

## Assoc. Prof. LEVENT KARA

### Personal Information

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### International Researcher IDs

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ScopusID: 55073157200

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### Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Makine Mühendisliği, Turkey 2009 - 2015

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği, Turkey 2007 - 2009

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Sıçratma Yöntemiyle Kompozit TiAlCrNbN Kaplı H13 Çeliğinin Yapısal ve Tribolojik Özelliklerinin Araştırılması, Erzincan Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği Bölümü/Malzeme, 2015

Postgraduate, Yüzeyi İnce Film Kaplanmış 100Cr6 çeliğinin Çeşitli Ortamlarda Sürtünme ve Aşınma Davranışlarının İncelenmesi, Erzincan Üniversitesi, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği Bölümü/Malzeme, 2009

### Research Areas

Mechanical Engineering, Construction and Manufacturing, Tribology, NDT Engineering, Welding Methods, Metallurgical and Materials Engineering, Material science and engineering, Mechanical Properties, Plating, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Erzincan Binali Yıldırım University, Mühendislik-Mimarlık Fakültesi, Makine Mühendisliği Bölümü, 2018 - Continues

Assistant Professor, Erzincan Binali Yıldırım University, Mühendislik-Mimarlık Fakültesi, Makine Mühendisliği Bölümü, 2016 - 2018

Research Assistant, Karadeniz Technical University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği, 2007 - 2015

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

- I. **Electrochemically structured tantalum surfaces via anodization for core-shell nanostructures: Optimization and characterization of Zn-ZnO nanoparticle deposition using magnetron sputtering**  
KARA L., Calderon S., Carvalho S.  
Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, vol.42, no.3, 2024 (SCI-Expanded)
- II. **The effect of FSP on the friction and wear behaviour of Al5083 under normal atmosphere and vacuum conditions**  
KARA L.  
Materials Science and Technology (United Kingdom), vol.39, no.7, pp.876-899, 2023 (SCI-Expanded)
- III. **Nano-Hydroxyapatite Airborne-Particle Abrasion System as an Alternative Surface Treatment Method on Intraorally Contaminated Titanium Discs**  
Gumus K. C., USTAOĞLU G., KARA L., ERCAN E., ALBAYRAK Ö., TUNALI M.  
INTERNATIONAL JOURNAL OF PERIODONTICS & RESTORATIVE DENTISTRY, vol.40, no.4, 2020 (SCI-Expanded)
- IV. **THE EFFECT OF TiN, TiAlN, CrAlN, AND TiAlN/TiSiN COATINGS ON THE WEAR PROPERTIES OF AISI H13 STEEL AT ROOM TEMPERATURE**  
KARA L., Asl H. G., Karadayi O.  
SURFACE REVIEW AND LETTERS, vol.26, no.9, 2019 (SCI-Expanded)
- V. **Friction and Wear Behaviors of TiN Coatings under Dry and Vacuum Conditions**  
KARA L., Ozkan D., Yagci M. B., Sulukan E., SERT Y., Sert T. S.  
TRIBOLOGY TRANSACTIONS, vol.62, no.3, pp.362-373, 2019 (SCI-Expanded)
- VI. **Tribological Behavior of TiAlN, AlTiN, and AlCrN Coatings at Boundary Lubricating Condition**  
Ozkan D., ERARSLAN Y., Sulukan E., KARA L., Yilmaz M. A., Yagci M. B.  
TRIBOLOGY LETTERS, vol.66, no.4, 2018 (SCI-Expanded)
- VII. **The friction and wear performance of DLC coatings deposited on plasma nitrided AISI 4140 steel by magnetron sputtering under air and vacuum conditions**  
Kovaci H., Baran Ö., Yetim A. F., Bozkurt Y. B., Kara L., Çelik A.  
SURFACE & COATINGS TECHNOLOGY, vol.349, pp.969-979, 2018 (SCI-Expanded)
- VIII. **The influence of nitrogen implantation on tribological properties of AISI H11 steel**  
BUDZYNSKI P., Kara L., KÜÇÜKÖMEROĞLU T., KAMINSKI M.  
VACUUM, vol.122, pp.230-235, 2015 (SCI-Expanded)
- IX. **The effect of Er,Cr:YSGG laser irradiation on titanium discs with microtextured surface morphology**  
Ercan E., Candirli C., Arin T., Kara L., Uysal C.  
LASERS IN MEDICAL SCIENCE, vol.30, no.1, pp.11-15, 2015 (SCI-Expanded)
- X. **Investigation of the friction and wear properties of Ti/TiB<sub>2</sub>/MOS<sub>2</sub> graded-composite coatings deposited by CFUBMS under air and vacuum conditions**  
Baran Ö., Bidev F., Cicek H., Kara L., Efeoğlu İ., Küçükömeroğlu T.  
SURFACE & COATINGS TECHNOLOGY, vol.260, pp.310-315, 2014 (SCI-Expanded)
- XI. **Effects of Er,Cr:YSGG laser irradiation on the surface characteristics of titanium discs: An in vitro study**  
Ercan E., Arin T., Kara L., Candirli C., Uysal C.  
LASERS IN MEDICAL SCIENCE, vol.29, no.3, pp.875-880, 2014 (SCI-Expanded)
- XII. **Microstructure, Mechanical, and Scratch Resistance Properties of TiAlCrNbN-Graded Composite Coating Deposited on AISI H13 Steel Substrate with Pulsed DC Closed Field Unbalanced Magnetron Sputtering Method**  
Kara L., Küçükömeroğlu T., Baran Ö., Efeoğlu İ., Yamamoto K.  
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.4, pp.2123-2131, 2014 (SCI-Expanded)
- XIII. **The friction and wear properties of CuZn39Pb3 alloys under atmospheric and vacuum conditions**  
KÜÇÜKÖMEROĞLU T., Kara L.  
WEAR, vol.309, pp.21-28, 2014 (SCI-Expanded)

## Articles Published in Other Journals

- I. **THE EFFECT OF "B" TARGET VOLTAGE ON WEAR PROPERTIES OF TiCrNb-hBN COATINGS**  
SERT Y., KÜÇÜKÖMEROĞLU T., KAHRAMANZADE H., KARA L.  
Acta Mechanica et Automatica, vol.17, no.4, pp.575-580, 2023 (ESCI)
- II. **5 Farklı CAD / CAM Restoratif Malzemelerin Mekanik ve Aşınma Özelliklerinin İncelenmesi**  
KAHRAMANZADE H., SAĞSÖZ Ö., KARA L.  
El-Cezeri Journal of Science and Engineering, vol.7, no.1, pp.57-66, 2020 (Scopus)
- III. **CrN Kaplanmış AISI 52100 Çeliğinin Atmosfer ve Vakum ortamlarında Aşınma Davranışının İncelenmesi**  
KARA L.  
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.8, no.1, pp.118-131, 2019 (Peer-Reviewed Journal)
- IV. **THE INVESTIGATION OF WEAR PROPERTIES OF TIN COATINGS ON THE H13 TOOL STEEL UNDER DIFFERENT DEPOSITION PARAMETERS**  
GHAHRAMANZADEH ASL H., KARA L., Sert Y., Sonsuz SERT T., KÜÇÜKÖMEROĞLU T.  
e-Journal of New World Sciences Academy, vol.13, no.4, pp.316-323, 2018 (Peer-Reviewed Journal)
- V. **Er,Cr:YSGG Laser as a surface detoxification method in enhancement of osseointegration**  
UYSAL C., ERCAN E., KARA L., ARIN T.  
Aydın Dental Journal, vol.3, no.1, pp.1-10, 2017 (Peer-Reviewed Journal)
- VI. **Investigation of friction and wear behaviours of CuSn10 alloy in vacuum**  
Küçükömeroğlu T., Pürçek G., Saray O., KARA L.  
journal of achievements in materials and manufacturing engineering, vol.30, pp.172-176, 2008 (Scopus)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Bias Gerilimi ve Nb Hedef Akımının TiAlCrNbN Kaplamaların Morfolojik, Yapısal ve Kimyasal Özelliklerine Etkisi**  
KARA L.  
LATIN AMERICA 5th INTERNATIONAL CONFERENCE ON SCIENTIFIC RESEARCHES, Medellin, Colombia, 17 February - 19 March 2023, pp.89-97
- II. **TRIBOLOGICAL BEHAVIOR OF TiAlN, AlTiN, AlCrN COATINGS UNDER DRY AND LUBRICATED CONDITIONS**  
ÖZKAN D., ERARSLAN Y., KARA L., YILMAZ M. A., YAĞCI M. B., SULUKAN E.  
19th International Metallurgy and Materials Congress, 25 - 27 October 2018
- III. **Mechanical, Structural and Tribological Properties of TiAlZrN Coated AISI H13 Steel**  
Sert Y., KARA L., Küçükömeroğlu T., Wfwoğlu İ.  
19th International Metallurgy and Materials Congress, İstanbul, Turkey, 25 - 27 October 2018, pp.82
- IV. **TRIBOLOGICAL BEHAVIOR OF TiB<sub>2</sub> COATINGS UNDER VACUUM CONDITION**  
SERT T. S., KARA L., ÖZKAN D., KÜÇÜKÖMEROĞLU T., SERT Y.  
3rd International Conference on Material Science and Technology in Cappadocia (IMSTEC'18), 17 - 19 September 2018
- V. **COATING TEMPERATURE EFFECT ON TRIBOLOGICAL PROPERTIES OF THE TiB<sub>2</sub> THIN FILM COATINGS**  
DURUKAN A., SERT T. S., ÖZKAN D., KARA L.  
3rd International Material Science and Technology in Cappadocia (IMSTEC'18), 17 - 19 September 2018
- VI. **WEAR AND FRICTION BEHAVIOR OF TiB<sub>2</sub> COATINGS UNDER DRY AND LUBRICATED CONDITIONS**  
ÖZKAN D., KARA L., SULUKAN E., KÜÇÜKÖMEROĞLU T., SERT Y., SERT T. S.  
3rd International Conference on Material Science and Technology in Cappadocia (IMSTEC'18), Nevşehir, Turkey, 17 - 19 September 2018
- VII. **Wettability of the intraorally contaminated titanium discs cleaning with different decontamination methods**

GÜMÜŞ K. Ç., USTAOĞLU G., TUNALI M., ERCAN E., KARA L., ALBAYRAK Ö.

EAO- Avrupa Osseointegrasyon Derneği 27. Yıllık Kongresi, 11 - 13 October 2018, vol.29, pp.50

- VIII. **The Effect of Deposition Parameters on the Wear and Scratch Properties of TiAlZrN Coatings**  
SERT Y., KÜÇÜKÖMEROĞLU T., KARA L., EFEĞLU İ.  
International Science Applications of Thin Films, Conference Exhibition (SATF 2018), 17 - 21 September 2018, vol.1, pp.13-21
- IX. **The Friction and Wear Performance of DLC Coatings Deposited on Plasma Nitrided AISI 4140 Steel by Magnetron Sputtering under Air and Vacuum Conditions**  
Kovacı H., BARAN Ö., YETİM A. F., Bozkurt Y., KARA L., ÇELİK A.  
International Conference on Metallurgical Coatings and Thin Films 2018 (ICMCTF'2018), San Diego, United States Of America, 23 - 27 April 2018, pp.26
- X. **The Friction and Wear Performance of DLC Coatings Deposited on Plasma Nitrided AISI 4140 Steel by Magnetron Sputtering under Air and Vacuum Conditions**  
Kovacı H., BARAN Ö., YETİM A. F., Bozkurt Y., KARA L., ÇELİK A.  
International Conference on Metallurgical Coatings and Thin Films 2018 (ICMCTF'2018), San Diego, United States Of America, 23 - 27 April 2018, pp.26
- XI. **Magnetron Sıçratma Yöntemiyle D2 Soğuk İş Takım Çeliğine Kaplanmış TiN Kaplamaların Adezyon ve Tribolojik Özelliklerine Taban Malzeme Sıcaklığının Etkisi**  
BARAN Ö., Bilgin E., KARA L., Keleş A., EFOĞLU İ.  
1st International Symposium on Light Alloys and Composite Materials, Karabük, Turkey, 22 - 24 March 2018, pp.182
- XII. **Al-5083 Alaşımının Mikroyapısal, Mekanik Ve Tribolojik Özelliklerinin Sürtünme Karıştırma Prosesi ile İyileştirilmesi**  
BARAN Ö., Saygın M., KARA L., KUCUKOMEROĞLU T.  
1st International Symposium on Light Alloys and Composite Materials, Karabük, Turkey, 22 - 24 March 2018, pp.189
- XIII. **Investigation of Wear Hardness Properties of CAD/CAM Materials: A Pilot Study**  
KAHRAMANZADE H., SAĞSÖZ Ö., KARA L.  
Turkish Society of Restorative Dentistry 21st International Scientific Congress, 1 - 03 November 2017
- XIV. **The Wear Behaviour of 52100 Steel under Vacuum Environment**  
KARA L., KÜÇÜKÖMEROĞLU T., GHAHRAMANZADEH ASL H., SERT Y.  
Balkan Trib'xx17 9'xxth International Conference on Tribology, 13 - 15 September 2017
- XV. **CAD/CAM Materyallerin Aşınma ve Sertlik Özelliklerinin İncelenmesi: Bir Pilot Çalışma**  
GHAHRAMANZADEH ASL H., SAĞSÖZ Ö., KARA L.  
Restoratif Diş Hekimliği Derneği 21. Uluslararası Kongresi, Turkey, 1 - 03 December 2017
- XVI. **The Investigation of Wear Properties of TiN Coatings under Different Deposition Parameters**  
GHAHRAMANZADEH ASL H., SERT Y., KARA L., KÜÇÜKÖMEROĞLU T., SONSUZ SERT T.  
ICADET'xx17, Bayburt, Turkey, 21 - 23 September 2017, vol.19, pp.58-63
- XVII. **The Effect of Friction Stir Processing Parameters on The Wear Properties of Al5083 Alloys**  
KUCUKOMEROĞLU T., KARA L., BARAN Ö., SERT Y.  
Balkan Trib'2017 (9th INTERNATIONAL CONFERENCE ON TRIBOLOGY), Nevşehir, Turkey, 13 - 15 September 2017, pp.40
- XVIII. **NAB Bronzunun Vakum Ortamındaki Sürtünme ve Aşınma Özelliklerinin İncelenmesi**  
KUCUKOMEROĞLU T., KARA L.  
15th International Materials Symposium (IMSP'2014), Denizli, Turkey, 15 - 17 October 2015, pp.114-120
- XIX. **The Effect of Deposition Parameters on the Tribological Properties of TiAlCrNbN Coatings**  
KUCUKOMEROĞLU T., BARAN Ö., EFEĞLU İ., KARA L.  
EUROMAT 2015, Warsaw, Poland, 20 - 24 September 2015, pp.1
- XX. **The Friction and Wear Properties at Room Temperature and Vacuum Atmosphere of Ti/TiB<sub>2</sub>/MoS<sub>2</sub> Graded-Composite Coatings Deposited by CFUBMS**  
BARAN Ö., BİDEV F., ÇİÇEK H., KARA L., Efeöğlü İ., KUCUKOMEROĞLU T.

International Conference on Metallurgical Coatings&Thin Films, 41th ICMCTF, ICMCTF 2014, San Diego, United States Of America, 28 April - 02 May 2014, pp.116

- XXI. **The Effect of Deposition Parameters on the Tribological Properties of TiAlCrNbN Thin Films**  
KARA L., BARAN Ö., KUCUKOMEROGLU T., Efeoğlu İ.  
ICMCTF 2014, San Diego, United States Of America, 28 April - 02 May 2014, pp.118
- XXII. **Effect of Deposition Parameters on Mechanical Properties of MoS<sub>2</sub>-Ti Coating**  
KARA L., KUCUKOMEROGLU T., EFEOGLU I., DANIŞMAN Ş., SAVAŞ S.  
IMSP'2012, Denizli, Turkey, 10 - 12 October 2012, pp.96
- XXIII. **The Structural Examination of Microstructure, Hardness, Tensile and Bending Tests of IF 7114 Steel Joined by Friction Stir Welding**  
KUCUKOMEROGLU T., Aktarer S., KARA L., Yılmaz H.  
International Congress on Advances in Welding Science and Technology for Construction, Energy and Transportation Systems (AWST), Antalya, Turkey, 24 - 25 November 2011, pp.330-342
- XXIV. **The effect of tool press force on the weldability of if steel by friction stir welding**  
AKTARER S. M., KÜÇÜKÖMEROĞLU T., KARA L.  
New Materials and Its Technologies In Production Engineering, 12 October 2011
- XXV. **The effect of tool press force on the weldability of if steel by friction stir welding New Materials and It Technologies In Production Engineering**  
KUCUKOMEROGLU T., Aktarer S., KARA L.  
New Materials and Its Technologies in Production Engineering, Lublin, Poland, 12 - 14 May 2011, pp.55-68
- XXVI. **Investigation of wear surfaces that occurs in CuZn39Pb3 bearing alloy with scanning electron microscopy**  
Küçükömeroğlu T., KARA L.  
19th National Electron Microscopy Conference (International Subscription), Trabzon, Turkey, 10 - 12 June 2009, pp.232
- XXVII. **Investigation of friction and wear behaviors of AlSi12 alloy in vacuum, 19. National Electron Microscopy Conference (International Subscription),**  
KARA L., KUCUKOMEROGLU T.  
19th National Electron Microscopy Conference (International Subscription), Trabzon, Turkey, 10 - 12 June 2009, pp.82

## Supported Projects

KARA L., ORHAN O., GHAHRAMANZADEHASL H., KURNUÇ SEYHAN A., BARAN Ö., BAYRAK Ö., Project Supported by Higher Education Institutions, Malzeme Bilimi ve Araştırma Laboratuvarlarının Kurulması, 2017 - 2023

KARA L., TUBITAK Project, Yüksek Sıcaklık Uygulamaları İçin Nitrürlenmiş H13 Çeliği Üzerine Kaplanan Dereceli TiAlCrNbN Filmin Sentezi Ve Mekanik-Tribolojik Özelliklerinin Araştırılması, 2017 - 2019

KARA L., KÜÇÜKÖMEROĞLU T., BARAN Ö., BAYRAK Ö., Saygın M., Project Supported by Higher Education Institutions, Al 5083 H111 Alaşımının Sürtünme Karıştırma Prosesi ile Proses Edilmesi Mekanik Korozyon ve Tribolojik Özelliklerinin İncelenmesi, 2016 - 2017

## Scientific Refereeing

SURFACE AND COATINGS TECHNOLOGY, Journal Indexed in SCI-E, October 2023

Universal Journal of Materials Science, Other Indexed Journal, December 2015

Universal Journal of Materials Science, Other Indexed Journal, June 2015

## Metrics

Publication: 46  
Citation (WoS): 65  
Citation (Scopus): 191  
H-Index (WoS): 5  
H-Index (Scopus): 9

## **Scholarships**

2218 yurt ii doktora sonrası arařtırma burs programı, TUBITAK, 2023 - Continues

## **Refereeing Duties**

19 Mayıs Genlik ve Spor Bayramı Satran Turnuvası-Organized Competitions, 2024

## **Non Academic Experience**

Coimbra niversitesi Makine Mhendislięi  
Lublin University of Technology  
Lublin University of Technology