



# EMRE BAL

## ASST. PROF.

Email : [emrebal@akdeniz.edu.tr](mailto:emrebal@akdeniz.edu.tr)

Office Phone : [+90 242 310 6710](tel:+902423106710)

### International Researcher IDs

ScholarID: hf7M-HoAAAAJ

ORCID: 0000-0003-1052-7749

Publons / Web Of Science ResearcherID: C-4748-2016

ScopusID: 57195775899

Yoksis Researcher ID: 122650



### Education

Doctorate 2013 - 2020	Istanbul Technical University, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği, Turkey
Postgraduate 2009 - 2012	Istanbul Technical University, Fen Bilimleri Enstitüsü, Malzeme Mühendisliği, Turkey
Undergraduate 2004 - 2009	Istanbul Technical University, Kimya - Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği, Turkey

### Foreign Languages

Russian, B1 Intermediate

English, C1 Advanced

### Certificates, Courses and Trainings

Other, 2. International Welding Technologies and Exhibition, Welding Technologies Society, 2012

Other, Int. Congress on Advances In Welding Science And Technoogy for Construction, Energy&Trans. Systems, AWST, 2011

Education Management and Planning, Phased Array Tahribatsız Muayene, MAK Elektronik, 2010

Education Management and Planning, Kaynak Mühendisliği ve Teknolojileri Hakkında Temel Bilgiler., İTÜ - GEDİK KAYNAK, 2009

Education Management and Planning, Sivil Havacılık Güvenliği, İç İşleri Bakanlığı - Ulaştırma Bakanlığı, 2008

Education Management and Planning, Sermaye Piyasası, İMKB Hisse Senetleri Piyasası, İMKB Eğitim ve Yayın Bölümü, 2006

## Dissertations

Doctorate, Eriyik Cama (CMAS) Dayanıklı Uçak Motoru Kaplamalarının Plazma Püskürtme Yöntemi İle Üretilmesi, Istanbul Technical University, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği, 2015

Postgraduate, Doğal Gaz Boru Hatları Yüksek Gerilimli Kaynak Ana Malzemesi Teknolojisinin Geliştirilmesi (BORKAY) - SANTEZ, Istanbul Technical University, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği, 2012

## Academic Titles / Tasks

---

Assistant Professor  
2021 - Continues

Akdeniz University, Faculty of Engineering, Department of Materials Science and Engineering

---

Lecturer PhD  
2013 - 2021

Akdeniz University, Technical Sciences Vocational School, Department of Electricity and Energy

## Supported Projects

1. Bal E., Arısoy C. F., Gök M. G., Özdemir K., Çağlayan N., Project Supported by Higher Education Institutions, Ergimiş Tuz Sentezi Yöntemi ile Bor Bileşik Enerjik Malzeme Üretimi, 2023 - 2024
2. BAL E., TUBITAK Project, La2Zr2O7 Sermağının Termal Bariyer Malzeme Olarak Kullanımının Geliştirilmesi, 2016 - 2017
3. Industrial Thesis Project, Doğal gaz boru hatları için yüksek gerilimli kaynak ana malzemesi teknolojisinin geliştirilmesi (Borkay), 2010 - 2013

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

1. **THERMAL SHOCK BEHAVIOR OF LANTHANUM ZIRCONATE-BASED THERMAL BARRIER COATINGS**  
Karabas M., BAL E.  
Surface Review and Letters, vol.31, no.4, 2024 (SCI-Expanded)
2. **Effect of molten glass on degradation of stabilized zirconia thermal barrier coatings**  
BAL E., Karabaş M.  
Journal of the Korean Ceramic Society, vol.60, no.2, pp.331-343, 2023 (SCI-Expanded)
3. **Thermal cycling behavior of La2Zr2O7 thermal barrier coatings by plasma spraying of an amorphous and crystalline precursors**  
Karabas M., BAL E., Taptık İ. Y.  
MATERIALS RESEARCH EXPRESS, vol.6, no.1, 2019 (SCI-Expanded)
4. **The effect of CMAS interaction on thermal cycle lifetime of YSZ based thermal barrier coatings**  
Bal E., Karabas M., Taptık İ. Y.  
MATERIALS RESEARCH EXPRESS, vol.5, no.6, 2018 (SCI-Expanded)
5. **Hot corrosion behaviour of plasma sprayed alumina plus YSZ particle composite coating**  
Karabas M., BAL E., Taptık İ. Y.  
PROTECTION OF METALS AND PHYSICAL CHEMISTRY OF SURFACES, vol.53, no.5, pp.859-863, 2017 (SCI-Expanded)
6. **Effect of Air Plasma Spray Parameters on the Properties of YSZ and CYSZ Thermal Barrier Coatings**  
Karabas M., BAL E., Kılıç A., Taptık İ. Y.  
JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, vol.52, no.2, pp.175-182, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- 1. Yeni Nesil Termal Bariyer Kaplama Malzemeleri**  
BAL E., KARABAŞ M.  
e-Makine Teknolojileri Elektronik Dergisi (elektronik), vol.12, pp.57-64, 2015 (Peer-Reviewed Journal)
- 2. Orbital Kaynak Teknolojisi Kullanılarak Kaynak Edilen X65 ve X70 Çelik Boruların Mekanik ve Mikroyapı Özelliklerinin İncelenmesi**  
BAL E., GENÇKAN H. D., TAPTIK İ. Y., KOÇAK M.  
e-Makine Teknolojileri Elektronik Dergisi (elektronik), vol.10, pp.45-56, 2014 (Peer-Reviewed Journal)

## Books

- 1. Doğalgaz Tesisatı ve Kaynak Bilimi**  
BAL E., KARABAŞ M.  
Akdeniz Belediyeler Birliği, Antalya, 2017

## Refereed Congress / Symposium Publications in Proceedings

- 1. Preparation and Characterization of (La,Gd,Yb,Sm,Y)0.4Si2O7 as a Potential Thermal / Environmental Barrier Coating**  
BAL E., KARABAŞ M.  
ICPAM-16, Antalya, Turkey, 07 September 2024, vol.1, pp.51-52
- 2. Static-Structural Analysis of Gas Turbine Blade Fabricated with Titanium Based MAX Phase Materials**  
BAL E., KARABAŞ M.  
6th International Conference on ADVANCES IN NATURAL and APPLIED SCIENCES, Ağrı, Turkey, 11 - 13 October 2022
- 3. STRUCTURAL CHARACTERIZATION OF PLASMA SPRAYED ENVIRONMENTAL BARRIER COATING**  
İhvan S., KARABAŞ M., BAL E., TAPTIK İ. Y.  
ICAME 2021, İstanbul, Turkey, 20 October 2021
- 4. Atmosferik Plazma Sprey Yöntemi İle Üretilen Farklı Seramik Kaplamaların Kuru Aşınma Davranışının İncelenmesi**  
Avcı A., Akdoğan Eker A., Karabaş M., Bal E.  
3.Uluslararası Mühendislik Mimarlık ve Tasarım Dergisi, İstanbul, Turkey, 4 - 05 May 2018, pp.205-206
- 5. LASER SURFACE MODIFICATION OF LANTHANUM-YTTERBIUMZIRCONATE BASED THERMAL BARRIER COATINGS**  
KARABAŞ M., BAL E., TAPTIK İ. Y.  
MTM 2017, İstanbul, Turkey, 26 - 27 October 2017, vol.1, pp.125-128
- 6. Degradation of Thermal Barrier Coatings with Molten CaO MgO Al2O3 SiO2 CMAS Deposition and Hot Corrosion**  
KARABAŞ M., BAL E., KILIÇ A., TAPTIK İ. Y.  
18th International Metallurgy and MaterialsCongress, İstanbul, Turkey, 29 September - 01 October 2016, pp.810-813
- 7. DEGRADATION OF YSZ YSZ Al2O3 CSZ AND C YSZ Al2O3 TBCs AFTER THERMAL CYCLE TESTS**  
BAL E., KARABAŞ M., TAPTIK İ. Y.  
The IRES 25th International Conferences, İstanbul, Turkey, İstanbul, Turkey, 24 January 2016, vol.1, pp.17-23
- 8. Investigation Into High Strength Steel Pipes Welded with Orbital Welding System**  
BAL E.  
IIW International Congress on Advances in Welding Science & Technology, İstanbul, Turkey, 1 - 04 October 2011, vol.1, no.1, pp.598-606
- 9. Assessment Of Girth Welded X80 Grade Pipes**  
BAL E., Gençkan D.

## Courses

Gıda Mühendisliğinde Malzeme Bilgisi, Undergraduate, 2024 - 2025, 2023 - 2024  
Malzemelerin Mekanik Özellikleri, Postgraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022  
Boru Kaynakçılığı, Associate Degree, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020,  
2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014  
Demir Olmayan Malzemeler, Undergraduate, 2024 - 2025, 2023 - 2024  
Mesleki Programlama, Associate Degree, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020,  
2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014  
Hasar Analizi, Postgraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022  
Kaynak Teknolojisi, Postgraduate, 2024 - 2025, 2023 - 2024  
Malzeme Teknolojisi, Associate Degree, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020,  
2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015  
Material Technology, Postgraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022  
Genel Kimya, Undergraduate, 2024 - 2025, 2023 - 2024  
Technical Drawing, Undergraduate, 2022 - 2023  
Doğalgaz Sistemleri, Undergraduate, 2021 - 2022  
Bilgisayar Destekli Çizim, Undergraduate, 2021 - 2022  
Tahribatsız Malzeme Muayenesi, Associate Degree, 2020 - 2021  
Bilgisayar Destekli Çizim 1, Associate Degree, 2020 - 2021  
Temel Tesizat İşlemleri, Associate Degree, 2020 - 2021  
Kazan Yakma ve Yakıcılar, Associate Degree, 2014 - 2015  
Kalite Güvencesi ve Standartlar, Associate Degree, 2013 - 2014  
İş Güvenliği, Associate Degree, 2014 - 2015  
Meslek Etiği, Associate Degree, 2013 - 2014  
Doğal Gaza Giriş, Associate Degree, 2013 - 2014  
Termodinamik, Associate Degree, 2014 - 2015

## Metrics

Publication: 18  
Citation (WoS): 29  
Citation (Scopus): 25  
H-Index (WoS): 4  
H-Index (Scopus): 3

## Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Plating, Production Metallurgy, Iron and Steel  
Production, Engineering and Technology