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Malzeme Mühendisliği Bölümü Oda No:329 Yakutiye ERZURUM



#### International Researcher IDs

ScholarID: DolA34AAAAJ

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

ScopusID: 57216646879

Yoksis Researcher ID: 34302

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#### Education Information

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

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#### Foreign Languages

- I. English, B2 Upper Intermediate

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#### Dissertations

- I. Doctorate, 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, 2020
- II. Postgraduate, Deposition of nanocomposite h-BN/Al<sub>2</sub>O<sub>3</sub> coatings on AA2014 alloys by peo process; characterisation of structural and tribological properties, Ataturk University, Mühendislik Fakültesi, Metalurji ve Malzeme Mühendisliği, 2015

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#### Research Areas

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

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#### Academic Titles / Tasks

- I. Research Assistant PhD, Ataturk University, Mühendislik Fakültesi, Metalurji ve Malzeme Mühendisliği, 2012 - Continues

## Courses

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- I. Biyomühendislikte 3B Biyoyazıcı Uygulamaları, Postgraduate, 2023 - 2024  
II. Teknik Resim, Associate Degree, 2023 - 2024

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

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- I. **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)
- II. **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)
- III. **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)
- IV. **Influence of sodium pentaborate (B5H10NaO13) additive in plasma electrolytic oxidation process on WE43 magnesium alloys**  
Şenocak T. Ç., Yilmaz T. A., Budak H. F., Gültén G., Yilmaz A. M., Ezirmik K. V., Totik Y.  
MATERIALS TODAY COMMUNICATIONS, vol.30, 2022 (SCI-Expanded)
- V. **Niobium-oxynitride coatings for biomedical applications: Its antibacterial effects and in-vitro cytotoxicity**  
Şenocak T. Ç., Ezirmik K. V., Aysin F., Şimşek Özük N., Cengiz S.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.120, 2021 (SCI-Expanded)
- VI. **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

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- 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 & Book Chapters

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**I. Composite Materials in Biomaterial Applications: A Comprehensive Overview**

Şenocak T. Ç.

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

**Refereed Congress / Symposium Publications in Proceedings**

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**I. 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

**II. 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

**III. 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

**IV. PEO Yöntemiyle AA2014 Alüminyum Alaşımı Üzerine Büyütülen h-BN/Al2O3 Nanokompozit**

Kaplamların Aşınma Özelliklerinin Karakterizasyonu

Şenocak T. Ç., Arslan E.

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

**V. 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

**VI. 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

**VII. 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 (IMSMATEC 2019), Nevşehir, Turkey, 21 - 23 June 2019, pp.1

**VIII. Elokusal 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

**IX. 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**

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**I. ŞENOCAK T. Ç., GÜNEŞ N., Project Supported by Higher Education Institutions, Yoğun bakım hasta karyolası**

- egzersiz aparatı, 2023 - Continues
- II. ŞENOCAK T. Ç., GÜNEŞ N., Project Supported by Higher Education Institutions, Bariyerli tekerlekli sandalye güvenlik aparatı, 2023 - Continues
  - III. ŞENOCAK M. G., ŞENOCAK T. Ç., KABUL A., Project Supported by Higher Education Institutions, Bronkoskop ikili işlem kanal aparatı, 2023 - Continues
  - IV. İPEK ÇOBAN G., ŞENOCAK T. Ç., KABUL A., Project Supported by Higher Education Institutions, AKILLI SOĞUK KORSE, 2023 - Continues
  - V. ŞENOCAK T. Ç., Project Supported by Higher Education Institutions, Sıcaklık kontrollü in-vitro potansiyodinamik korozyon hücresi, 2023 - Continues
  - VI. ŞENOCAK T. Ç., KABUL A., Project Supported by Higher Education Institutions, Tek kullanımı balgam numune kabı, 2023 - Continues
  - VII. AKTAŞ ŞENOCAK E., ŞENOCAK T. Ç., KABUL A., Project Supported by Higher Education Institutions, Mıknatışlı nazal kanül aparatı, 2023 - Continues
  - VIII. İPEK ÇOBAN G., ŞENOCAK T. Ç., KABUL A., Project Supported by Higher Education Institutions, Spiralli Nazal kanül, 2022 - Continues
  - IX. ŞENOCAK M. G., ŞENOCAK T. Ç., AKTAŞ ŞENOCAK E., Project Supported by Higher Education Institutions, Cerrahi operasyon masası servis kolu (Angel arm), 2022 - Continues
  - X. TUBITAK Project, 3D printed tissue models for determining biocompatibility of metallic coatings, 2022 - 2023
  - XI. Şenocak T. Ç., Project Supported by Higher Education Institutions, Mikro ark oksidasyon yöntemiyle WE43合金ının aşınma ve korozyon özelliklerinin geliştirilmesi, 2021 - 2021
  - XII. EZİRMİK K. V., ŞENOCAK T. Ç., Project Supported by Higher Education Institutions, Havacılık Alanında Kullanılan Magnezyum Alaşımının Korozyon Özelliklerinin Çok Katlı Nitrür Kaplamalarla İyileştirilmesi, 2018 - 2020
  - XIII. KOCADAĞİSTAN M. E., ŞENOCAK T. Ç., ARSLAN E., Project Supported by Higher Education Institutions, PEO YÖNTEMİ İLE AA2014 ALAŞIMI ÜZERİNE H-BN/AL2O3 NANOKOMPOZİT KAPLAMALARIN BÜYÜTÜLMESİ; TRİBOLOJİK VE YAPISAL ÖZELLİKLERİNİN KARAKTERİZASYONU, 2016 - 2017
  - XIV. KOCADAĞİSTAN M. E., ARSLAN E., ŞENOCAK T. Ç., Project Supported by Higher Education Institutions, YÜZEY İŞLEMLERİ LABORATUVAR ALTYAPISININ KURULUMU, 2016 - 2017
  - XV. ARSLAN E., ŞENOCAK T. Ç., Project Supported by Higher Education Institutions, ZİNKATLAMA PROSESİ İLE AKTİVE EDİLEN AA2014 ALAŞIMI ÜZERİNE MAO YÖNTEMİ İLE AL2O3 BÜYÜTÜLMESİ; YAPISAL VE TRİBOKOROZYON ÖZELLİKLERİNİN KARAKTERİZASYONU, 2015 - 2017
  - XVI. ARSLAN E., ŞENOCAK T. Ç., Project Supported by Higher Education Institutions, HASSAS DÖKÜM YÖNTEMİYLE MAGNEZYUM ALAŞIMLARININ ÜRETİMİ; MEKANİK VE TRİBOLOJİK ÖZELLİKLERİNİN ARAŞTIRILMASI, 2013 - 2014
  - XVII. BENKLİ Y. E., ŞENOCAK T. Ç., Project Supported by Higher Education Institutions, ÜRETİM METALURjisİNDE YÜKSEK FIRINA ALTERNATİF YÖNTEMLERİNİN ARAŞTIRILMASI, 2012 - 2013

## Patent

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- I. Aktaş Şenocak E., Şenocak T. Ç., Kabul A., Mıknatışlı Nazal Kanül Aparatı, Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2023/013926 , Standard Registration, 2023
- II. 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
- III. Şenocak T. Ç., Kabul A., TEK KULLANIMLIK BALGAM NUMUNE KABI, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: 2023/013678 , Standard Registration, 2023
- IV. 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
- V. 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

## Scientific Research / Working Group Memberships

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- I. Polimerik Ve Nanopartiküler İlaç Araştırma, Geliştirme Ve Uygulama Grubu , Ataturk University, Türkiye,  
<https://avesis.atauni.edu.tr/arastirma-grubu/piag>, 2022 - Continues
- II. Biofabrication And Bio-Instructive Materials, Silesian University of Technology, Polonya,  
<https://biofabrication.group/team/>, 2022 - 2023

## Mobility Activity

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

## Metrics

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Publication: 18  
Citation (WoS): 57  
Citation (Scopus): 63  
H-Index (WoS): 3  
H-Index (Scopus): 3

## Congress and Symposium Activities

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

## Coaching Duties

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## Refereeing Duties

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## Non Academic Experience

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- I. Business Establishment Private, Eti Krom A.Ş., Ferrokrom Ark Firması İşletmesi