUK KORSE, Project Supported by Higher Education Institutions
2023 - 2024	Sıcaklık kontrollü in-vitro potansiyodinamik korozyon hücresi, Project Supported by Higher Education Institutions
2023 - 2024	Tek kullanımlık balgam numune kabı, Project Supported by Higher Education Institutions
2023 - 2024	Mıknatıslı nazal kanül aparatı, Project Supported by Higher Education Institutions
2022 - 2024	Spiralli Nazal kanül, Project Supported by Higher Education Institutions
2022 - 2024	Cerrahi operasyon masası servis kolu (Angel arm), Project Supported by Higher Education Institutions
2022 - 2023	3D printed tissue models for determining biocompatibility of metallic coatings, TUBITAK Project
2021 - 2021	Mikro ark oksidasyon yöntemiyle WE43 alaşımının aşınma ve korozyon özelliklerinin geliştirilmesi, Project Supported by Higher Education Institutions
2018 - 2020	Havacılık Alanında Kullanılan Magnezyum Alaşımlarının Korozyon Özelliklerinin Çok Katlı Nitrür Kaplamalarla İyileştirilmesi, Project Supported by Higher Education Institutions
2016 - 2017	PEO YÖNTEMİ İLE AA2014 ALAŞIMI ÜZERİNE H-BN/AL ₂ O ₃ NANOKOMPOZİT KAPLAMALARIN BÜYÜTÜLMESİ; TRİBOLOJİK VE YAPISAL ÖZELLİKLERİNİN KARAKTERİZASYONU, Project Supported by Higher Education Institutions
2016 - 2017	YÜZEY İŞLEMLERİ LABORATUVAR ALTYAPISININ KURULUMU, Project Supported by Higher Education Institutions
2015 - 2017	ZİNKATLAMA PROSESİ İLE AKTİVE EDİLEN AA2014 ALAŞIMI ÜZERİNE MAO YÖNTEMİ İLE AL ₂ O ₃ BÜYÜTÜLMESİ; YAPISAL VE TRİBOKOROZYON ÖZELLİKLERİNİN KARAKTERİZASYONU, Project Supported by Higher Education Institutions
2013 - 2014	HASSAS DÖKÜM YÖNTEMİYLE MAGNEZYUM ALAŞIMLARININ ÜRETİMİ; MEKANİK VE TRİBOLOJİK ÖZELLİKLERİNİN ARAŞTIRILMASI, Project Supported by Higher Education Institutions
2012 - 2013	ÜRETİM METALURJİSİNDE YÜKSEK FIRINA ALTERNATİF YÖNTEMLERİNİN ARAŞTIRILMASI, Project Supported by Higher Education Institutions

Patent

2024	Şenocak M. G., Kabul A., Şenocak T. Ç., BRONKOSKOP İKİLİ İŞLEM KANAL APARATI, Utility Model, CHAPTER A Human Needs, The Invention Recourse Number: 2024/019500 , Standard Registration, 2024
2023	İpek Çoban G., Şenocak T. Ç., Kabul A., SPIRALLI NASAL KANUL, Patent, CHAPTER A Human Needs, The Invention Recourse Number: PCT/TR2023/05177 4 , Standard Registration, 2023
2023	Aktaş Şenocak E., Şenocak T. Ç., Kabul A., Miknatıslı Nazal Kanül Aparatı, Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2023/013926 , Standard Registration, 2023
2023	İpek Çoban G., Şenocak T. Ç., Kabul A., Akıllı Soğuk Korse, Patent, CHAPTER A Human Needs, The Invention Recourse Number: TFM-2023-13061 , Standard Registration, 2023
2023	Şenocak T. Ç., SICAKLIK KONTROLLÜ IN-VITRO POTANSİYODİNAMİK KOROZYON HÜCRESİ, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2023/013640 , Standard Registration, 2023
2023	Şenocak T. Ç., Kabul A., TEK KULLANIMLIK BALGAM NUMUNE KABI, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2023/013678 , Standard Registration, 2023
2022	Şenocak M. G., Şenocak T. Ç., Aktaş Şenocak E., CERRAHİ OPERASYON MASASI SERVİS KOLU (ANGEL ARM), Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2022/019837 , Standard Registration, 2022

Activities in Scientific Journals

2024 - Continues Innovative Approaches to Engineering Problems, Editor

Scientific Research / Working Group Memberships

2022 - Continues Polimerik Ve Nanopartiküler İlaç Araştırma, Geliştirme Ve Uygulama Grubu ,
<https://avesis.atauni.edu.tr/arastirma-grubu/piag>, Ataturk University, Turkey

2022 - 2023 Biofabrication And Bio-Instructive Materials, <https://biofabrication.group/team/>, Silesian University of Technology, Poland

Mobility Activity

2022 - 2023 Post Doc, Post Doc, Silesian University of Technology, Poland

Metrics

Publication: 23
Citation (WoS): 67
Citation (Scopus): 95
H-Index (WoS): 4
H-Index (Scopus): 4

Congress and Symposium Activities

2021 20th International Metallurgy and Materials Congress, Attendee, İstanbul, Turkey

Non Academic Experience

2011 - 2012

Business Establishment Private, Eti Krom A.Ş., Ferrokrom Ark Fırını İşletmesi, İşletme ve Vardiya Mühendisi