

## Res. Asst. PhD Banu YAYLALI

### Personal Information

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### International Researcher IDs

ORCID: 0000-0002-9488-3910

ScopusID: 58185030400

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### Education Information

Doctorate, Ataturk University, Fen Bilimleri Enstitüsü, Makine Mühendisliği Anabilim Dalı, Turkey 2018 - 2024

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Education Management and Planning, Proje Döngüsü Yönetimi Eğitimi, KUDAKA, 2016

Occupational Health and Safety, Temel İş Sağlığı ve İş Güvenliği Eğitimi, Atatürk Üniversitesi, 2015

Education Management and Planning, TÜRK TELEKOM A.Ş., ETKİLİ KONUŞMA VE DİKSİYON, 2013

### Dissertations

Doctorate, DEVELOPMENT of Nb and Ta ADDED CrYN BASED FUNCTIONAL THIN FILM COATINGS: INVESTIGATION of STRUCTURAL-MECHANICAL AND ELECTROCHEMICAL PROPERTIES, Ataturk University, Fen Bilimleri Enstitüsü, Makine Mühendisliği Anabilim Dalı, 2024

Postgraduate, Piritik atıklardan kobalt kazanımı, Karadeniz Technical University, Fen Bilimleri Enstitüsü, 2017

### Research Areas

Mechanical Engineering, Construction and Manufacturing, Material, Ore-Dressing, Engineering and Technology

### Academic Titles / Tasks

Research Assistant PhD, Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği, 2024 - Continues

Research Assistant, Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği, 2013 - Continues

## Academic and Administrative Experience

Adaptation/Exemption Committee Member, Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği, 2023 - Continues

Performans Değerlendirme Komisyonu Üyesi, Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği, 2020 - Continues

Bölüm Kalite Komisyonu Üyesi, Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği, 2021 - 2023

Internship Committee Member, Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği, 2020 - 2023

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

- I. **Nb-doped hydrogenated diamond-like carbon coated biodiesel injectors material: Synthesis, structure and properties**  
EFEOĞLU İ., Maleque M. A., GÜLTEN G., YEŞİLYURT M., YAYLALI B., TOTİK Y., Kalam M. A., Hassan M. H., Zulkifli N. W.  
Diamond and Related Materials, vol.149, 2024 (SCI-Expanded)
- II. **Effect of Nb and V doped elements on the mechanical and tribological properties of CrYN coatings**  
Gülten G., Yaylalı B., Efeoğlu İ., Totik Y., Kelly P., Kulczyk-Malecka J.  
Surface and Coatings Technology, vol.477, 2024 (SCI-Expanded)
- III. **Influence of Nb and Ta on the corrosion and mechanical properties of CrYN coatings**  
Yaylalı B., Gülten G., Efeoğlu İ., Totik Y., Kelly P., Kulczyk-Malecka J.  
Surface and Coatings Technology, vol.476, 2024 (SCI-Expanded)
- IV. **Extraction of cobalt from a cobaltiferrous pyrite concentrate using H<sub>2</sub>SO<sub>4</sub>-NaNO<sub>3</sub> lixiviant system**  
Yaylalı B., DEVECİ H., Yener Yazici E., CELEP O.  
MINERALS ENGINEERING, vol.198, 2023 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Utilization of Demolition Waste for Treatment of Acid Mine Drainage and Immobilization of Heavy Metals Released from Copper Flotation Tailings**  
Tozsın G., Koç E., Yaylalı B., Deveci H.  
Turkish Journal of Nature and Science, vol.3, no.11, pp.58-62, 2022 (Peer-Reviewed Journal)
- II. **PRODUCTION OF COBALT AS A CRITICAL METAL FROM PRIMARY AND SECONDARY RESOURCES  
KRİTİK METAL KONUMUNDAKİ KOBALTIN BİRİNCİL VE İKİNCİL KAYNAKLARDAN ÜRETİMİ**  
YAYLALI B., YAZICI E. Y., CELEP O., DEVECİ H.  
Scientific Mining Journal, vol.59, no.1, pp.35-50, 2020 (Scopus)

## Books & Book Chapters

- I. **Annealing Effect on Nb Additive CrYN Thin Films Deposited by Magnetron Sputtering**  
Yaylalı B., Gülten G., Yeşilyurt M., Yüksel F., Polat M. A., Efeoğlu İ.  
in: Proceeding of 5th International Conference on Advances in Manufacturing and Materials Engineering, Md. Abdul Maleque, Ahmad Zahirani Ahmad Azhar, Norshahida Sarifuddin, Sharifah Imihezri Syed Shaharuddin, Afifah Mohd Ali, Nor Farah Huda Abdul Halim, Editor, Springer Singapore, Singapore, pp.1-667, 2023
- II. **The Mechanical and Tribological Properties of LaB<sub>6</sub> Thin Films Deposited by Closed-Field Unbalanced Magnetron Sputtering**  
Gülten G., Yeşilyurt M., Yaylalı B., Totik Y., Efeoğlu İ.  
in: Proceeding of 5th International Conference on Advances in Manufacturing and Materials Engineering, Md.

Abdul Maleque,Ahmad Zahirani Ahmad Azhar,Norshahida Sarifuddin,Sharifah Imihezri Syed Shaharuddin,Afifah Mohd Ali,Nor Farah Huda Abdul Halim, Editor, Springer Singapore, Singapore, pp.1-667, 2023

**III. Deposition of Nb Doped CrYN Thin Films: Investigation of Structural, Mechanical and Tribological Properties**

Yüksel F., Gülten G., Yaylalı B., Totik Y., Efeoğlu İ.

in: Proceeding of 5th International Conference on Advances in Manufacturing and Materials Engineering, Md.

Abdul Maleque,Ahmad Zahirani Ahmad Azhar,Norshahida Sarifuddin,Sharifah Imihezri Syed Shaharuddin,Afifah Mohd Ali,Nor Farah Huda Abdul Halim, Editor, Springer Singapore, Singapore, pp.1-667, 2023

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **Adhesion and Friction-wear Characterization of Wdoped Hydrogenated Diamond-like Carbon (a-C:H) Coatings**  
Efeoğlu İ., Totik Y., Gülten G., Yaylalı B., Yeşilyurt M., Günay R., Kara G., Altıntaş B. B.  
50th International Conference on Metallurgical Coatings and Thin Films (ICMCTF 2024), California, United States Of America, 19 May 2023 - 24 May 2024, pp.40
- II. **Wear and Corrosion Characterization and Parametric Optimization of Nb-doped Hydrogenated Diamond-like Carbon (a-C:H) Coatings**  
Efeoğlu İ., Totik Y., Gülten G., Yaylalı B., Yeşilyurt M., Günay R., Kara G., Altıntaş B. B.  
50th International Conference on Metallurgical Coatings and Thin Films (ICMCTF 2024) , California, United States Of America, 19 - 24 May 2024, pp.99
- III. **Influence of Nb and Ta on the corrosion and mechanical properties of CrYN coatings**  
Yaylalı B., Gülten G., Efeoğlu İ., Totik Y., Kelly P., Kulczyk-Malecka J.  
49th International Conference on Metallurgical Coatings and Thin Films-ICMCTF, California, United States Of America, 21 - 26 May 2023, pp.1-15
- IV. **Effect of Nb and V Doped Elements on the Mechanical and Tribological Properties of CrYN Coatings**  
Gülten G., Yaylalı B., Efeoğlu İ., Totik Y., Kelly P., Kulczyk-Malecka J.  
49th International Conference on Metallurgical Coatings and Thin Films-ICMCTF, California, United States Of America, 21 - 26 May 2023, pp.1-15
- V. **The Mechanical and Tribological Properties of LaB6 Thin Films Deposited by Closed-Field Unbalanced Magnetron Sputtering**  
GÜLTEN G., YEŞİLYURT M., YAYLALI B., TOTİK Y., EFEOĞLU İ.  
5th International Conference on Advances in Manufacturing and Materials Engineering, ICAMME 2022, Kuala-Lumpur, Malaysia, 9 - 10 August 2022, pp.245-250
- VI. **Deposition of Nb Doped CrYN Thin Films: Investigation of Structural, Mechanical and Tribological Properties**  
Yuksel F., GÜLTEN G., YAYLALI B., TOTİK Y., EFEOĞLU İ.  
5th International Conference on Advances in Manufacturing and Materials Engineering, ICAMME 2022, Kuala-Lumpur, Malaysia, 9 - 10 August 2022, pp.251-257
- VII. **Annealing Effect on Nb Additive CrYN Thin Films Deposited by Magnetron Sputtering**  
YAYLALI B., GÜLTEN G., YEŞİLYURT M., Yüksel F., POLAT M., EFEOĞLU İ.  
5th International Conference on Advances in Manufacturing and Materials Engineering, ICAMME 2022, Kuala-Lumpur, Malaysia, 9 - 10 August 2022, pp.259-265
- VIII. **EXTRACTION OF COBALT FROM A FLOTATION TAILINGS IN DIFFERENT MINERAL ACIDS UNDER OXIDATIVE CONDITIONS**  
YAYLALI B., YAZICI E. Y., CELEP O., DEVECİ H.  
15'th International Mineral Processing Symposium, İstanbul, Turkey, 19 - 21 October 2016
- IX. **Neutralization of Sulphurous Waste AMD Using Recycled Waste Concrete**  
Tozsın G., Deveci H., Koç E., Yaylalı B.  
ICEWRM 2016 : 18th International Conference on Environment and Water Resource Management, Antalya,

## Supported Projects

EFEÖĞLU İ., KARA G., YEŞİLYURT M., GÜLTEN G., AVCİ S., YAYLALI B., GÜNAY R., TOTİK Y., ALTINTAŞ B. B., Project Supported by Higher Education Institutions, Turbo Jet Uçak Motorun Sızdırmazlık Elemanları için Yüksek Sıcaklık Fonksiyonel Kaplamaların Geliştirilmesi, 2022 - Continues

EFEÖĞLU İ., TOTİK Y., GÜLTEN G., YAYLALI B., KULCZYK-MALECKA J., KELLY P., Project Supported by Higher Education Institutions, Agresif Zorlu Ortamlar için Seramik Kaplamaların Geliştirilmesi, 2022 - 2024

Efeoğlu İ., Totik Y., Gülten G., Maleque A., Kalam M. A., Hassan M. H., Zulkıflı N. W. B. M., YAYLALI B., Project Supported by Higher Education Institutions, Increasing the Performance and Service Life of a Diesel Engine Fuel Injector by Surface Modification, 2022 - 2024

Efeoğlu İ., Totik Y., Project Supported by Public Organizations in Other Countries, Development of coatings for hostile environments, 2020 - 2022

Tozsın G., Deveci H., TUBITAK Project, Kentsel Dönüşüm Kapsamında Açığa Çıkan Beton Atıkların Asit Maden Drenaj Oluşumu ve Ağır Metal Salınımı Önlenmesinde Kullanım Potansiyelinin Araştırılması, 2014 - 2016

Yaylalı B., Tozsın G., Project Supported by Higher Education Institutions, Elektrikli ve Elektronik Atıkların E-Atık Metal Geri Kazanım Potansiyeli Bakımından Değerlendirilmesi , 2014 - 2016

Yaylalı B., Tozsın Durmaz G., Project Supported by Higher Education Institutions, OLTU ve ÇEVRESİNDEKİ KÖMÜR OCAKLARININ ÜRÜN KARAKTERİZASYONUN BELİRLENMESİ VE ZENGİNLEŞTİRME POTANSİYELLERİNİN ARAŞTIRILMASI, 2013 - 2016

Tozsın G., Koç E., Çınar Demir K., Yaylalı B., Aydın U., Project Supported by Higher Education Institutions, Oltu ve Çevresindeki Kömür Ocaklarının Ürün Karakterizasyonunun Belirlenmesi ve Zenginleştirme Potansiyellerinin Araştırılması, 2013 - 2016

## Scientific Research / Working Group Memberships

Functional Surface Technologies R&D Group, Ataturk University, Turkey, <https://avesis.atauni.edu.tr/arastirma-grubu/fstech>, 2018 - Continues

Hydrometallurgy Of Base And Precious Metals, Karadeniz Technical University, Turkey, [www.hydrometbpm.com/en](http://www.hydrometbpm.com/en), 2015 - 2021

## Metrics

Publication: 18

Citation (WoS): 7

Citation (Scopus): 11

H-Index (WoS): 2

H-Index (Scopus): 2

## Congress and Symposium Activities

5th International Conference on Advances in Manufacturing and Materials Engineering (ICAMME) 2022, Attendee, Kuala-Lumpur, Malaysia, 2022