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Publons / Web Of Science ResearcherID: AAZ-4751-2020

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Education Information

- I. Doctorate, Yıldız Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical And Materials Engineering, Turkey 2014 - 2019
- II. Postgraduate, Istanbul Technical University, Kimya-Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği, Turkey 2012 - 2014
- III. Undergraduate, Istanbul Technical University, Kimya-Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği, Turkey 2007 - 2012

Foreign Languages

- I. English, C1 Advanced

Dissertations

- I. Postgraduate, Gaz Nitrürlenerek Sertleştirilmiş 31CrMoV9 Çeliğinde İndentasyon Yöntemiyle Kalıntı Gerilme Ve Sertlik Değişimlerinin İncelenmesi, İstanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2014

Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Composites, Engineering and Technology

Academic Titles / Tasks

- I. Research Assistant PhD, Yıldız Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical And Materials Engineering, 2013 - Continues

Advising Theses

- I. Birol B., Gecü R., Toz metalurjisinde BorKarbür (B4C) takviyeli çift fazlı(dupleks) paslanmaz çelik matrisli kompozit üretim araştırması ve karakterizasyonu, Postgraduate, S.ÖRÜCÜ(Student), 2023

- I. Effects of Ti addition and wall thickness on microstructure, hardness, and wear properties of spheroidal graphite cast irons
Kaymak K., Tazegül Y., Keyvankli A. B., GECÜ R.
Tribology International, vol.195, 2024 (SCI-Expanded)
- II. Microstructural, hardness, and wear properties of Mg₂Si-reinforced Al matrix in-situ composites produced by low superheat casting
Ozkan T., Tutuk I., ACAR S., GECÜ R., GÜLER K. A.
Materials Today Communications, vol.38, 2024 (SCI-Expanded)
- III. Enhancing wear resistance of R220 rail steels by quenching and partitioning (Q&P) treatment
GECÜ R.
Materials Letters, vol.354, 2024 (SCI-Expanded)
- IV. Wear and corrosion behavior of vanadium-alloyed nodular cast irons fabricated by sand-casting
TÜRKÜ İ. C., GECÜ R.
Wear, vol.534-535, 2023 (SCI-Expanded)
- V. Chemical composition optimization of Al₂O₃-TiO₂ composite coatings for enhanced wear and corrosion resistance
Eraslan F. S., Gecü R.
Surface and Coatings Technology, vol.474, 2023 (SCI-Expanded)
- VI. Influence of layer number and sintering temperature on microstructural, tribological, and corrosion behavior of Al₂O₃-TiO₂ multilayer coatings
Eraslan F. S., TÜRKÜ İ. C., ÖZCAN M., BİROL B., GECÜ R.
Ceramics International, vol.49, no.20, pp.33226-33235, 2023 (SCI-Expanded)
- VII. Influence of vanadium content and cooling rate on the characteristics of vanadium-alloyed spheroidal graphite cast irons
Kandemir A. S., GECÜ R.
Journal of Alloys and Compounds, vol.934, 2023 (SCI-Expanded)
- VIII. Combined effects of cryogenic treatment and tempering on microstructural and tribological features of AISI H13 steel
GECÜ R.
MATERIALS CHEMISTRY AND PHYSICS, vol.292, 2022 (SCI-Expanded)
- IX. Improving wear and corrosion protection of AISI 304 stainless steel by Al₂O₃-TiO₂ hybrid coating via sol-gel process
Gecü R., Birol B., Özcan M.
TRANSACTIONS OF THE INSTITUTE OF METAL FINISHING, vol.100, no.6, pp.324-332, 2022 (SCI-Expanded)
- X. Microstructure, Mechanical, and Wear Properties of Al-Alloyed Austempered Ductile Irons
GECÜ R.
TRIBOLOGY TRANSACTIONS, vol.65, no.5, pp.952-962, 2022 (SCI-Expanded)
- XI. Volume fraction effect of stainless steel on microstructure, interface, corrosion and wear behavior of stainless steel / aluminum bimetal composites
GECÜ R., KARAASLAN A.
Materials Chemistry and Physics, vol.284, 2022 (SCI-Expanded)
- XII. Surface characteristics of plasma electrolytic oxidation coatings on Cp-Ti and hot-dip aluminised Cp-Ti
Celtik C., Yurekturk Y., GECÜ R., Kaboglu C., Muhaffel F.
TRANSACTIONS OF THE INSTITUTE OF METAL FINISHING, vol.100, pp.159-165, 2022 (SCI-Expanded)
- XIII. Microstructural, mechanical and tribological characterization of aluminum-alloyed ductile cast irons based on aluminum content
Sandikoglu A., Gecü R.
Journal of Alloys and Compounds, vol.879, 2021 (SCI-Expanded)
- XIV. Microstructure, wear and corrosion characteristics of multiple-reinforced (SiC-B4C-Al₂O₃) Al matrix

- composites produced by liquid metal infiltration**
Öztürk K., Gecü R., Karaaslan A.
CERAMICS INTERNATIONAL, vol.47, no.13, pp.18274-18285, 2021 (SCI-Expanded)
- XV. **Casting temperature dependent wear and corrosion behavior of 304 stainless steel reinforced A356 aluminium matrix bimetal composites fabricated by vacuum-assisted melt infiltration casting**
Gecü R., Karaaslan A.
WEAR, vol.446, 2020 (SCI-Expanded)
- XVI. **Sliding Wear of the Ti-Reinforced Al Matrix Bi-metal Composite: A Potential Replacement to Conventional SiC-Reinforced Composites for Automotive Application**
GECÜ R., KARAASLAN A.
INTERNATIONAL JOURNAL OF METALCASTING, vol.13, no.3, pp.641-652, 2019 (SCI-Expanded)
- XVII. **Improving wear resistance of 304 stainless steel reinforced AA7075 aluminum matrix composite by micro-arc oxidation**
GECÜ R., Yurekturk Y., Tekoglu E., Muhaffel F., KARAASLAN A.
SURFACE & COATINGS TECHNOLOGY, vol.368, pp.15-24, 2019 (SCI-Expanded)
- XVIII. **The effect of retrogression and re-aging treatment on mechanical and tribological features of AA7075 aluminium alloyEinfluss der Retrogressions- und Reaging-Behandlung auf die mechanischen und tribologischen Eigenschaften der Aluminiumlegierung AA7075**
Ozer G., GECÜ R., KARAASLAN A.
MATERIALWISSENSCHAFT UND WERKSTOFFTECHNIK, vol.50, no.6, pp.761-768, 2019 (SCI-Expanded)
- XIX. **A Comparative Study on Titanium-Reinforced Aluminium Matrix Composites Produced by Melt Infiltration Casting and Squeeze Infiltration**
GECÜ R., KARAASLAN A.
INTERNATIONAL JOURNAL OF METALCASTING, vol.13, no.2, pp.311-319, 2019 (SCI-Expanded)
- XX. **Microstructural and Tribological Characterization of Stainless Steel-Reinforced Aluminum Matrix Bimetal Composites Produced at Various Mold Burnout Temperatures**
GECÜ R., KARAASLAN A.
TRIBOLOGY TRANSACTIONS, vol.62, no.2, pp.249-261, 2019 (SCI-Expanded)
- XXI. **Volume Fraction Dependent Wear Behavior of Titanium-Reinforced Aluminum Matrix Composites Manufactured by Melt Infiltration Casting**
GECÜ R., KARAASLAN A.
JOURNAL OF TRIBOLOGY-TRANSACTIONS OF THE ASME, vol.141, no.2, 2019 (SCI-Expanded)
- XXII. **Preform-Based Production of Al₂O₃-Reinforced Aluminium Matrix Composites by Using Various Modification Techniques**
Öztürk K., Gecü R., Karaaslan A.
Metals and Materials International, 2019 (SCI-Expanded)
- XXIII. **A Study on Al/Cu Bimetal Production by Lost Foam Casting**
ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., KARAASLAN A.
PRAKTISCHE METALLOGRAPHIE-PRACTICAL METALLOGRAPHY, vol.55, no.11, pp.728-740, 2018 (SCI-Expanded)
- XXIV. **Influence of T6 heat treatment on A356 and A380 aluminium alloys manufactured by thixoforging combined with low superheat casting**
GECÜ R., ACAR S., KISASÖZ A., ALTUG GULER K. A., KARAASLAN A.
Transactions of Nonferrous Metals Society of China (English Edition), vol.28, no.3, pp.385-392, 2018 (SCI-Expanded)
- XXV. **Relationship Between Nanoindentation and Wear Properties of Stainless Steel-Reinforced Aluminium Matrix Composite**
GECÜ R., KARAASLAN A.
TRIBOLOGY LETTERS, vol.65, no.4, 2017 (SCI-Expanded)
- XXVI. **Influence of preform preheating on dry sliding wear behavior of 304 stainless steel reinforced A356 aluminum matrix composite produced by melt infiltration casting**
GECÜ R., ATAPEK Ş. H., KARAASLAN A.

- TRIBOLOGY INTERNATIONAL, vol.115, pp.608-618, 2017 (SCI-Expanded)
- XXVII. **Investigation of spherisation in microstructures of aluminium casting alloys for thixoforging process**
GÜLER K. A., GECÜ R., KISASÖZ A., KARAASLAN A.
RUSSIAN JOURNAL OF NON-FERROUS METALS, vol.58, no.5, pp.489-494, 2017 (SCI-Expanded)
- XXVIII. **A Comparative Study on the Microstructure Evaluation of Thixoforged A356 and A380 Aluminium Alloys**
GÜLER K. A., GECÜ R., KISASÖZ A., KARAASLAN A.
PRAKTISCHE METALLOGRAPHIE-PRACTICAL METALLOGRAPHY, vol.54, no.3, pp.163-177, 2017 (SCI-Expanded)

Articles Published in Other Journals

- I. **Determination of Temperature Gradient in TIG Welding of Duplex Stainless Steel**
KISASÖZ A., GECÜ R., KARAASLAN A.
El-Cezerî Journal of Science and Engineering, vol.4, pp.593-597, 2017 (Scopus)
- II. **Bimetal ve Geleneksel Olarak Üretilen Alüminyum Esaslı Metal-Metal Kompozitlerin Mekanik Özellikleri**
Gecü R.
Metalurji, no.180, pp.26-30, 2016 (Non Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Investigation And Characterization Of Duplex Stainless Steel Production By Mechanical Alloying Method**
Örücü S., Birol B., Gecü R.
International Marmara Sciences Congress (Imascon Autumn) 2022, Kocaeli, Turkey, 9 - 10 December 2022, pp.25
- II. **Influence of Heat Treatment of 1.4462 and 1.4501 Duplex Stainless Steels on Microstructure and Wear Resistance**
YALÇINER G., GECÜ R., KISASÖZ A., KARAASLAN A.
20th International Metallurgy and Materials Congress, İstanbul, Turkey, 10 - 12 June 2021, pp.316
- III. **Prevention of Hot Crack Formation in 304 Stainless Steel Reinforced AA7075 Aluminium Matrix Bimetal Composites**
Gecü R., Karaaslan A.
9th International Aluminium Symposium, İstanbul, Turkey, 10 - 11 October 2019, pp.34-38
- IV. **A Study on the Effects of Solution Heat Treatment Time on Eutectic Silicon Morphology for A380 Alloy**
ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., KARAASLAN A.
19th International Metallurgy and Materials Congress, İstanbul, Turkey, 25 - 27 October 2018, pp.304-306
- V. **Sliding Wear Characteristics of AISI 2205 Duplex Stainless Steel Cooled in Various Environments after Solution Treatment**
GECÜ R., KISASÖZ A., KARAASLAN A.
19th International Metallurgy and Materials Congress, İstanbul, Turkey, 25 October 2018, pp.837-840
- VI. **The impact of volume fraction of commercially pure titanium reinforcement on aluminium matrix bimetal composite properties**
GENÇER K., GECÜ R., KARAASLAN A.
19th International Metallurgy and Materials Congress, İstanbul, Turkey, 25 October 2018, pp.148-151
- VII. **TRIBOLOGICAL CHARACTERIZATION OF 304 STAINLESS STEEL REINFORCED AA7075 ALUMINIUM MATRIX COMPOSITE PRODUCED BY MELT INFILTRATION CASTING**
GECÜ R., KARAASLAN A.

- 2nd International Conference on Tribology, İstanbul, Turkey, 18 April 2018, pp.36-41
- VIII. **Investigation of the Effects of Solution Heat Treatmeant Time on the Eutectic Silicon for A356 Alloy**
ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., KARAASLAN A.
2. International Conference on Engineering Technology and Innovation (ICETI), Budapeşte, Hungary, 07 March 2018, pp.268-272
- IX. **Dry Sliding Wear Properties of AA7075 Aluminium Matrix Hybrid Composites**
GECÜ R., ACAR S., KISASÖZ A., GÜLER K. A., KARAASLAN A.
2. International Conference on Engineering Technology and Innovation (ICETI), Budapeşte, Hungary, 07 March 2018, pp.295-300
- X. **The Effect of Preform Preheating on Microstructural and Mechanical Features of 80% CP-Ti Reinforced A356 Matrix Composite**
GECÜ R., KARAASLAN A.
International Conference on Engineering Technology and Innovation (ICETI), Budapeşte, Hungary, 07 March 2018, pp.163-169
- XI. **Aging of A356 Aluminum Billets Produced by Semi-Solid Metal Processing**
GECÜ R., ACAR S., KISASÖZ A., GÜLER K. A., KARAASLAN A.
3rd International Iron & Steel Symposium, Karabük, Turkey, 03 April 2017, pp.267-270
- XII. **Production of CP-Ti Reinforced A356 Aluminum Composite by Vacuum-Assisted Investment Casting**
GECÜ R., KARAASLAN A.
International Conference on Engineering Technology and Innovation, Saraybosna, Bosnia And Herzegovina, 22 March 2017, pp.210-214
- XIII. **Microstructural Evaluation of T6-Treated A380 Alloy Manufactured by Semi-Solid Metal Casting**
GECÜ R., ACAR S., KISASÖZ A., GÜLER K. A., KARAASLAN A.
International Conference on Engineering Technology and Innovation, Sarajevo, Bosnia And Herzegovina, 22 March 2017, pp.284-288
- XIV. **Manufacturing and Aging of 7075 Based Metal-Metal Composites by Using Sawdusts as Reinforcements**
GECÜ R., KISASÖZ A., GÜLER K. A., KARAASLAN A.
18th International Metallurgy & Materials Congress, İstanbul, Turkey, 29 September 2016, pp.114-117
- XV. **An Investigation of the Effect of Solution Heat Treatment on 475 °C Embrittlement in 1.4462 Duplex Stainless Steels**
GECÜ R., KISASÖZ A., KARAASLAN A.
18th International Metallurgy & Materials Congress, İstanbul, Turkey, 29 September 2016, pp.501-503
- XVI. **The Effect of Intermetallic Phases on Corrosion Behaviour of Duplex Stainless Steels**
ZORBA A. P., ÖZYILMAZ A. Ö., GECÜ R., KISASÖZ A., KARAASLAN A.
18th International Metallurgy & Materials Congress, İstanbul, Turkey, 29 September 2016, pp.836-839

Supported Projects

- I. GECÜ R., Project Supported by Higher Education Institutions, Sıfıraltı İşlem Görmüş AISI H13 Sıcak İş Takım Çeliklerinde Temperlemenin Mikroyapı ve Aşınma Davranışına Etkisinin İncelenmesi, 2022 - 2023
- II. KARAASLAN A., GECÜ R., Project Supported by Higher Education Institutions, Bimetal Kompozitlerin Metal Talaşlarıyla Üretilimi ve Karakterizasyonu, 2017 - 2019
- III. KISASÖZ A., ACAR S., GECÜ R., KARAASLAN A., GÜLER K. A., Project Supported by Higher Education Institutions, Isıya Dayanıklı 2.4879 Alaşının Yüksek Sıcaklık Uygulamalarındaki Özellik Değişimlerinin Belirlenmesi, 2017 - 2019
- IV. KARAASLAN A., ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., Project Supported by Higher Education Institutions, Geri Dönüşürlülebilir Metal Takviyeler Kullanılarak Üretilen Alüminyum Matrisli Metal-Metal Kompozitlerin Aşınma Özelliklerinin Belirlenmesi, 2017 - 2019

- V. KARAASLAN A., ACAR S., KISASÖZ A., GECÜ R., GÜLER K. A., Project Supported by Higher Education Institutions, Çift Fazlı Paslanmaz Çelikte Ferrit-Östenit Faz Dengesinin 475 °C Kirılganlığı Üzerindeki Etkisinin İncelenmesi, 2017 - 2019

Scientific Refereeing

- I. TRIBOLOGY INTERNATIONAL, SCI Journal, March 2020
- II. INTERNATIONAL JOURNAL OF METALCASTING, SCI Journal, February 2019
- III. MATERIALS EXPRESS, SCI Journal, August 2018
- IV. INTERNATIONAL JOURNAL OF METALCASTING, SCI Journal, June 2018
- V. TRIBOLOGY LETTERS, SCI Journal, September 2017

Metrics

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Coaching Duties

Refereeing Duties
