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#### International Researcher IDs

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

ScopusID: 57193953931

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#### Education Information

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- I. Doctorate, Yildiz 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

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- I. English, C1 Advanced

#### Dissertations

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

#### Research Areas

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

#### Academic Titles / Tasks

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

#### Advising Theses

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- 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. **Enhancing wear and corrosion resistance of TiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> hybrid coatings by the development of TiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> bilayer film coatings**  
Eraslan F. S., GECÜ R.  
Ceramics International, vol.50, no.15, pp.26715-26726, 2024 (SCI-Expanded)
- II. **Effects of Ti addition and wall thickness on microstructure, hardness, and wear properties of spheroidal graphite cast irons**  
Kaymak K., Tazegül Y., Keyvanklı A. B., GECÜ R.  
Tribology International, vol.195, 2024 (SCI-Expanded)
- III. **Microstructural, hardness, and wear properties of Mg<sub>2</sub>Si-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)
- IV. **Enhancing wear resistance of R220 rail steels by quenching and partitioning (Q&P) treatment**  
GECÜ R.  
Materials Letters, vol.354, 2024 (SCI-Expanded)
- V. **Chemical composition optimization of Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> composite coatings for enhanced wear and corrosion resistance**  
Eraslan F. S., Gecü R.  
Surface and Coatings Technology, vol.474, 2023 (SCI-Expanded)
- VI. **Wear and corrosion behavior of vanadium-alloyed nodular cast irons fabricated by sand-casting**  
TÜRÜ İ. C., GECÜ R.  
Wear, vol.534-535, 2023 (SCI-Expanded)
- VII. **Influence of layer number and sintering temperature on microstructural, tribological, and corrosion behavior of Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> multilayer coatings**  
Eraslan F. S., TÜRÜ İ. C., ÖZCAN M., BİROL B., GECÜ R.  
Ceramics International, vol.49, no.20, pp.33226-33235, 2023 (SCI-Expanded)
- VIII. **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)
- IX. **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)
- X. **Improving wear and corrosion protection of AISI 304 stainless steel by Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> 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)
- XI. **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)
- XII. **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)
- XIII. **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)
- XIV. **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)

- XV. **Microstructure, wear and corrosion characteristics of multiple-reinforced (SiC-B4C-Al<sub>2</sub>O<sub>3</sub>) 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)
- XVI. **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)
- XVII. **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)
- XVIII. **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)
- XIX. **The effect of retrogression and re-aging treatment on mechanical and tribological features of AA7075 aluminium alloy**  
Einfluss 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)
- XX. **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)
- XXI. **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)
- XXII. **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)
- XXIII. **Preform-Based Production of Al<sub>2</sub>O<sub>3</sub>-Reinforced Aluminium Matrix Composites by Using Various Modification Techniques**  
Öztürk K., Gecü R., Karaaslan A.  
Metals and Materials International, 2019 (SCI-Expanded)
- XXIV. **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)
- XXV. **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)
- XXVI. **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)
- XXVII. **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)
- XXVIII. **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)
- XXIX. **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

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- 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

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- 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 Treatment 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

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- I. GECÜ R., Project Supported by Higher Education Institutions, Sıfırlı 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 Üretimi 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 Alaşımının 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 Dönüştürülebilir 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 Kırılabilirliği Üzerindeki Etkisinin İncelenmesi, 2017 - 2019

## Scientific Refereeing

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- 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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Publication: 48  
Citation (WoS): 200  
Citation (Scopus): 280  
H-Index (WoS): 9  
H-Index (Scopus): 10

## Coaching Duties

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## Refereeing Duties

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