

# HARUN YANAR

## ASST. PROF.

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Bölümü

### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAI-9305-2021

Yoksis Researcher ID: 123518



### Learning Knowledge

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Doctorate 2014 - 2020	Karadeniz Technical University, Mühendislik Fakültesi, Makine Mühendisliği, Turkey
Postgraduate 2012 - 2014	Karadeniz Technical University, -, Makina Mühendisliği, Turkey
Undergraduate 2007 - 2012	Karadeniz Technical University, Mühendislik Fakültesi, Makina Mühendisliği, Turkey

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### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Demir Yolu Taşıtları İçin Asbest İçermeyen Organik Esaslı Kompozit Balata Bileşimlerinin Geliştirilmesi,  
Karadeniz Technical University, Fen Bilimleri Enstitüsü, -, 2020

Postgraduate, Aşırı Plastik Deformasyon ve Yaşlandırma İşlemlerinin Bileşik Etkisi İle Yüksek Performanslı Cu-Cr-Zr  
Elektrot Malzemesinin Geliştirilmesi, Karadeniz Technical University, Malzeme, Makina Mühendisliği, 2014

### Academic Titles / Tasks

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Assistant Professor 2021 - Continues	Karadeniz Technical University, Mühendislik Fakültesi, Makine Mühendisliği
Research Assistant 2014 - 2020	Karadeniz Technical University, Mühendislik Fakültesi, Makine Mühendisliği

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## Supported Projects

1. Varol T., Pürçek G., Yanar H., Beder M., Güler O., TÜBİTAK International Bilateral Joint Cooperation Program Project, Hierarchically Structured Functional Aa2024 Aerospace Alloy Processed By Hybrid Additive Manufacturing and Surface Engineering, 2023 - 2024
2. PÜRÇEK G., DEMİRTAŞ M., YANAR H., Project Supported by Higher Education Institutions, Demir yolu taşıtları için kompozit fren balata bileşiminin geliştirilmesi, 2018 - 2022
3. Yanar H., Pürçek G., TUBITAK Project, Kara ve Demir Yolu Taşıtlarına Yönelik Yeni Bir Balata Test Sisteminin Geliştirilmesi, 2020 - 2021
4. Yanar H., Pürçek G., KOSGEB, Servo Sistem Tahrikli ve PLC Kontrollü Çonk Fonksiyonlu Bir Sürtünme Aşınma ve Yağlama Test Cihazının Arayüz Yazılımı İle Birlikte Geliştirilmesi, 2019 - 2020
5. Pürçek G., Çakır O., TUBITAK Project, Çok Fonksiyonlu Özgün Bir Tribolojik Test Sisteminin Geliştirilmesi, 2017 - 2019
6. Yanar H., Pürçek G., TUBITAK Project, Pin-on-disk tipi tribolojik test sisteminin modüler tarzda geliştirilerek ticarileşme potansiyelinin artırılması, 2015 - 2016
7. Yanar H., Pürçek G., BOREN, Ulusal Bor Araştırma Enstitüsü Projesi, Ulusal Bor Araştırma Enstitüsü (BOREN): Asbestsiz Kompozit Fren Pabuçlarında Bor (Bor Nitrür) Kullanımının Tribolojik Özelliklere Etkisinin İncelenmesi, 2014 - 2016
8. Pürçek G., Industrial Thesis Project, Aşırı plastik deformasyon ve yaşlandırma işlemlerinin bileşik etkisi ile yüksek performanslı Cu-Cr-Zr elektrot malzemesinin geliştirilmesi ve bunun için yarı mamul pilot üretim sisteminin oluşturulması, 2013 - 2015
9. YANAR H., Project Supported by Other Official Institutions, Çok amaçlı bir sürtünme ve aşınma test sisteminin tasarım ve imalatı, 2013 - 2014

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

1. **Surface Modification of Additively Manufactured Inconel 718 Alloy by Low-Energy High-Current Electron Beam Irradiation**  
Demirtas M., Ivanov K. V., PÜRÇEK G., YANAR H., KAYNAK Y.  
Advanced Engineering Materials, vol.26, no.23, 2024 (SCI-Expanded)
2. **Fatigue crack propagation anisotropy of an Al-Zn-Mg-Cu super-thick plate**  
Wang H., Zhang Z., Hou J., Gong B., Liu H., Abedi H., PÜRÇEK G., YANAR H., Demirtas M., Zhang Z.  
International Journal of Fatigue, vol.187, 2024 (SCI-Expanded)
3. **High-Cycle-Fatigue Anisotropy of an Aluminum Alloy Superthick Plate**  
Wang H., Zhang Z., Gong B., Zhou X., Liu R., Abedi H. R., PÜRÇEK G., YANAR H., Demirtas M., Zhang Z.  
Advanced Engineering Materials, vol.26, no.15, 2024 (SCI-Expanded)
4. **Enhancing mechanical and tribological properties of Ni3Al-15vol%TiC composite by high current pulsed electron beam irradiation**  
DEMİRTAŞ M., Ivanov K., PÜRÇEK G., YANAR H.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.898, 2022 (SCI-Expanded)
5. **Effect of hexagonal boron nitride (h-BN) addition on friction behavior of low-steel composite brake pad material for railway applications**  
YANAR H., PÜRÇEK G., Demirtas M., Ayar H. H.  
TRIBOLOGY INTERNATIONAL, vol.165, 2022 (SCI-Expanded)
6. **The mechanical compression performance of ultra-fine grained stainless steel pyramidal lattice core**  
KULEYİN H., GÜMRÜK R., YANAR H., Demirtaş M., PÜRÇEK G.  
MECHANICS OF ADVANCED MATERIALS AND STRUCTURES, vol.28, no.10, pp.1073-1078, 2021 (SCI-Expanded)
7. **Microstructural, mechanical and tribological properties of ultrafine-grained Cu-Cr-Zr alloy processed by high pressure torsion**  
Purcek G., Yanar H., Demirtas M., Shangina D. V., Bocharov N. R., Dobatkin S. V.

JOURNAL OF ALLOYS AND COMPOUNDS, vol.816, 2020 (SCI-Expanded)

8. **Effect of resin content on tribological behavior of brake pad composite material**  
YANAR H., Ayar H. H., DEMİRTAŞ M., PÜRÇEK G.  
INDUSTRIAL LUBRICATION AND TRIBOLOGY, vol.72, no.2, pp.195-202, 2018 (SCI-Expanded)
9. **High temperature superplasticity and deformation behavior of naturally aged Zn-Al alloys with different phase compositions**  
Demirtas M., Kawasaki M., Yanar H., Purcek G.  
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.730, pp.73-83, 2018 (SCI-Expanded)
10. **Effect of grain refinement and phase composition on room temperature superplasticity and damping capacity of dual-phase Zn-Al alloys**  
DEMİRTAŞ M., ATLI K. C., YANAR H., Purce G.  
JOURNAL OF MATERIALS RESEARCH, vol.33, no.8, pp.1032-1045, 2018 (SCI-Expanded)
11. **Influence of high pressure torsion-induced grain refinement and subsequent aging on tribological properties of Cu-Cr-Zr alloy**  
PÜRÇEK G., YANAR H., Shangina D., Demirtas M., Bochvar N., Dobatkin S.  
Journal of Alloys and Compounds, vol.742, pp.325-333, 2018 (SCI-Expanded)
12. **Enhancing the Damping Behavior of Dilute Zn-0.3Al Alloy by Equal Channel Angular Pressing**  
Demirtas M., Atli K. C., YANAR H., PÜRÇEK G.  
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.6, pp.2868-2876, 2017 (SCI-Expanded)
13. **Improvement of wear behaviour of titanium by boriding**  
Kara G., Pürçek G., Yanar H.  
INDUSTRIAL LUBRICATION AND TRIBOLOGY, vol.69, no.1, pp.65-70, 2017 (SCI-Expanded)
14. **Effect of different processes on lamellar-free ultrafine grain formation, room temperature superplasticity and fracture mode of Zn-22Al alloy**  
Demirtas M., PÜRÇEK G., YANAR H., ZHANG Z. J., ZHANG Z. F.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.663, pp.775-783, 2016 (SCI-Expanded)
15. **Influence of microalloying with zirconium on the structure and properties of Cu-Cr alloy after high pressure torsion**  
SHANGINA D. V., BOCHVAR N. R., GORSHENKOV M. V., YANAR H., PÜRÇEK G., DOBATKIN S. V.  
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.650, pp.63-66, 2016 (SCI-Expanded)
16. **Optimization of strength, ductility and electrical conductivity of Cu-Cr-Zr alloy by combining multi-route ECAP and aging**  
PÜRÇEK G., YANAR H., Demirtas M., ALEMDAĞ Y., SHANGINA D. V., DOBATKIN S. V.  
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.649, pp.114-122, 2016 (SCI-Expanded)
17. **Effect of equal-channel angular pressing on room temperature superplasticity of quasi-single phase Zn-0.3Al alloy**  
Demirtas M., PÜRÇEK G., YANAR H., Zhang Z. J., Zhang Z. F.  
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.644, pp.17-24, 2015 (SCI-Expanded)
18. **Achieving room temperature superplasticity in Zn-5Al alloy at high strain rates by equal-channel angular extrusion**  
Demirtas M., PÜRÇEK G., YANAR H., ZHANG Z. J., Zhang Z. F.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.623, pp.213-218, 2015 (SCI-Expanded)
19. **Improvement of high strain rate and room temperature superplasticity in Zn-22Al alloy by two-step equal-channel angular pressing**  
DEMIRTAS M., PÜRÇEK G., YANAR H., ZHANG Z. J., ZHANG Z. F.  
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND

PROCESSING, vol.620, pp.233-240, 2015 (SCI-Expanded)

20. **Effect of precipitation on mechanical and wear properties of ultrafine-grained Cu-Cr-Zr alloy**  
PÜRÇEK G., YANAR H., Saray O., Kraman I., Maier H. J.  
WEAR, vol.311, pp.149-158, 2014 (SCI-Expanded)

### Articles Published in Other Journals

1. **Effect of long-term natural aging on microstructure and room temperature superplastic behavior of UFG/FG Zn-Al alloys processed by ECAP**  
Demirtas M., Yanar H., Purcek G.  
Letters on Materials, vol.8, pp.532-537, 2018 (Scopus)
2. **Effect of friction stir processing on tribological properties of Al-Si alloys**  
AKTARER S. M., SEKBAN D. M., YANAR H., PÜRÇEK G.  
IOP Conf. Series: Materials Science and Engineering, no.174, 2017 (Peer-Reviewed Journal)
3. **Improvement the wear behavior of low carbon steels by friction stir processing**  
SEKBAN D. M., AKTARER S. M., YANAR H., ALSARAN A., PÜRÇEK G.  
IOP Conf. Series: Materials Science and Engineering, no.174, 2017 (Peer-Reviewed Journal)
4. **Effect of Chemical Composition and Grain Size on RT Superplasticity of Zn-Al alloys processed by ECAP**  
Demirtaş M., PÜRÇEK G., YANAR H., ZHANG Z. J., ZHANG Z. F.  
Letters on materials, vol.5, no.3, pp.328-334, 2015 (ESCI)
5. **Effect of Chemical Composition and Grain Size on RT Superplasticity of Zn-Al alloys processed by ECAP**  
Demirtaş M., PÜRÇEK G., YANAR H., Zhang Z., Zhang Z.  
Letters on Materials, vol.1, pp.3, 2015 (ESCI)

### Refereed Congress / Symposium Publications in Proceedings

1. **Effect of steel fiber addition on the mechanical and tribological behavior of the composite brake pad materials**  
Yanar H., Pürçek G., Ayar H.  
14th International Conference on Tribology, ROTRIB 2019, Cluj-Napoca, Romania, 19 - 21 September 2019, vol.724
2. **Effect Of Cashew Nut Shell Liquid (CNSL) On Tribological Behavior Of Brake Pad Composite**  
YANAR H., AYAR H. H., PÜRÇEK G.  
16th International Conference on Tribology (SERBIATRIB19), Kragujevac, Serbia And Montenegro, 15 - 17 May 2019, pp.1
3. **Development Of A Multifunctional Tribometer: Design Concept**  
PÜRÇEK G., YANAR H.  
16th International Conference on Tribology (SERBIATRIB19), Kragujevac, Serbia And Montenegro, 15 - 17 May 2019, pp.1
4. **Mechanical Properties of Multi-Directional Forged Al-7Si-4Zn-3Cu Alloy**  
ALEMDAĞ Y., KARABIYIK S., YANAR H., PÜRÇEK G.  
13th International Conference on Superplasticity in Advanced Materials, (ICSAM 2018), St. Petersburg, Russia, 19 September - 22 August 2018, vol.385, pp.250-255
5. **Effect of Multi-Directional Forging on Tribological Properties of Al-7Si-4Zn-3Cu alloy**  
ALEMDAĞ Y., KARABIYIK S., YANAR H., PÜRÇEK G.  
13th International Conference on Superplasticity in Advanced Materials, (ICSAM 2018), St. Petersburg, Russia, 19 - 22 August 2018, pp.12
6. **A New Multi-Functional Tribometer: Application of Block-on-Ring Test Module**

- YANAR H., Demirtaş M., PÜRÇEK G.  
2th International Conference On Tribology (Turkeytrib'18), İstanbul, Turkey, 18 - 20 April 2018, pp.1
7. **Effect of Resin Content on Friction and Wear Behaviour of Non-Asbestos Composite Friction Material Used in Brake Pad**  
YANAR H., AYAR H. H., Demirtaş M., PÜRÇEK G.  
2th International Conference On Tribology (Balkantrib'18), İstanbul, Turkey, 18 - 20 April 2018, pp.1
8. **Room temperature superplasticity in fine/ultrafine-grained Zn-Al alloys with different phase compositions**  
Demirtaş M., YANAR H., Saray O., PÜRÇEK G.  
13th International Conference on Superplasticity in Advanced Materials, ICSAM 2018, Petersburg, Russia, 19 - 22 August 2018, pp.72-77
9. **Superplastic-Like Behavior at Room Temperature in Two-Step Rolled Zn-Al Alloys**  
DEMİRTAŞ M., YANAR H., PÜRÇEK G.  
International Conference on Advanced Engineering Technologies (ICADET'17), 21 - 23 September 2017
10. **Severe Plastic Deformation Induced Dynamic Precipitation in Cu-Cr-Zr Alloy**  
YANAR H., PÜRÇEK G., DEMİRTAŞ M., SHANGINA D., DOBATKIN S.  
EUROMAT 2017, European Congress and Exhibition on Advanced Materials and Processes, 17 - 22 September 2017
11. **Relationship between superplasticity and damping capacity in naturally aged Zn-Al alloys**  
DEMİRTAŞ M., ATLI K. C., YANAR H., PÜRÇEK G.  
European Congress and Exhibitaion on Advanced Materials and Processes (EUROMAT 2017), 17 - 22 September 2017
12. **İki aşamalı hadde işleme tabi tutulan Zn-Al alaşımlarında oda sıcaklığında süperplastisite-benzeri davranış**  
Demirtaş M., YANAR H., PÜRÇEK G.  
International Conferance on Advances Engineering Technogies (ICADET), Bayburt, Turkey, 21 - 23 September 2017, pp.1
13. **Effect of Ultrafine-Grained Formation and Subsequent Aging on Structural, Mechanical and Tribological Properties of Cu-Cr-Zr Alloy**  
SHANGINA D. V., BOCHVAR N. R., PÜRÇEK G., YANAR H., DOBATKIN S. V.  
European Congress and Exhibitaion on Advanced Materials and Processes (EUROMAT 2017), Thessaloniki, Greece, 17 - 22 September 2017, pp.1
14. **Plastic Deformation Induced Dynamic Precipitation in Cu-Cr-Zr Alloy**  
YANAR H., PÜRÇEK G., DEMİRTAS M., SHANGINA D. V., DOBATKIN S. V.  
European Congress and Exhibitaion on Advanced Materials and Processes (EUROMAT 2017), Thessaloniki, Greece, 17 - 22 September 2017, pp.1
15. **A new multifunctional tribometer with high temperature module**  
YANAR H., PÜRÇEK G., Demirtaş M.  
9. International conference on tribology (BalkanTRib'17), Nevşehir, Turkey, 13 - 15 September 2017, pp.65
16. **Effect of Fiber Content on the Friction and Wear Performance of Non-asbestos Composites Used in Brake Pads**  
YANAR H., Demirtaş M., AYAR H. H., PÜRÇEK G.  
9th International conference on tribology (Balkantrib17), Nevşehir, Turkey, 13 - 15 September 2017, pp.59
17. **Effect of testing temperature on tribological properties of a Cu-Cr-Zr alloy in different microstructural conditions**  
YANAR H., SHANGINA D. V., Demirtaş M., PÜRÇEK G., DOBATKIN S. V.  
9th International conference on tribology (Balkantrib17), Nevşehir, Turkey, 13 - 15 September 2017, pp.40
18. **Superplastic behaviors of severely deformed and naturally aged Zn-Al alloys at room and elevated temperatures**  
Demirtaş M., Kawasaki M., YANAR H., PÜRÇEK G.  
European Congress and Exhibitaion on Advanced Materials and Processes (EUROMAT 2017), Thessaloniki, Greece, 12 - 17 September 2017, pp.1

19. **Optimization of RT superplasticity of UFG Zn-22Al alloy by applying ECAP at different temperatures and phase regions**  
Demirtaş M., YANAR H., PÜRÇEK G.  
7th International Conference on Nanomaterials by Severe Plastic Deformation, Sydney, Australia, 2 - 07 July 2017, pp.1
20. **Effect of Hexagonal Boron Nitride (h-BN) Addition on the Friction and Wear Characteristics of Non-asbestos Composites Used in Brake Pads**  
YANAR H., AYAR H. H., Demirtaş M., PÜRÇEK G.  
IBERTRIB 2017 – IX Iberian Conference on Tribology, Guimarães, Portugal, 12 - 13 June 2017, pp.1
21. **Enhanced Mechanical and Service Properties of Ultrafine- Grained Copper-Based Alloys with Cr, Zr, and Hf Additives**  
DOBATKIN S. V., SHANGINA D. V., BOCHVAR N. R., Terent'ev V. F., Prosvirnin D. I., Putinceva M. V., PÜRÇEK G., YANAR H., Raab G.  
14th International Congress: Machines, Technologies and Materials'17, Borovetz, Bulgaria, 15 - 18 March 2017, pp.1
22. **Optimization of RT superplasticity of UFG Zn-22Al alloy by applying ECAP at different temperatures and phase regions**  
Demirtaş M., YANAR H., PÜRÇEK G.  
7th International Conference on Nanomaterials by Severe Plastic Deformation, Sydney, Australia, 2 - 07 July 2017, vol.194
23. **Effect of High-Pressure Torsion on Tribological Properties of Cu-Cr-Zr alloy Under Reciprocating Dry Conditions**  
PÜRÇEK G., YANAR H., SHANGINA D. V., DOBATKIN S. V.  
International Conference on Engineering Tribology and Applied Technology, Taipei, Taiwan, 4 - 06 November 2016, pp.1
24. **Effect of Accumulative Strain on Room Temperature Superplasticity of Dilute Zn-0.3Al Alloy**  
Demirtaş M., YANAR H., PÜRÇEK G.  
16th International Materials Symposium (IMSP 2016), Denizli, Turkey, 12 - 14 October 2016, pp.1
25. **Effect of natural aging on RT and HSR superplasticity of ultrafine grained Zn-22Al alloy**  
Demirtaş M., PÜRÇEK G., YANAR H., Zhang Z., Zhang Z.  
12th International Conference on Superplasticity in Advanced Materials, ICSAM 2015, Tokyo, Japan, 7 - 11 September 2015, pp.320-325
26. **Comparison Of Wear And Friction Properties Of A Nickel Aluminum Bronze CuAl10Ni5Fe4 And Tin Bronze CuSn11**  
Turhan K., YANAR H., feriha b., PÜRÇEK G.  
2nd International Iron and Steel Symposium (IISS'15), Karabük, Turkey, 1 - 03 April 2015
27. **Improvement of wear behaviour of titanium by boriding**  
KARA G., PÜRÇEK G., YANAR H.  
TURKEYTRIB 2015 1st International Conference on Tribology, İstanbul, Turkey, 7 - 09 October 2015, pp.1
28. **Optimization of RT superplasticity of UFG Zn-22Al alloy by applying ECAP at different temperatures and phase regions**  
Demirtaş M., PÜRÇEK G., YANAR H., Zhang Z., Zhang Z.  
12th International Conference on Superplasticity in Advanced Materials (ICSAM) 2015, Tokyo, Japan, 7 - 11 September 2015, pp.1
29. **Improvement in Room-Temperature Damping Capacity of Zn-22Al Alloy by Ultrafine-Grain Formation**  
Demirtaş M., PÜRÇEK G., YANAR H., Zhang Z., Zhang Z.  
NanoSPD-6 (Nanomaterials by Severe Plastic Deformation), Metz, France, 30 June - 04 July 2014, pp.2
30. **Effect of aging on structural, mechanical and electrical properties of ultrafine-grained Cu-Cr-Zr alloy**  
YANAR H., PÜRÇEK G., SARAY O., KARAMAN İ., MAIER H. J.  
NanoSPD-6 (Nanomaterials by Severe Plastic Deformation), Metz, France, 30 June - 04 July 2014, pp.3

31. **Developing an Ultrafine-Grained or Nanostructured Superplastic Zn-22Al Alloy for Seismic Damper Application**  
Demirtaş M., PÜRÇEK G., SARAY O., YANAR H.  
NanoTR-9, Erzurum, Turkey, 24 - 28 June 2013, pp.3
32. **Development an ultra-high strength Cu-Cr-Zr alloy without notably sacrificing the ductility and electrical conductivity by dispersion of nano-sized precipitates inside ultrafine-grained microstructure**  
YANAR H., PÜRÇEK G., SARAY O., Demirtaş M., KRAMAN I., MAIER H. J.  
NanoTR-9, Erzurum, Turkey, 24 - 28 June 2013, pp.1

## Scientific Refereeing

TRIBOLOGY LETTERS, SCI Journal, February 2021

JOURNAL OF ASTM INTERNATIONAL, Journal Indexed in ESCI, December 2020

## Metrics

Publication: 59

Citation (WoS): 459

Citation (Scopus): 512

H-Index (WoS): 10

H-Index (Scopus): 10

## Research Areas

Tribology, Composites, Polymeric Materials, Material Characterization, Metallic Materials, Nanomaterials, Structure-Property Relationship, Non Metallic Materials Production, Powder Metallurgy

## Entrepreneurship Activities

Other, Harun YANAR-UTS Mühendislik , 03 April 2013, Owner

Limited, UTS Yazılım Mühendislik Hizmetleri San Tic. Ltd. Şti., 12 February 2015, Co-Founder

## Non Academic Experience

Company, Trabzon KTÜ Teknokent, UTS Yazılım Mühendislik Hizmetleri San. Tic. Ltd. Şti.