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Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Makine Mühendisliği, Turkey 2012 - 2017

Postgraduate, Marmara University, Institute For Graduate Studies In Pure And Applied Sciences, Makine Mühendisliği (İngilizce), Turkey 2008 - 2012

Undergraduate, Marmara University, Faculty Of Engineering, Makine Mühendisliği (İngilizce), Turkey 2003 - 2008

Foreign Languages

English, C1 Advanced

Research Areas

Mechanical Engineering, Construction and Manufacturing, Material, Metallurgical and Materials Engineering, Material science and engineering, Testing and Control of Materials, Mechanical Properties, Material Characterization, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2019 - Continues

Assistant Professor, Bayburt University, Faculty Of Engineering, Makine Mühendisliği, 2017 - 2019

Research Assistant, Bayburt University, Faculty Of Engineering, Makine Mühendisliği, 2011 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Research on anisotropy of the 7B50 super thick plate**
Wang H., Zhang Z., Cong F., Ren W., Gong B., Liu R., Li R., Zhou X., PÜRÇEK G., DEMİRTAŞ M., et al.
Journal of Alloys and Compounds, vol.960, 2023 (SCI-Expanded)
- II. **An Overview of the Principles of Low-Temperature Superplasticity in Metallic Materials Processed by Severe Plastic Deformation**
DEMİRTAŞ M., PÜRÇEK G.
Materials Transactions, vol.64, no.8, pp.1724-1738, 2023 (SCI-Expanded)
- III. **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)

- IV. **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)
- V. **Microstructural, mechanical and tribological characterization of Cu-Co-Ni-Be alloy processed via equal channel angular pressing**
DEMİRTAŞ M.
MATERIALS TODAY COMMUNICATIONS, vol.28, 2021 (SCI-Expanded)
- VI. **The mechanical compression performance of ultra-fine grained stainless steel pyramidal lattice core**
Kuleyin H., GÜMRÜK R., YANAR H., DEMIRTAS M., PÜRÇEK G.
MECHANICS OF ADVANCED MATERIALS AND STRUCTURES, vol.28, no.10, pp.1073-1078, 2021 (SCI-Expanded)
- VII. **Optimization of strength, ductility and wear resistance of low-carbon grade A shipbuilding steel by post-ECAP annealing**
DEMİRTAŞ M., Sekban D. M.
METALLURGICAL RESEARCH & TECHNOLOGY, vol.118, no.2, 2021 (SCI-Expanded)
- VIII. **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., Bochvar N. R., Dobatkin S. V.
Journal of Alloys and Compounds, vol.816, 2020 (SCI-Expanded)
- IX. **Effect of resin content on tribological behavior of brake pad composite material**
YANAR H., Ayar H. H., Demirtas M., PÜRÇEK G.
INDUSTRIAL LUBRICATION AND TRIBOLOGY, vol.72, no.2, pp.195-202, 2020 (SCI-Expanded)
- X. **Room Temperature Superplasticity in Fine/Ultrafine Grained Materials Subjected to Severe Plastic Deformation**
Demirtas M., Purcek G.
MATERIALS TRANSACTIONS, vol.60, no.7, pp.1159-1167, 2019 (SCI-Expanded)
- XI. **High temperature superplasticity and deformation behavior of naturally aged Zn-Al alloys with different phase compositions**
Demirtas M., Kawasaki M., YANAR H., PÜRÇEK G.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.730, pp.73-83, 2018 (SCI-Expanded)
- XII. **Effect of grain refinement and phase composition on room temperature superplasticity and damping capacity of dual-phase Zn-Al alloys**
Demirtas M., Atli K. C., YANAR H., Purce G.
JOURNAL OF MATERIALS RESEARCH, vol.33, no.8, pp.1032-1045, 2018 (SCI-Expanded)
- XIII. **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. V., Demirtas M., Bochvar N. R., Dobatkin S. V.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.742, pp.325-333, 2018 (SCI-Expanded)
- XIV. **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)
- XV. **Optimization of RT superplasticity of UFG Zn-22Al alloy by applying ECAP at different temperatures and phase regions**
DEMİRTAŞ M., YANAR H., PÜRÇEK G.
IOP Conf. Series: Materials Science and Engineering, vol.194, pp.1-6, 2017 (SCI-Expanded)
- XVI. **Effects of grain size on room temperature deformation behavior of Zn-22Al alloy under uniaxial and**

biaxial loading conditions

Cetin M. E., Demirtas M., SOFUOĞLU H., CORA Ö. N., PÜRÇEK G.

MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.672, pp.78-87, 2016 (SCI-Expanded)

XVII. 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)

XVIII. 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)

XIX. 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)

XX. 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)

XXI. 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)

Articles Published in Other Journals

**I. PROCESSING OF GRADE A LOW CARBON STEEL BY EQUAL CHANNEL ANGULAR PRESSING
DEMİRTAŞ M.**

Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.9, no.1, 2020 (Peer-Reviewed Journal)

II. Effect of long-term natural aging on microstructure and room temperature superplastic behavior of UFG/FG Zn-Al alloys processed by ECAP

DEMİRTAŞ M., YANAR H., PÜRÇEK G.

LETTERS ON MATERIALS, vol.8, no.4, pp.532-537, 2018 (ESCI)

III. Experimental and Numerical Investigation of Thickness Distribution in Forming of Superplastic Zn-22Al Alloy

ÇETİN M. E., DEMİRTAŞ M., PÜRÇEK G., CORA Ö. N., SOFUOĞLU H.

Academic Perspective Procedia, vol.1, no.1, pp.1034-1040, 2018 (Peer-Reviewed Journal)

IV. Room Temperature Superplasticity in Fine/Ultrafine-Grained Zn-Al Alloys with Different Phase Compositions

DEMİRTAŞ M., YANAR H., SARAY O., PÜRÇEK G.

Defect and Diffusion Forum, vol.385, pp.72-77, 2018 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. Mechanical and Tribological Behavior of Al-Si Alloy Processed via Two-Step ECAP

DEMİRTAŞ M.

2. International Conference on Materials Science, Mechanical and Automotive Engineerings And Technology, 21 - 23 June 2019

II. Mechanical Properties of Low Carbon Steel Processed by Equal Channel Angular Pressing

DEMİRTAŞ M.

Fourth International Iron and Steel Symposium (UDCS'19), 4 - 06 April 2019

III. Experimental and numerical investigation of thickness distribution in forming of superplastic Zn-22Al alloy

ÇETİN M. E., DEMİRTAŞ M., PÜRÇEK G., CORA Ö. N., SOFUOĞLU H.

6th international symposium on innovative technologies in engineering and science, 9 - 11 November 2018

IV. A New Multi-Functional Tribometer: Application of Block-on-Ring Test Module

YANAR H., DEMİRTAŞ M., PÜRÇEK G.

2th International Conference On Tribology (Turkeytrib'18), 10 - 20 April 2018

V. Effect of Resin Content on Friction and Wear Behaviour of NonAsbestos Composite Friction Material Used in Brake Pad

YANAR H., AYAR H. H., DEMİRTAŞ M., PÜRÇEK G.

2th International Conference On Tribology (Turkeytrib'18), 18 - 20 April 2018

VI. Room temperature superplasticity in fine/ultrafine-grained Zn-Al alloys with different phase compositions

Demirtas 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

VII. Effect of Grain Size on Microhardness of Superplastic Zn-22Al

ÇETİN M. E., DEMİRTAŞ M., SOFUOĞLU H., CORA Ö. N., PÜRÇEK G.

International Conference on Engineering Technologies, 7 - 09 December 2017

VIII. İki aşamalı hadde işlemine tabi tutulan Zn-Al alaşımlarında oda sıcaklığında süperplastisite-benzeri davranış

DEMİRTAŞ M., YANAR H., PÜRÇEK G.

International Conference on Advanced Engineering Technologies, Bayburt Türkiye, 21 - 23 September 2017

IX. Relationship Between Superplasticity and Damping Capacity in Naturally Aged Zn-Al Alloys

DEMİRTAŞ M., ATLI K. C., YANAR H., PÜRÇEK G.

European Congress and exhibition on advanced materials and processes EUROMAT 2017, Thessaloniki, Greece, 17 - 22 September 2017

X. Severe Plastic Deformation Induced Dynamic Precipitation in Cu-Cr-Zr Alloy

YANAR H., PÜRÇEK G., DEMİRTAŞ M., SHANGINA D., DOBATKIN S.

EUROMAT2017, European Congress and Exhibition on Advanced Materials and Processes, 17 - 22 September 2017

XI. Superplastic behaviors of severely deformed and naturally aged Zn-Al alloys at room and elevated temperatures

DEMİRTAŞ M., MEGUMİ K., YANAR H., PÜRÇEK G.

European Congress and Exhibition on Advanced Materials and Processes (EUROMAT 2017), Thessaloniki, Greece, 12 - 17 September 2017

XII. A new multifunctional tribometer with high temperature module

YANAR H., DEMİRTAŞ M., PÜRÇEK G.

9th INTERNATIONAL CONFERENCE ON TRIBOLOGY BALKANTRIB'17, Kapadokya Nevşehir, 13 - 15 September 2017

XIII. Effect of Fiber Content on the Friction and Wear Performance of Non-asbestos Composites Used in Brake Pads

YANAR H., DEMİRTAŞ M., AYAR H., PÜRÇEK G.

9th INTERNATIONAL CONFERENCE ON TRIBOLOGY, BALKANTRIB'17, Kapadokya Nevşehir, 13 - 15 September 2017

XIV. Effect of testing temperature on tribological properties of a Cu-Cr-Zr alloy in different

microstructural conditions

YANAR H., SHANGİNA D. V., DEMİRİTAŞ M., DOBİTKİN S. V., PÜRÇEK G.

9th INTERNATIONAL CONFERENCE ON TRIBOLOGY, BALKANTRIB'17, Kapadokya Nevşehir, 13 - 15 September 2017

XV. 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., DEMİRİTAŞ M., PÜRÇEK G.

IX IBERIAN CONFERENCE on TRIBOLOGY, GUIMARÃES, PORTUGAL, 12 - 13 June 2017

XVI. EFFECT OF ACCUMULATIVE STRAIN ON ROOM TEMPERATURE SUPERPLASTICITY OF DILUTE ZN 0 3AL ALLOY

DEMİRİTAŞ M., YANAR H., PÜRÇEK G.

16th International Materials Symposium IMSP'2016, 12 - 14 October 2016

XVII. Effect of natural aging on RT and HSR superplasticity of ultrafine grained Zn-22Al alloy

Demirtas 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

XVIII. Effect of Natural Aging on RT and HSR Superplasticity Of Ultrafine Grained Zn 22al Alloy

DEMİRİTAŞ 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

XIX. Süperplastik Zn 22al Alaşımında Ultra İnce Tane Oluşumunun Oda Sıcaklığındaki Şekillendirilebilirliğe Etkisinin Deneyisel Ve Teorik Olarak İncelenmesi

ÇETİN M. E., DEMİRİTAŞ M., SOFUOĞLU H., CORA Ö. N., PÜRÇEK G.

19. Ulusal Mekanik Kongresi, Trabzon, Turkey, 24 - 28 August 2015

XX. Improvement in Room Temperature Damping Capacity of Zn 22Al Alloy by Ultrafine Grain Formation

DEMİRİTAŞ M., PÜRÇEK G., YANAR H., ZHANG Z., ZHANG Z.

NanoSPD-6 (Nanomaterials by Severe Plastic Deformation), Metz, France, 30 June - 04 July 2014

XXI. High strain rate superplasticity at room temperature in two phase and quasi single phase Zn Al alloys

DEMİRİTAŞ M., PÜRÇEK G., YANAR H., ZHANG Z., ZHANG Z.

NanoSPD-6 (Nanomaterials by Severe Plastic Deformation), Matez, France, 30 June - 04 July 2014

Supported Projects

Demirtaş M., Pürçek G., Yanar H., TÜBİTAK International Bilateral Joint Cooperation Program Project, Tane Boyutu Ve Nano Çökeltiler Üzerinden Yüksek Mukavemetli Dövme Al Alaşımlarının Servis Performanslarının Optimize Edilmesi, 2022 - 2024

DEMİRİTAŞ M., Project Supported by Higher Education Institutions, Yüksek sıcaklıktaki tribolojik uygulamalar için yüksek dayanıma sahip Cu-Co-Ni-Be alaşımlarının geliştirilmesi, 2020 - 2022

Demirtaş M., Pürçek G., Yanar H., Project Supported by Higher Education Institutions, 4. Demir yolu taşıtları için kompozit fren balata bileşiminin geliştirilmesi, 2018 - 2021

Demirtaş M., Project Supported by Higher Education Institutions, Cu-Cr-Zr Alaşımlarının Yüksek Sıcaklıktaki Tribolojik Davranışlarının Aşırı Plastik Deformasyon Yöntemi ile Geliştirilmesi, 2017 - 2019

Demirtaş M., Pürçek G., Yanar H., Saray O., Altan Ş. B., Project Supported by Higher Education Institutions, Zn-22Al alaşımlarının oda sıcaklığındaki süperplastik davranışının geliştirilmesi ve sönümleyici malzeme olarak kullanılabilirliğinin araştırılması, 2014 - 2017

Metrics

Publication: 46

Citation (WoS): 288

Citation (Scopus): 343

H-Index (WoS): 8

H-Index (Scopus): 9